Telecommand and Telemetry Formats
Instrument Operation Focus (detailed)

Large Area Telescope (LAT) Flight Software (FSW) Group
Gamma Ray Large Area Space Telescope (GLAST) Project

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0 SCOPE

0.0 Identification

This Interface Control Document (ICD) describes the formats and protocols associated with telecommands and telemetry for the Gamma-ray Large Area Space Telescope's (GLAST) Large Area Telescope (LAT) payload.

0.1 System Overview

GLAST is a high-energy gamma-ray observatory, designed for making observations of celestial sources in the energy band extending from 20 MeV to 300 GeV, with complementary coverage between 10 KeV and 25 MeV for gamma-ray bursts.

The LAT instrument detects both Cosmic Rays (i.e., charged particles) and Gamma Rays (i.e., high-energy photons), capturing the resulting information as "events". The LAT Flight Software (FSW) is tasked with configuring and operating the instrument, as well as deciding which events are Gamma Rays from celestial sources.

The vast majority of communication with the FSW is accomplished by the exchange of telecommand and telemetry packets. Telecommand packets are used to load new software, set configuration values, initiate operations, etc. Telemetry packets are used to report data of various types, including diagnostic, housekeeping, and science.

The FSW receives telecommand packets from the spacecraft (SC) and telemetry packets from the Gamma-ray Burst Monitor (GBM). It sends telemetry packets to the spacecraft, for retransmission to Earth-based installations. On rare occasions, the FSW sends telecommand packets (e.g., repoint requests) to the spacecraft.

0.2 Document Overview

This document details the telecommand and telemetry interfaces between the LAT payload and the GLAST spacecraft bus. It is organized as follows:

0 Scope

Discussion of the general nature of the document.

1 References

Documents, acronyms, and glossary terms referenced in or required for use with this document.

2 Interface Overview

A summary of the telecommand and telemetry interfaces between the LAT payload and the GLAST spacecraft bus and between the LAT payload and the GBM payload.

3 CCSDS Protocol

A summary of the CCSDS protocol.

4 Package Overview

A summary of the packages described in subsequent sections.

5 <package> (e.g., FILE, LCAT, LHK):

Definitions of relevant items (e.g., packets, attributes) for the package in question.

Indexes

Indexes into the package chapters, organized by APID, item name, etc.

0.3 Document Data Sources

The "front matter" for this document was derived, largely, from a set of hand-edited configuration files. Consequently, it may not track all changes in the software, etc.

The telecommand and telemetry descriptions in this document were autogenerated from the following packages/versions in the LAT flight software code management system:

0.4 Document Output Variants

The "Telecommand and Telemetry Formats" document is available in four variant formats, differing in focus ("Software Maintenance", "Instrument Operation") and level of detail ("abridged", detailed").

The Software Maintenance variants are aimed at the needs of software maintainers. Consequently, they discuss data structures (e.g., Bitfields), use LCAT (i.e., C) nomenclature, etc.

The Instrument Operation variants are aimed at the needs of instrument operators. Consequently, they ignore data structures, use ITOS nomenclature, etc.

None of these variants is as complete and navigable, however, as the online (web-based) variants. If online access is available, this should be your first choice.

1 REFERENCES

This section lists documents, acronyms, and glossary terms that either are referenced in this Interface Control Document or provide additional information applicable to the understanding of this document.

1.0 Applicable Documents

LAT Project Documents

LAT Project Documents	
Document Number	**Document Title**

GLAST Project Documents

GLAST Project Documents	
Document Number	**Document Title**

NASA Standards and Guidelines

NASA Standards and Guidelines	
Document Number	**Document Title**
CCSDS 101.0-B-4	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Telemetry Channel Coding, May 1999
CCSDS 102.0-B-4	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Packet Telemetry, November 1995
CCSDS 200.0-G-6	Consultative Committee for Space Data Systems (CCSDS) Report for Telecommand: Summary of Concept and Rationale, January 1987
CCSDS 201.0-B-3	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Telecommand: Part 1, Channel Service, June 2000
CCSDS 202.0-B-2	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Telecommand: Part 2.1, Command Operation Procedures, October 1991
CCSDS 203.0-B-1	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Telecommand: Part 3, Data Management Service Architectural Specification, January 1987
CCSDS 102.0-B-4	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Packet Telemetry, November 1995
CCSDS 102.0-B-4	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Packet Telemetry, November 1995
CCSDS 102.0-B-4	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Packet Telemetry, November 1995
CCSDS 102.0-B-4	Consultative Committee for Space Data Systems (CCSDS) Recommendation for Packet Telemetry, November 1995

Military Standards and Guidelines

Military Standards and Guidelines	
Document Number	**Document Title**

Commercial Standards

Commercial Standards	
Document Number	**Document Title**
RFC-1590	Media Type Registration Procedure
RFC-1591	Domain Name System Structure and Delegation

1.1 Acronyms

Acronyms	
Acronym	**Definition**

1.2 Glossary

Glossary	
Term	**Definition**

2 INTERFACE OVERVIEW

This section provides a summary description of the telecommand and telemetry interfaces between the LAT payload and the GLAST spacecraft bus and between the LAT payload and the GBM payload.

2.0 Data Representation Conventions

Unless otherwise specified, the following data representation conventions are applicable for the entire document:

- Bits are numbered from 0 to N, where 0 represents the least significant bit of the field and N represents the most significant bit in a field. TBR - is this appropriate for the RAD750 and spacecraft bus? (BD)
- The data representations in this document treat bytes as the smallest addressable unit size.
- When multiple bytes are combined to form larger data units, the most significant byte of the field is the byte with the lowest address.
- When data are transferred across a serial interface, the bits flow from the most significant bit to the least significant bit.
- Floating-point values are represented in either a 32-bit IEEE-754 format or a 64-bit IEEE-754 format.

Refer to Figure 1-1 and Figure 1-2 for graphical depictions of the data representation conventions.

TBR - depending on the answer above, these pictures may need to change to reflect the convention for bit number assignments.

>>> fig_01.gif

>>> fig_02.gif

Time is represented as a 64-bit value from a time epoch. The time epoch for LAT and the spacecraft bus is 00:00:00.0 hours of January 1st, 2001. That is, the midnight between December 31st, 2000 and January 1st, 2001. The 64-bit value is represented in Figure 3. The 32-bit Timestamp Seconds represents the number of elapsed seconds since the epoch. The Timestamp Sub-Seconds represents the number of micro-seconds elapsed since the last second.

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Timestamp Seconds MSW															
Timestamp Seconds LSW															
Timestamp Sub-Seconds MSW															
Timestamp Sub-Seconds LSW															

2.1 Interface Identification

The LAT interfaces are depicted below.

>>> fig_04.gif

Telecommands to LAT

Interface:	1553
Type:	BC to RT
Source:	Bus Controller - Spacecraft Bus Processor
Destination:	Remote Terminal 3 - LAT SIU
Data Transfer:	Subaddress 27 - 62 Bytes
Transfer Rate:	20 Hz maximum
Transfer Gap:	20 milliseconds minimum

Protocol:	BC to RT data transfer will only take place when a LAT telecommand is ready for transfer.
Message Type:	CCSDS Version 1 Telecommand Packet
Message Size:	62 bytes maximum, even number of bytes, zero filled to 62 bytes
APID Range:	0x640 - 0x69F, directed to LAT 0x701, broadcast from spacecraft bus processor 0x703, broadcast from GBM
Notes:	None

Telecommands from LAT

Interface:	1553
Type:	RT to BC
Source:	Remote Terminal 3 - LAT SIU
Destination:	Bus Controller - Spacecraft Bus Processor
Data Transfer:	Subaddress 29 - 64 Bytes
Transfer Rate:	5 Hz
Transfer Gap:	150 milliseconds minimum to 250 milliseconds maximum
Protocol:	First word of the transfer is a Transfer Request Counter. If the counter has changed since last read by the BC and is non-zero, then the transfer contains a new telecommand from the LAT.
Message Type:	CCSDS Version 1 Telecommand Packet
Message Size:	62 bytes maximum, even number of bytes, zero filled to 62 bytes
APID Range:	0x600 - 0x63F, directed to spacecraft bus processor 0x6A0 - 0x6FF, directed to GBM 0x702, broadcast from LAT
Notes:	The GBM telecommands and LAT broadcast telecommands are routed to the GBM by the spacecraft bus processor.

Housekeeping Telemetry from LAT

Interface:	1553
Type:	RT to BC
Source:	Remote Terminal 3 - LAT SIU
Destination:	Bus Controller - Spacecraft Bus Processor
Data Transfer:	Subaddress 11 through Subaddress 25 - 960 Bytes
Transfer Rate:	4 Hz
Transfer Gap:	500 milliseconds maximum (question - what is the minimum?)
Protocol:	First word of the transfer is a Transfer Request Counter. If the counter has changed since last read by the BC and is non-zero, then the transfer contains new telemetry from the LAT. If the BC successfully reads the 15 subaddresses, then a BC to RT transaction is performed to write one data word to RT-3 subaddress 26. The fifteen BC to RT transactions and the sole RT to BC transactions are all scheduled to occur consecutively. By LAT convention, the housekeeping telemetry will occupy the first 116 bytes available for telemetry transfer (last 62 bytes of SA 11, first 54 bytes of SA 12). Multiple telemetry packets can be transferred during one transaction. The packets must be contiguous. Packets cannot span transactions. If the packet data for a transaction uses 958 or less bytes, then the last packet must be followed by at least two bytes containing zeroes.
Message Type:	CCSDS Advanced Orbital Systems Telemetry Packets
Message Size:	116 bytes
APID Range:	0x200 - 0x25F from LAT

Notes:	LAT Housekeeping telemetry is transmitted when a TDRSS or GN RF link is active. The spacecraft bus processor stores the housekeeping telemetry.

Diagnostic Telemetry from LAT

Interface:	1553
Type:	RT to BC
Source:	Remote Terminal 3 - LAT SIU
Destination:	Bus Controller - Spacecraft Bus Processor
Data Transfer:	Subaddress 11 through Subaddress 25 - 960 Bytes
Transfer Rate:	4 Hz
Transfer Gap:	500 milliseconds maximum
Protocol:	Reference protocol for Housekeeping Telemetry from LAT.
Message Type:	CCSDS Advanced Orbital Systems Telemetry Packets
Message Size:	942 bytes maximum, even number of bytes
APID Range:	0x260 - 0x33F from LAT
Notes:	LAT Diagnostic telemetry is transmitted when a TDRSS or GN RF link is active. The spacecraft bus processor stores the diagnostic telemetry. (question - how does the spacecraft processor rate-control the diagnostic telemetry?)

Alert Telemetry from LAT

Interface:	1553
Type:	RT to BC
Source:	Remote Terminal 3 - LAT SIU
Destination:	Bus Controller - Spacecraft Bus Processor
Data Transfer:	Subaddress 11 through Subaddress 25 - 960 Bytes
Transfer Rate:	4 Hz
Transfer Gap:	500 milliseconds maximum
Protocol:	Reference protocol for Housekeeping Telemetry from LAT.
Message Type:	CCSDS Advanced Orbital Systems Telemetry Packets
Message Size:	942 bytes maximum, even number of bytes
APID Range:	0x340 - 0x39F from LAT
Notes:	LAT Alert telemetry is transmitted when a TDRSS or GN RF link is active. If no RF link is active, then the spacecraft bus will activate the TDRSS link to transmit an alert telemetry packet. The spacecraft bus processor stores the alert telemetry.

Science Telemetry from LAT

Interface:	LVDS
Type:	LAT Protocol (LATp)
Source:	LAT - GASU
Destination:	Spacecraft Bus - Solid State Recorder
Data Transfer:	Contiguous and Encapsulated 128-bit LATp cells. Encapsulation uses a cell announce, cell truncate, and cell parity for each cell. The first cell in contiguous sequence has a cell header.
Transfer Rate:	TBD bits/second
Transfer Gap:	TBD time between LATp transfers
Protocol:	TBD protocol Packets must be a multiple of bytes in length.
Message Type:	CCSDS Advanced Orbital Systems Telemetry Packets
Message Size:	65540 bytes maximum (TBR), must be a multiple of 4 bytes in length
APID Range:	0x3A0 - 0x3FF from LAT

Notes: None

2.2 Unit Identification

The LAT will use the following unit identification codes for external communications (via the 1553 bus) and internal communications (via the LATp bus):

LAT Unit Identification Codes		
LAT Unit	**Description**	**LATp ID**
Not Applicable	SIU(ext): SIU test port.	0x11 (TBR)
0x0	SIU(0): The SIU designated as unit 0. The LAT unit identifier of 0x0 will be used to address the active SIU on the 1553 bus. SIU 0 is active if it is the SIU that is responsive on the 1553 bus. The LATp address for SIU(0) is unique from SIU(1) and is designated as ID 18.	0x12
	SIU(1): The SIU designated as unit 1. The LAT unit identifier of 0x0 will be used to address the active SIU on the 1553 bus. SIU 1 is active if it is the SIU that is responsive on the 1553 bus. The LATp address for SIU(1) is unique from SIU(0) and is designated as ID 19.	0x13
0x1	EPU(0): EPU designated as unit 0.	0x14
0x2	EPU(1): EPU designated as unit 1.	0x15
0x3	EPU(2): EPU designated as unit 2.	0x16
0x6-0xF	Not Assigned	Not Applicable

3 CCSDS PROTOCOL

3.0 Telecommand Packet

The LAT receives CCSDS telecommand packets as input from the SC, across the 1553 bus. The LAT can also send a limited set of telecommands to the SC, across the 1553 bus.

Packet Format

Each Telecommand packet contains three items:

- GLAST CCSDS Telecommand Packet Header
- Packet Command Data
- Packet Checksum (required by Spectrum Astro)

Header Format

The GLAST CCSDS telecommand packets have the standard 6-byte primary header, followed by a 2-byte secondary header. The GLAST CCSDS telecommand header layout is shown below.

Layout:

offset	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0x00	Version = 0			T=1	SH=1	APID										
0x02	3			Sequence Count												
0x04	Packet Length															
0x06	0	Function Code														

Fields:

APID - The CCSDS-packet application identifier.

Function Code - An indicator of the specific command action to perform.

Packet Length - The CCSDS-packet length. Indicates the length of application data, plus the two bytes of secondary header, minus 1.

Sequence Count - The CCSDS-packet sequence count. This running counter increments for each packet generated for a given application type (indicated by the "APID" member).

SF - The CCSDS-packet sequence flags (’00’ = continuation packet in the middle of a sequence; ’01’ = first packet in a sequence; ’10’ = standalone packet that is not part of a sequence).

SH - The CCSDS-packet secondary-header flag. Always 1, indicating that all GLAST telemetry packets have secondary headers.

T - The CCSDS packet-type identifier (’0’ indicates a telemetry packet; ’1’ indicates a telecommand packet).

Version - The CCSDS-packet version identifier. Always ’0’, indicating a Version 1 packet.

Telecommand Application Identifier (APID) Summary

Telecommand Receive Application ID’s

Telecommand packets with telecommand receive application ID values designate commands or other input for which the LAT is the destination. LAT telecommand receive APID’s are in the range 0x640-0x69F. In addition, the LAT also receives broadcast telecommands as input from the SC.

The LAT utilizes the APID range from 0x710-0x76F for internal LAT FSW master-task to slave-task communications. This APID range is used to address message queues associated with slave tasks. The LAT utilizes the APID range from 0x780-0x7DF for internal LAT FSW slave-task to master-task

communications. This APID range is used to address message queues associated with master tasks. These APIDs are for internal communication use only and are not recognized by any LAT external system. Telecommands from the ground (across the 1553 bus) cannot utilize these APID ranges.

Telecommand Receive APIDs			
APID	**Description**	**M -> S**	**S -> M**
0x640	Boot operational telecommands	N/A	N/A
0x641	File Load telecommands	0x711	0x781
0x642	Memory Load telecommands	0x712	0x782
0x643	File Dump telecommands	0x713	0x783
0x644	Memory Dump telecommands	0x714	0x784
0x645	Task Management telecommands	0x715	0x785
0x646	Diagnostic telecommands	0x716	0x786
0x647	Not Assigned	N/A	N/A
0x648	Front end primitive telecommands	N/A	N/A
0x649	Not Assigned	N/A	N/A
0x650	Science operations telecommands	N/A	N/A
0x650-0x65F	Not Assigned	N/A	N/A
0x660	GBM alert telecommands	N/A	N/A
0x661	SC repoint request reply	N/A	N/A
0x663-0x69F	Not Assigned	N/A	N/A
0x662	SC load shed notification	N/A	N/A
0x701	SC broadcast telecommands	N/A	N/A

Telecommand Transmit Application ID's

Telecommand packets with telecommand transmit application ID values designate commands or other input for which the LAT is the source. The APID assignments for such telecommands depend on the destination. The SC destination is designated by APID's in the range 0x600-0x63F.

Telecommand Transmit APIDs	
APID	**Description**
0x600-0x63F	SC repoint request telecommands

3.1 Telemetry Packet Summary

The LAT outputs CCSDS telemetry packets to the SC on both the 1553 bus and the high-speed science data interface.

Packet Format

Each Telemetry packet contains two items:

- GLAST CCSDS Telecommand Packet Header
- Packet Command Data

Header Format

The LAT CCSDS telemetry packets have the standard 6-byte primary header, followed by an 8-byte secondary header specific to the LAT. The LAT CCSDS telemetry header layout is shown below.

Layout:

offset	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0x00	Version = 0			T=0	SH=1	APID										
0x02	SF		Sequence Count													
0x04	Packet Length: TBD															
0x06	Timestamp Seconds MSW															
0x08	Timestamp Seconds LSW															
0x0A	Timestamp Sub-Seconds MSW															
0x0C	Timestamp Sub-Seconds LSW															

APID - The CCSDS-packet application identifier.

Packet Length - The CCSDS-packet length. Indicates the length of application data, plus the two bytes of secondary header, minus 1.

Sequence Count - The CCSDS-packet sequence count. This running counter increments for each packet generated for a given application type (indicated by the "APID" member).

SF - The CCSDS-packet sequence flags (’00’ = continuation packet in the middle of a sequence; ’01’ = first packet in a sequence; ’10’ = standalone packet that is not part of a sequence).

SH - The CCSDS-packet secondary-header flag. Always 1, indicating that all GLAST telemetry packets have secondary headers.

T - The CCSDS packet-type identifier (’0’ indicates a telemetry packet; ’1’ indicates a telecommand packet).

Timestamp - Time is represented as a 64-bit offset from a time epoch. The time epoch for LAT and the spacecraft bus is 00:00:00.0 hours of January 1st, 2001. That is the midnight between December 31st, 2000 and January 1st, 2001. Timestamp Seconds represents the number of elapsed seconds since the epoch. Timestamp Sub-Seconds represents the number of microseconds elapsed since the last second.

Version - The CCSDS-packet version identifier. Always ’0’, indicating a Version 1 packet.

Telemetry Application Identifier (APID) Summary

Housekeeping Telemetry Application ID’s

The housekeeping telemetry packets provide critical status information about the current state of the LAT. The SC treats housekeeping telemetry packets specially, so that the packets are downlinked on the real-time channel.

Housekeeping Telemetry APIDs	
APID	**Description**
0x200	Boot housekeeping telemetry
0x20F	Communication test housekeeping telemetry

Diagnostic Telemetry Appication ID’s

Diagnostic telemetry packets provide status responses to particular commands or internal states of the LAT. The diagnostic telemetry may report general success or error reports, in response to telecommands. The diagnostic telemetry may also report data back in response to a telecommand that requests a dump or explicit status of some kind. Internal errors encountered during normal processing will also generate diagnostic telemetry error packets.

Diagnostic Telemetry APIDs	
APID	**Description**
0x260	File data dump telemetry
0x261	File directory dump telemetry
0x262	File system dump telemetry
0x263	Memory data dump telemetry
0x264	Memory symbol lookup telemetry
0x265	Memory pool status dump telemetry
0x266	Task status dump telemetry
0x26F	Communication test diagnostic telemetry
0x270	TEM register read telemetry
0x271	GTIC register read telemetry
0x272	GCCC register read telemetry
0x273	GCRC register read telemetry
0x274	GCFE register read telemetry
0x275	GTCC register read telemetry
0x276	GTRC register read telemetry
0x277	GTFE register read telemetry
0x278	AEM register read telemetry
0x279	GARC register read telemetry
0x27A	GAFE register read telemetry

Alert Telemetry Appication ID's

Alert Telemetry APIDs	
APID	**Description**
0x34F	Communication test alert telemetry

Science Telemetry Appication ID's

Science Telemetry APIDs	
APID	**Description**
0x3AF	Communication test science telemetry

4 PACKAGES

5 FILE Package

5.0 Overview

The FILE package contains routines that are specific to the file system.

The package supports the following functions:

- RAD750 boot and crate initialization

5.1 Command Packets

5.1.0 `LFILUPLSTART` (1601/0x641:0)

Description:

"File Upload Start" Telecommand Packet

Announces the start of a new file upload. The FILESIZE parameter sets the maximum offset for incomming LFILUPLDATA packets. Upon completion, the file upload state machine is in the LOAD state.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	LFILESIZE ?

5.1.1 `LFILUPLCANCEL` (1601/0x641:1)

Description:

"File Upload Cancel" Telecommand Packet

This command cancels a file upload and resets the file upload state machine to the START state, regardless of the state when the command is received. A new LFILUPLSTART command is neede to begin a new file upload.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT ?

5.1.2 `LFILUPLCOMMIT` (1601/0x641:2)

Description:

"File Upload Commit" Telecommand Packet

This command indicates that the loaded LFILUPLDATA file data contents should be written to storage. The FILEID paramter indicates the storage location. The complete file data set is first validated before successfully entering the COMMIT state. The validate only flag in the FILEFLAGS parameter indicates that validations errors shoud be reported, but that the file upload state machine will remain in the LOAD state regardless of the validation outcome.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT
				?
0x00A	0	16	U12	LFILEFLAGS
				?
0x00C	0	32	U1234	LFILEID
				?

5.1.3 LFILUPLDATA (1601/0x641:3)

Description:

"File Upload Data" Telecommand Packet

Each LFILUPLDATA packet contains a portion of the file data being loaded. The FILEOFFSET parameter is the offset in bytes from the beginning of the file which the first FILEDATA byte in this packet represents. The LFILEUPLDATA packets may be loaded in any order with respect to the offset and may be re-loaded ad many times as wished .

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	LFILEOFFSET
				?
0x00C	0	8	U1	LFILEDATA0
				?
0x00D	0	8	U1	LFILEDATA1
				?
0x00E	0	8	U1	LFILEDATA2
				?
0x00F	0	8	U1	LFILEDATA3
				?
0x010	0	8	U1	LFILEDATA4
				?
0x011	0	8	U1	LFILEDATA5
				?
0x012	0	8	U1	LFILEDATA6
				?
0x013	0	8	U1	LFILEDATA7
				?
0x014	0	8	U1	LFILEDATA8
				?
0x015	0	8	U1	LFILEDATA9
				?
0x016	0	8	U1	LFILEDATA10
				?
0x017	0	8	U1	LFILEDATA11
				?
0x018	0	8	U1	LFILEDATA12
				?
0x019	0	8	U1	LFILEDATA13
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x01A	0	8	U1	LFILEDATA14 ?
0x01B	0	8	U1	LFILEDATA15 ?
0x01C	0	8	U1	LFILEDATA16 ?
0x01D	0	8	U1	LFILEDATA17 ?
0x01E	0	8	U1	LFILEDATA18 ?
0x01F	0	8	U1	LFILEDATA19 ?
0x020	0	8	U1	LFILEDATA20 ?
0x021	0	8	U1	LFILEDATA21 ?
0x022	0	8	U1	LFILEDATA22 ?
0x023	0	8	U1	LFILEDATA23 ?
0x024	0	8	U1	LFILEDATA24 ?
0x025	0	8	U1	LFILEDATA25 ?
0x026	0	8	U1	LFILEDATA26 ?
0x027	0	8	U1	LFILEDATA27 ?
0x028	0	8	U1	LFILEDATA28 ?
0x029	0	8	U1	LFILEDATA29 ?
0x02A	0	8	U1	LFILEDATA30 ?
0x02B	0	8	U1	LFILEDATA31 ?
0x02C	0	8	U1	LFILEDATA32 ?
0x02D	0	8	U1	LFILEDATA33 ?
0x02E	0	8	U1	LFILEDATA34 ?
0x02F	0	8	U1	LFILEDATA35 ?
0x030	0	8	U1	LFILEDATA36 ?
0x031	0	8	U1	LFILEDATA37 ?
0x032	0	8	U1	LFILEDATA38 ?
0x033	0	8	U1	LFILEDATA39 ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x034	0	8	U1	LFILEDATA40 ?
0x035	0	8	U1	LFILEDATA41 ?
0x036	0	8	U1	LFILEDATA42 ?
0x037	0	8	U1	LFILEDATA43 ?
0x038	0	8	U1	LFILEDATA44 ?
0x039	0	8	U1	LFILEDATA45 ?
0x03A	0	8	U1	LFILEDATA46 ?
0x03B	0	8	U1	LFILEDATA47 ?

5.1.4 `LFILUPLEPU` (1601/0x641:4)

Description:

"File Upload to EPU" Telecommand Packet

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT ?
0x00A	0	32	U1234	LFILEID ?

6 ISIS Package

6.0 Overview

The ISIS package contains routines that are specific to the Instrument to Spacecraft Interface Simulator.

6.1 Enumerations

6.1.0 `CMD_CNT_SEL` (Selects count to return as diagnostic telemetry) Enumeration

Description:

Definition:

0 No-op command (`NO_OP`)

1 Count of attitude messages from spacecraft (`ATTITUDE`)

2 Count of ancillary messages from spacecraft (`ANCILLARY`)

3 Count time-tone messages from spacecraft (`TIME_TONE`)

Used by:

???

6.1.1 `EPU_ID` (Enumeration of the EPUs) Enumeration

Description:

Definition:

1 EPU 1 (`EDP_1`)

1 EPU 0 (`EPU_0`)

2 EPU 2 (`EPU_2`)

3 External EPU (`EPU_X`)

Used by:

???

6.1.2 `FILEDEVICE` (Code for file device) Enumeration

Description:

Definition:

0 (`BOOT`)

1 RAM Device (`RAM`)

2 SIB EEPROM Patition 0 (`EE0`)

3 SIB EEPROM Partition 1 (`EE1`)

4 TMP file system (`TMP`)

Used by:

???

6.1.3 `ON_OFF_SELECTOR` (Enumeration of the options for the simple on-off selector) Enumeration

Description:

Definition:

0 Off (`OFF`)

1 On (`ON`)

Used by:

???

6.1.4 `PDU_ID` (Identifies a PDU) Enumeration

Description:

Definition:

0 PDU 0 (`PDU_0`)

1 PDU 1 (`PDU_1`)

Used by:

???

6.1.5 `P_S_SELECTOR` (Enumeration for the simple primary-secondary selector) Enumeration

Description:

Definition:

0 Primary (`PRIMARY`)

1 Secondary (`SECONDARY`)

Used by:

???

6.1.6 `SCIPATTYPE` (Science data generation pattern types) Enumeration

Description:

Definition:

0 Increment by 1 starting with parameter (`INCREMENT`)

1 Constant value using parameter (`CONSTANT`)

2 Random value using parameter as seed (`RANDOM`)

3 Walking one with parameter as width (`WALK1`)

4 Transition 0 to 1 with parameter size (`TRANS01`)

5 Transition 1 to 0 with parameter size (`TRANS10`)

Used by:

???

6.1.7 `SIU_ID` (Enumeration of the possible SIU IDs) Enumeration

Description:

Definition:

0 SIU 0 (aka SIU 7 aka primary SIU) (`SIU_0`)

1 SIU 1 (aka SIU 11 aka secondary SIU) (`SIU_1`)

2 External SIU (`SIU_X`)

Used by:

???

6.2 Ranges

6.2.0 `bits_12_range` (Range for 12-bit fields) Range

Description:

Definition:

Limits 0 - 4095

Used by:

???

6.2.1 `cmd_cnt_range` (Range for command count selection) Range

Description:

Definition:

Limits 0 - 3

Used by:

???

6.2.2 `epu_range` (EPU number range) Range

Description:

Definition:

Limits 0 - 7

Used by:

???

6.2.3 `on_off_range` (On and off selector range) Range

Description:

Definition:

Limits 0 - 1

Used by:

???

6.2.4 `p_s_range` (Primary and secondary selector range) Range

Description:

Definition:

Limits 0 - 1

Used by:

???

6.2.5 `pdu_id_range` (PDU ID range) Range

Description:

Definition:

Limits 0 - 1

Used by:

???

6.2.6 `siu_id_range` (SIU ID range) Range

Description:

Definition:

Limits 0 - 2

Used by:

???

6.2.7 `tem_mask_range` (TEM mask range) Range

Description:

Definition:

Limits 0 - 65535

Used by:

???

7 ITC Package

7.0 Overview

The ITC package defines a common communications standard to unify communications between tasks on either the same or different CPUs. It also provides the services to build up tasks that are capable of communicating according to the standard.

The package supports the following functions:

- CPU internal communications/task frameworks

7.1 Telemetry Packets

7.1.0 `CmdConfirm` (720/0x2D0)

Description:

"Response to command from spacecraft" Telemetry Packet

Command confirmation telemetry packet. When executing spacecraft commands, ITC will autogenerate a diagnostic packet, detailing where and when a command is executed as well as the return code for the execution. To identify the command, ITC reflects the command in toto.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	I1	ITC_NODE; ITC_NODEID
				ITC node ID
0x00F	0	8	I1	ITC_TASK
				ITC task ID
0x010	0	32	U1234	ITC_DEQTIMHI
				Time (most significant 32 bits)
0x014	0	32	U1234	ITC_DEQTIMLO
				Time (least significant 32 bits)
0x018	0	32	U1234	ITC_EXETIMHI
				Time (most significant 32 bits)
0x01C	0	32	U1234	ITC_EXETIMLO
				Time (least significant 32 bits)
0x020	0	32	U1234	ITC_EXESTATUS
				MSG status code
0x024	0	16	U12	ITC_DROPCNFRM
				Number of dropped confirmations
0x026	0	16	U12	ITC_PADDING
				Pad two bytes
0x028	0	3	I1	ITC_CMDHDRVER
				CCSDS version
	3	1	I1	ITC_CMDHDRCMD
				CCSDS command bit
	4	1	I1	ITC_CMDHDRSEC
				CCSDS secondary header flag
	5	11	U12	ITC_CMDHDRAPID
				CCSDS application ID
0x02A	0	2	I1	ITC_CMDHDRSEQ
				CCSDS sequencing bits
	2	14	U12	ITC_CMDHDRCNT

Offset	S	L	Type	ITOS name, attribute(s), and description
				CCSDS sequencing count
0x02C	0	16	U12	ITC_CMDHDRLEN
				CCSDS telecommand packet length
0x02E	0	1	I1	ITC_CMDHDRPAD
				Padding
	1	15	U12	ITC_CMDHDRFNC
				CCSDS telecommand function code

7.2 Discretes

7.2.0 `ITC_NODEID` (Discrete list of ITC nodes) Discrete

Description:

Discrete list of ITC nodes

Definition:

-1 Unknown node (guard value) (`ITC_NID_UNKNOWN`)

0 SIU (`ITC_NID_SIU`)

1 EPU 0 (`ITC_NID_EPU0`)

2 EPU 1 (`ITC_NID_EPU1`)

3 EPU 2 (`ITC_NID_EPU2`)

4 EPU 3 (external crate) (`ITC_NID_EPU3`)

5 Science Data Interface (to Solid State Recorder) (`ITC_NID_SDI`)

6 Spacecraft (`ITC_NID_SC`)

7 CPU broadcast class (`ITC_NID_BCST`)

Used by:

???

7.2.1 `ITC_TASKID` (Discrete list of ITC task IDs) Discrete

Description:

Discrete list of ITC task IDs

Definition:

-1 Unknown task (guard value) (`ITC_TID_UNKNOWN`)

0 The anonymous task (`ITC_TID_ANON`)

1 LAT computer manager task (`ITC_TID_LCM`)

2 LAT file system master task (`ITC_TID_LFS_M`)

3 LAT file system slave task (`LAT_TID_LFS_S`)

4 LAT housekeeping master task (`LAT_TID_LHK_M`)

5 LAT housekeeping slave task (`ITC_TID_LHK_S`)

6 LAT instrument manager master task (`LAT_TID_LIM_M`)

7 LAT instrument manager slave task (`LAT_TID_LIM_S`)

8 LAT spacecraft messages master task (`LAT_TID_LSM_M`)

9 LAT spacecraft messages slave task (`ITC_TID_LSM_S`)

10 LAT software watchdog master task (`ITC_TID_LSW_M`)

11 LAT software watchdog slave task (`ITC_TID_LSW_S`)

12 LAT charge injection calibration master task (`ITC_TID_LCI_M`)

13 LAT charge injection calibration slave task (`ITC_TID_LCI_S`)

20 ISIS command task (`ITC_TID_ICT`)

30 LCB Tx service task (`ITS_SID_LCS`)

31 CTDB Tx service task (`ITC_SID_CTS`)

32 LCB Rx driver callback (`ITC_LID_LCX`)

33 CTDB Rx driver callback (`ITC_LID_CTX`)

34 ITC hook into message task (`ITC_LID_MSG`)

Used by:

???

8 LCM Package

8.0 Overview

The LCM package handles the management of a single LAT computer.

8.1 Command Packets

8.1.0 `msgResponse` (1685/0x695:0)

Description:

"Change task messaging level" Telecommand Packet

Change the messaging level of a task

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	8	I1	LCM_NODEID ?
0x009	0	8	I1	LCM_TASKID ?
0x00A	0	8	I1	LCM_MSGLEVEL ?
0x00B	0	8	I1	LCM_MSGPAD1 ?

8.1.1 `cmdResponse` (1685/0x695:1)

Description:

"Change task command confirmation level" Telecommand Packet

Change the spacecraft command confirmation level of a task

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	8	I1	LCM_NODEID ?
0x009	0	8	I1	LCM_TASKID ?
0x00A	0	8	I1	LCM_CMDCLASS ?
0x00B	0	8	I1	LCM_CMDACTION ?
0x00C	0	8	I1	LCM_CMDLEVEL ?
0x00D	0	8	I1	LCM_CMDPAD1 ?

9 LFS Package

9.0 Overview

The LFS package provides the "standard" file operations (copy, delete, move, list directory, ...), plus a few "unusual" operations (file upload and file dump via spacecraft).

9.0.0 `LLFSFILEDELETE` (1608/0x648:0)

Description:

"File Delete" Telecommand Packet

Deletes the file specified by FILEID.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT
				?
0x00A	0	16	U12	LPAD16
				?
0x00C	0	32	U1234	LFILEID
				?

9.0.1 `LLFSFILECOPY` (1608/0x648:1)

Description:

"File Copy Local" Telecommand Packet

Copies a file locally on the same CPU. The FILEID values specify the source and destination file locations.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT
				?
0x00A	0	16	U12	LPAD16
				?
0x00C	0	32	U1234	LSRCFILEID
				?
0x010	0	32	U1234	LDESTFILEID
				?

9.0.2 `LLFSDIRCREATE` (1608/0x648:2)

Description:

"Directory Create" Telecommand Packet

Creates a directory specified by the FILEID path. Only the device and directory number portions of the file ID are used.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT
				?
0x00A	0	16	U12	LPAD16
				?
0x00C	0	32	U1234	LFILEID
				?

9.0.3 LLFSDIRDELETE (1608/0x648:3)

Description:

"Directory Delete" Telecommand Packet

Deletes a directory specified by the FILEID path. Only the device and directory number portions of the file ID are used.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT
				?
0x00A	0	16	U12	LPAD16
				?
0x00C	0	32	U1234	LFILEID
				?

9.0.4 LLFSFILEDUMPC (1608/0x648:4)

Description:

"File Dump CTDB" Telecommand Packet

Dumps the contents of a file indicated by FILEID to the CTDB interface. The file data is sent as a series of LLFSDUMPTCTBD telemetery packets.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT
				?
0x00A	0	16	U12	LPAD16
				?
0x00C	0	32	U1234	LFILEID
				?

9.0.5 `LLFSDIRDUMP` (1608/0x648:5)

Description:

"Directory Dump" Telecommand Packet

Dumps the contents of a directory specified by the FILEID path. Only the device and directory number portions of the file ID are used. If the directory value is '127', a series of LLFSROOTLIST telemetry packets are sent, one for each directory in the root directory of the device. Otherwise, a series of LLFSDIRLIST telemetry packets are sent, one for each file in the directory.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT
				?
0x00A	0	16	U12	LPAD16
				?
0x00C	0	32	U1234	LFILEID
				?

9.0.6 `LLFSSYSSTATUS` (1608/0x648:6)

Description:

"File System Status" Telecommand Packet

Report the current status of a file system partition indicated by FILEID. Only the device number portion of the file storage ID is used. The status is returned as a single LLFSSYSLIST telemetry packet.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LLATUNIT
				?
0x00A	0	16	U12	LPAD16
				?
0x00C	0	32	U1234	LFILEID
				?

9.1 Telemetry Packets

9.1.0 `LLFSDIRLIST` (792/0x318)

Description:

"Directory Listing Report" Telemetry Packet

Lists one file entry in a LAT file system sub-directory. One of these packets is sent in response to a LLFSDIRDUMP telecommand for each file in the target directory.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	4	U12	LLFSDDMPLATUNIT

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
	4	12	U12	LLFSDDMPXACTID
				?
0x010	0	1	I1	LLFSDDMPARCFLG
				?
	1	1	U12	LLFSDDMPDIRFLG
				?
	2	1	U12	LLFSDDMPROFLG
				?
0x012	0	3	U1234	LLFSDDMPFDEV
				?
	3	7	U1234	LLFSDDMPFDIR
				?
	10	22	U1234	LLFSDDMPFFILE
				?
0x016	0	32	U1234	LLFSDDMPFSTIME
				?
0x01A	0	32	U1234	LLFSDDMPFSSIZE
				?
0x01E	0	32	U1234	LLFSDDMPFSBLKS
				?
0x022	0	8	U1	LLFSDDMPFHDR0
				?
0x023	0	8	U1	LLFSDDMPFHDR1
				?
0x024	0	8	U1	LLFSDDMPFHDR2
				?
0x025	0	8	U1	LLFSDDMPFHDR3
				?
0x026	0	8	U1	LLFSDDMPFHDR4
				?
0x027	0	8	U1	LLFSDDMPFHDR5
				?
0x028	0	8	U1	LLFSDDMPFHDR6
				?
0x029	0	8	U1	LLFSDDMPFHDR7
				?
0x02A	0	8	U1	LLFSDDMPFHDR8
				?
0x02B	0	8	U1	LLFSDDMPFHDR9
				?
0x02C	0	8	U1	LLFSDDMPFHDR10
				?
0x02D	0	8	U1	LLFSDDMPFHDR11
				?
0x02E	0	8	U1	LLFSDDMPFHDR12
				?
0x02F	0	8	U1	LLFSDDMPFHDR13
				?
0x030	0	8	U1	LLFSDDMPFHDR14
				?
0x031	0	8	U1	LLFSDDMPFHDR15

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x032	0	8	U1	LLFSDDMPFHDR16
				?
0x033	0	8	U1	LLFSDDMPFHDR17
				?
0x034	0	8	U1	LLFSDDMPFHDR18
				?
0x035	0	8	U1	LLFSDDMPFHDR19
				?
0x036	0	8	U1	LLFSDDMPFHDR20
				?
0x037	0	8	U1	LLFSDDMPFHDR21
				?
0x038	0	8	U1	LLFSDDMPFHDR22
				?
0x039	0	8	U1	LLFSDDMPFHDR23
				?
0x03A	0	8	U1	LLFSDDMPFHDR24
				?
0x03B	0	8	U1	LLFSDDMPFHDR25
				?
0x03C	0	8	U1	LLFSDDMPFHDR26
				?
0x03D	0	8	U1	LLFSDDMPFHDR27
				?
0x03E	0	8	U1	LLFSDDMPFHDR28
				?
0x03F	0	8	U1	LLFSDDMPFHDR29
				?
0x040	0	8	U1	LLFSDDMPFHDR30
				?
0x041	0	8	U1	LLFSDDMPFHDR31
				?

9.1.1 `LLFSROOTLIST` (793/0x319)

Description:

"Root Listing Report" Telemetry Packet

Lists one file entry in a LAT file system root directory. One of these packets is sent in response to a LLFSDIRDUMP (directory = '127') telecommand for each sub-directory in the target device.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	4	U12	LLFSRDMPLATUNIT
				?
	4	12	U12	LLFSRDMPXACTID
				?
0x010	0	1	I1	LLFSRDMPARCFLG
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
	1	1	U12	LLFSRDMPDIRFLG ?
	2	1	U12	LLFSRDMPROFLG ?
0x012	0	3	U1234	LLFSRDMPFDEV ?
	3	7	U1234	LLFSRDMPFDIR ?
	10	22	U1234	LLFSRDMPFFILE ?
0x016	0	32	U1234	LLFSRDMPFSTIME ?
0x01A	0	32	U1234	LLFSRDMPFSSIZE ?
0x01E	0	32	U1234	LLFSRDMPFSBLKS ?

9.1.2 LLFSSYSLIST (794/0x31A)

Description:

"File System Status Report" Telemetry Packet

Provides the status of a LAT file system partition. One of these packets is sent in response to the LLFSSYSSTATUS telecommand.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	4	U12	LLFSSYSSLATUNIT ?
	4	12	U12	LLFSSYSSXACTID ?
0x010	0	3	U1234	LLFSSYSSFDEV ?
	3	7	U1234	LLFSSYSSFDIR ?
	10	22	U1234	LLFSSYSSFFILE ?
0x014	0	32	U1234	LLFSSYSSBLKSIZE ?
0x018	0	32	U1234	LLFSSYSSBLKFREE ?
0x01C	0	32	U1234	LLFSSYSSBLKTOT ?

9.1.3 `LLFSDUMPCTDB` (795/0x31B)

Description:

"File Dump Data CTDB" Telemetry Packet

Contains a portion of a file data dump to the CTDB interface. The FILESTOFFSET and FILEDUMP-SIZE members provide the offset into the file and size of the current packet's data contents (FILEDATA). The FILESTID gives the storage location of the file.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	4	U12	LLFSFDMPLATUNIT ?
	4	12	U12	LLFSFDMPXACTID ?
0x010	0	3	U1234	LLFSFDMPFDEV ?
	3	7	U1234	LLFSFDMPFDIR ?
	10	22	U1234	LLFSFDMPFFILE ?
0x014	0	32	U1234	LLFSFDMPOFFSET ?
0x018	0	32	U1234	LLFSFDMPSIZE ?
0x01C	0	8	U1	LLFSFDMPDATA0 ?
0x01D	0	8	U1	LLFSFDMPDATA1 ?
0x01E	0	8	U1	LLFSFDMPDATA2 ?
0x01F	0	8	U1	LLFSFDMPDATA3 ?
0x020	0	8	U1	LLFSFDMPDATA4 ?
0x021	0	8	U1	LLFSFDMPDATA5 ?
0x022	0	8	U1	LLFSFDMPDATA6 ?
0x023	0	8	U1	LLFSFDMPDATA7 ?
0x024	0	8	U1	LLFSFDMPDATA8 ?
0x025	0	8	U1	LLFSFDMPDATA9 ?
0x026	0	8	U1	LLFSFDMPDATA10 ?
0x027	0	8	U1	LLFSFDMPDATA11 ?
0x028	0	8	U1	LLFSFDMPDATA12 ?
0x029	0	8	U1	LLFSFDMPDATA13

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x02A	0	8	U1	LLFSFDMPDATA14
				?
0x02B	0	8	U1	LLFSFDMPDATA15
				?
0x02C	0	8	U1	LLFSFDMPDATA16
				?
0x02D	0	8	U1	LLFSFDMPDATA17
				?
0x02E	0	8	U1	LLFSFDMPDATA18
				?
0x02F	0	8	U1	LLFSFDMPDATA19
				?
0x030	0	8	U1	LLFSFDMPDATA20
				?
0x031	0	8	U1	LLFSFDMPDATA21
				?
0x032	0	8	U1	LLFSFDMPDATA22
				?
0x033	0	8	U1	LLFSFDMPDATA23
				?
0x034	0	8	U1	LLFSFDMPDATA24
				?
0x035	0	8	U1	LLFSFDMPDATA25
				?
0x036	0	8	U1	LLFSFDMPDATA26
				?
0x037	0	8	U1	LLFSFDMPDATA27
				?
0x038	0	8	U1	LLFSFDMPDATA28
				?
0x039	0	8	U1	LLFSFDMPDATA29
				?
0x03A	0	8	U1	LLFSFDMPDATA30
				?
0x03B	0	8	U1	LLFSFDMPDATA31
				?
0x03C	0	8	U1	LLFSFDMPDATA32
				?
0x03D	0	8	U1	LLFSFDMPDATA33
				?
0x03E	0	8	U1	LLFSFDMPDATA34
				?
0x03F	0	8	U1	LLFSFDMPDATA35
				?
0x040	0	8	U1	LLFSFDMPDATA36
				?
0x041	0	8	U1	LLFSFDMPDATA37
				?
0x042	0	8	U1	LLFSFDMPDATA38
				?
0x043	0	8	U1	LLFSFDMPDATA39

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x044	0	8	U1	LLFSFDMPDATA40
				?
0x045	0	8	U1	LLFSFDMPDATA41
				?
0x046	0	8	U1	LLFSFDMPDATA42
				?
0x047	0	8	U1	LLFSFDMPDATA43
				?
0x048	0	8	U1	LLFSFDMPDATA44
				?
0x049	0	8	U1	LLFSFDMPDATA45
				?
0x04A	0	8	U1	LLFSFDMPDATA46
				?
0x04B	0	8	U1	LLFSFDMPDATA47
				?
0x04C	0	8	U1	LLFSFDMPDATA48
				?
0x04D	0	8	U1	LLFSFDMPDATA49
				?
0x04E	0	8	U1	LLFSFDMPDATA50
				?
0x04F	0	8	U1	LLFSFDMPDATA51
				?
0x050	0	8	U1	LLFSFDMPDATA52
				?
0x051	0	8	U1	LLFSFDMPDATA53
				?
0x052	0	8	U1	LLFSFDMPDATA54
				?
0x053	0	8	U1	LLFSFDMPDATA55
				?
0x054	0	8	U1	LLFSFDMPDATA56
				?
0x055	0	8	U1	LLFSFDMPDATA57
				?
0x056	0	8	U1	LLFSFDMPDATA58
				?
0x057	0	8	U1	LLFSFDMPDATA59
				?
0x058	0	8	U1	LLFSFDMPDATA60
				?
0x059	0	8	U1	LLFSFDMPDATA61
				?
0x05A	0	8	U1	LLFSFDMPDATA62
				?
0x05B	0	8	U1	LLFSFDMPDATA63
				?
0x05C	0	8	U1	LLFSFDMPDATA64
				?
0x05D	0	8	U1	LLFSFDMPDATA65

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x05E	0	8	U1	LLFSFDMPDATA66
				?
0x05F	0	8	U1	LLFSFDMPDATA67
				?
0x060	0	8	U1	LLFSFDMPDATA68
				?
0x061	0	8	U1	LLFSFDMPDATA69
				?
0x062	0	8	U1	LLFSFDMPDATA70
				?
0x063	0	8	U1	LLFSFDMPDATA71
				?
0x064	0	8	U1	LLFSFDMPDATA72
				?
0x065	0	8	U1	LLFSFDMPDATA73
				?
0x066	0	8	U1	LLFSFDMPDATA74
				?
0x067	0	8	U1	LLFSFDMPDATA75
				?
0x068	0	8	U1	LLFSFDMPDATA76
				?
0x069	0	8	U1	LLFSFDMPDATA77
				?
0x06A	0	8	U1	LLFSFDMPDATA78
				?
0x06B	0	8	U1	LLFSFDMPDATA79
				?
0x06C	0	8	U1	LLFSFDMPDATA80
				?
0x06D	0	8	U1	LLFSFDMPDATA81
				?
0x06E	0	8	U1	LLFSFDMPDATA82
				?
0x06F	0	8	U1	LLFSFDMPDATA83
				?
0x070	0	8	U1	LLFSFDMPDATA84
				?
0x071	0	8	U1	LLFSFDMPDATA85
				?
0x072	0	8	U1	LLFSFDMPDATA86
				?
0x073	0	8	U1	LLFSFDMPDATA87
				?
0x074	0	8	U1	LLFSFDMPDATA88
				?
0x075	0	8	U1	LLFSFDMPDATA89
				?
0x076	0	8	U1	LLFSFDMPDATA90
				?
0x077	0	8	U1	LLFSFDMPDATA91

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x078	0	8	U1	LLFSFDMPDATA92
				?
0x079	0	8	U1	LLFSFDMPDATA93
				?
0x07A	0	8	U1	LLFSFDMPDATA94
				?
0x07B	0	8	U1	LLFSFDMPDATA95
				?
0x07C	0	8	U1	LLFSFDMPDATA96
				?
0x07D	0	8	U1	LLFSFDMPDATA97
				?
0x07E	0	8	U1	LLFSFDMPDATA98
				?
0x07F	0	8	U1	LLFSFDMPDATA99
				?
0x080	0	8	U1	LLFSFDMPDATA100
				?
0x081	0	8	U1	LLFSFDMPDATA101
				?
0x082	0	8	U1	LLFSFDMPDATA102
				?
0x083	0	8	U1	LLFSFDMPDATA103
				?
0x084	0	8	U1	LLFSFDMPDATA104
				?
0x085	0	8	U1	LLFSFDMPDATA105
				?
0x086	0	8	U1	LLFSFDMPDATA106
				?
0x087	0	8	U1	LLFSFDMPDATA107
				?
0x088	0	8	U1	LLFSFDMPDATA108
				?
0x089	0	8	U1	LLFSFDMPDATA109
				?
0x08A	0	8	U1	LLFSFDMPDATA110
				?
0x08B	0	8	U1	LLFSFDMPDATA111
				?
0x08C	0	8	U1	LLFSFDMPDATA112
				?
0x08D	0	8	U1	LLFSFDMPDATA113
				?
0x08E	0	8	U1	LLFSFDMPDATA114
				?
0x08F	0	8	U1	LLFSFDMPDATA115
				?
0x090	0	8	U1	LLFSFDMPDATA116
				?
0x091	0	8	U1	LLFSFDMPDATA117

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x092	0	8	U1	LLFSFDMPDATA118
				?
0x093	0	8	U1	LLFSFDMPDATA119
				?
0x094	0	8	U1	LLFSFDMPDATA120
				?
0x095	0	8	U1	LLFSFDMPDATA121
				?
0x096	0	8	U1	LLFSFDMPDATA122
				?
0x097	0	8	U1	LLFSFDMPDATA123
				?
0x098	0	8	U1	LLFSFDMPDATA124
				?
0x099	0	8	U1	LLFSFDMPDATA125
				?
0x09A	0	8	U1	LLFSFDMPDATA126
				?
0x09B	0	8	U1	LLFSFDMPDATA127
				?
0x09C	0	8	U1	LLFSFDMPDATA128
				?
0x09D	0	8	U1	LLFSFDMPDATA129
				?
0x09E	0	8	U1	LLFSFDMPDATA130
				?
0x09F	0	8	U1	LLFSFDMPDATA131
				?
0x0A0	0	8	U1	LLFSFDMPDATA132
				?
0x0A1	0	8	U1	LLFSFDMPDATA133
				?
0x0A2	0	8	U1	LLFSFDMPDATA134
				?
0x0A3	0	8	U1	LLFSFDMPDATA135
				?
0x0A4	0	8	U1	LLFSFDMPDATA136
				?
0x0A5	0	8	U1	LLFSFDMPDATA137
				?
0x0A6	0	8	U1	LLFSFDMPDATA138
				?
0x0A7	0	8	U1	LLFSFDMPDATA139
				?
0x0A8	0	8	U1	LLFSFDMPDATA140
				?
0x0A9	0	8	U1	LLFSFDMPDATA141
				?
0x0AA	0	8	U1	LLFSFDMPDATA142
				?
0x0AB	0	8	U1	LLFSFDMPDATA143

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x0AC	0	8	U1	LLFSFDMPDATA144
				?
0x0AD	0	8	U1	LLFSFDMPDATA145
				?
0x0AE	0	8	U1	LLFSFDMPDATA146
				?
0x0AF	0	8	U1	LLFSFDMPDATA147
				?
0x0B0	0	8	U1	LLFSFDMPDATA148
				?
0x0B1	0	8	U1	LLFSFDMPDATA149
				?
0x0B2	0	8	U1	LLFSFDMPDATA150
				?
0x0B3	0	8	U1	LLFSFDMPDATA151
				?
0x0B4	0	8	U1	LLFSFDMPDATA152
				?
0x0B5	0	8	U1	LLFSFDMPDATA153
				?
0x0B6	0	8	U1	LLFSFDMPDATA154
				?
0x0B7	0	8	U1	LLFSFDMPDATA155
				?
0x0B8	0	8	U1	LLFSFDMPDATA156
				?
0x0B9	0	8	U1	LLFSFDMPDATA157
				?
0x0BA	0	8	U1	LLFSFDMPDATA158
				?
0x0BB	0	8	U1	LLFSFDMPDATA159
				?
0x0BC	0	8	U1	LLFSFDMPDATA160
				?
0x0BD	0	8	U1	LLFSFDMPDATA161
				?
0x0BE	0	8	U1	LLFSFDMPDATA162
				?
0x0BF	0	8	U1	LLFSFDMPDATA163
				?
0x0C0	0	8	U1	LLFSFDMPDATA164
				?
0x0C1	0	8	U1	LLFSFDMPDATA165
				?
0x0C2	0	8	U1	LLFSFDMPDATA166
				?
0x0C3	0	8	U1	LLFSFDMPDATA167
				?
0x0C4	0	8	U1	LLFSFDMPDATA168
				?
0x0C5	0	8	U1	LLFSFDMPDATA169

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x0C6	0	8	U1	LLFSFDMPDATA170
				?
0x0C7	0	8	U1	LLFSFDMPDATA171
				?
0x0C8	0	8	U1	LLFSFDMPDATA172
				?
0x0C9	0	8	U1	LLFSFDMPDATA173
				?
0x0CA	0	8	U1	LLFSFDMPDATA174
				?
0x0CB	0	8	U1	LLFSFDMPDATA175
				?
0x0CC	0	8	U1	LLFSFDMPDATA176
				?
0x0CD	0	8	U1	LLFSFDMPDATA177
				?
0x0CE	0	8	U1	LLFSFDMPDATA178
				?
0x0CF	0	8	U1	LLFSFDMPDATA179
				?
0x0D0	0	8	U1	LLFSFDMPDATA180
				?
0x0D1	0	8	U1	LLFSFDMPDATA181
				?
0x0D2	0	8	U1	LLFSFDMPDATA182
				?
0x0D3	0	8	U1	LLFSFDMPDATA183
				?
0x0D4	0	8	U1	LLFSFDMPDATA184
				?
0x0D5	0	8	U1	LLFSFDMPDATA185
				?
0x0D6	0	8	U1	LLFSFDMPDATA186
				?
0x0D7	0	8	U1	LLFSFDMPDATA187
				?
0x0D8	0	8	U1	LLFSFDMPDATA188
				?
0x0D9	0	8	U1	LLFSFDMPDATA189
				?
0x0DA	0	8	U1	LLFSFDMPDATA190
				?
0x0DB	0	8	U1	LLFSFDMPDATA191
				?
0x0DC	0	8	U1	LLFSFDMPDATA192
				?
0x0DD	0	8	U1	LLFSFDMPDATA193
				?
0x0DE	0	8	U1	LLFSFDMPDATA194
				?
0x0DF	0	8	U1	LLFSFDMPDATA195

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x0E0	0	8	U1	LLFSFDMPDATA196
				?
0x0E1	0	8	U1	LLFSFDMPDATA197
				?
0x0E2	0	8	U1	LLFSFDMPDATA198
				?
0x0E3	0	8	U1	LLFSFDMPDATA199
				?
0x0E4	0	8	U1	LLFSFDMPDATA200
				?
0x0E5	0	8	U1	LLFSFDMPDATA201
				?
0x0E6	0	8	U1	LLFSFDMPDATA202
				?
0x0E7	0	8	U1	LLFSFDMPDATA203
				?
0x0E8	0	8	U1	LLFSFDMPDATA204
				?
0x0E9	0	8	U1	LLFSFDMPDATA205
				?
0x0EA	0	8	U1	LLFSFDMPDATA206
				?
0x0EB	0	8	U1	LLFSFDMPDATA207
				?
0x0EC	0	8	U1	LLFSFDMPDATA208
				?
0x0ED	0	8	U1	LLFSFDMPDATA209
				?
0x0EE	0	8	U1	LLFSFDMPDATA210
				?
0x0EF	0	8	U1	LLFSFDMPDATA211
				?
0x0F0	0	8	U1	LLFSFDMPDATA212
				?
0x0F1	0	8	U1	LLFSFDMPDATA213
				?
0x0F2	0	8	U1	LLFSFDMPDATA214
				?
0x0F3	0	8	U1	LLFSFDMPDATA215
				?
0x0F4	0	8	U1	LLFSFDMPDATA216
				?
0x0F5	0	8	U1	LLFSFDMPDATA217
				?
0x0F6	0	8	U1	LLFSFDMPDATA218
				?
0x0F7	0	8	U1	LLFSFDMPDATA219
				?
0x0F8	0	8	U1	LLFSFDMPDATA220
				?
0x0F9	0	8	U1	LLFSFDMPDATA221

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x0FA	0	8	U1	LLFSFDMPDATA222
				?
0x0FB	0	8	U1	LLFSFDMPDATA223
				?
0x0FC	0	8	U1	LLFSFDMPDATA224
				?
0x0FD	0	8	U1	LLFSFDMPDATA225
				?
0x0FE	0	8	U1	LLFSFDMPDATA226
				?
0x0FF	0	8	U1	LLFSFDMPDATA227
				?
0x100	0	8	U1	LLFSFDMPDATA228
				?
0x101	0	8	U1	LLFSFDMPDATA229
				?
0x102	0	8	U1	LLFSFDMPDATA230
				?
0x103	0	8	U1	LLFSFDMPDATA231
				?
0x104	0	8	U1	LLFSFDMPDATA232
				?
0x105	0	8	U1	LLFSFDMPDATA233
				?
0x106	0	8	U1	LLFSFDMPDATA234
				?
0x107	0	8	U1	LLFSFDMPDATA235
				?
0x108	0	8	U1	LLFSFDMPDATA236
				?
0x109	0	8	U1	LLFSFDMPDATA237
				?
0x10A	0	8	U1	LLFSFDMPDATA238
				?
0x10B	0	8	U1	LLFSFDMPDATA239
				?
0x10C	0	8	U1	LLFSFDMPDATA240
				?
0x10D	0	8	U1	LLFSFDMPDATA241
				?
0x10E	0	8	U1	LLFSFDMPDATA242
				?
0x10F	0	8	U1	LLFSFDMPDATA243
				?
0x110	0	8	U1	LLFSFDMPDATA244
				?
0x111	0	8	U1	LLFSFDMPDATA245
				?
0x112	0	8	U1	LLFSFDMPDATA246
				?
0x113	0	8	U1	LLFSFDMPDATA247

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x114	0	8	U1	LLFSFDMPDATA248
				?
0x115	0	8	U1	LLFSFDMPDATA249
				?
0x116	0	8	U1	LLFSFDMPDATA250
				?
0x117	0	8	U1	LLFSFDMPDATA251
				?
0x118	0	8	U1	LLFSFDMPDATA252
				?
0x119	0	8	U1	LLFSFDMPDATA253
				?
0x11A	0	8	U1	LLFSFDMPDATA254
				?
0x11B	0	8	U1	LLFSFDMPDATA255
				?
0x11C	0	8	U1	LLFSFDMPDATA256
				?
0x11D	0	8	U1	LLFSFDMPDATA257
				?
0x11E	0	8	U1	LLFSFDMPDATA258
				?
0x11F	0	8	U1	LLFSFDMPDATA259
				?
0x120	0	8	U1	LLFSFDMPDATA260
				?
0x121	0	8	U1	LLFSFDMPDATA261
				?
0x122	0	8	U1	LLFSFDMPDATA262
				?
0x123	0	8	U1	LLFSFDMPDATA263
				?
0x124	0	8	U1	LLFSFDMPDATA264
				?
0x125	0	8	U1	LLFSFDMPDATA265
				?
0x126	0	8	U1	LLFSFDMPDATA266
				?
0x127	0	8	U1	LLFSFDMPDATA267
				?
0x128	0	8	U1	LLFSFDMPDATA268
				?
0x129	0	8	U1	LLFSFDMPDATA269
				?
0x12A	0	8	U1	LLFSFDMPDATA270
				?
0x12B	0	8	U1	LLFSFDMPDATA271
				?
0x12C	0	8	U1	LLFSFDMPDATA272
				?
0x12D	0	8	U1	LLFSFDMPDATA273

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x12E	0	8	U1	LLFSFDMPDATA274
				?
0x12F	0	8	U1	LLFSFDMPDATA275
				?
0x130	0	8	U1	LLFSFDMPDATA276
				?
0x131	0	8	U1	LLFSFDMPDATA277
				?
0x132	0	8	U1	LLFSFDMPDATA278
				?
0x133	0	8	U1	LLFSFDMPDATA279
				?
0x134	0	8	U1	LLFSFDMPDATA280
				?
0x135	0	8	U1	LLFSFDMPDATA281
				?
0x136	0	8	U1	LLFSFDMPDATA282
				?
0x137	0	8	U1	LLFSFDMPDATA283
				?
0x138	0	8	U1	LLFSFDMPDATA284
				?
0x139	0	8	U1	LLFSFDMPDATA285
				?
0x13A	0	8	U1	LLFSFDMPDATA286
				?
0x13B	0	8	U1	LLFSFDMPDATA287
				?
0x13C	0	8	U1	LLFSFDMPDATA288
				?
0x13D	0	8	U1	LLFSFDMPDATA289
				?
0x13E	0	8	U1	LLFSFDMPDATA290
				?
0x13F	0	8	U1	LLFSFDMPDATA291
				?
0x140	0	8	U1	LLFSFDMPDATA292
				?
0x141	0	8	U1	LLFSFDMPDATA293
				?
0x142	0	8	U1	LLFSFDMPDATA294
				?
0x143	0	8	U1	LLFSFDMPDATA295
				?
0x144	0	8	U1	LLFSFDMPDATA296
				?
0x145	0	8	U1	LLFSFDMPDATA297
				?
0x146	0	8	U1	LLFSFDMPDATA298
				?
0x147	0	8	U1	LLFSFDMPDATA299

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x148	0	8	U1	LLFSFDMPDATA300
				?
0x149	0	8	U1	LLFSFDMPDATA301
				?
0x14A	0	8	U1	LLFSFDMPDATA302
				?
0x14B	0	8	U1	LLFSFDMPDATA303
				?
0x14C	0	8	U1	LLFSFDMPDATA304
				?
0x14D	0	8	U1	LLFSFDMPDATA305
				?
0x14E	0	8	U1	LLFSFDMPDATA306
				?
0x14F	0	8	U1	LLFSFDMPDATA307
				?
0x150	0	8	U1	LLFSFDMPDATA308
				?
0x151	0	8	U1	LLFSFDMPDATA309
				?
0x152	0	8	U1	LLFSFDMPDATA310
				?
0x153	0	8	U1	LLFSFDMPDATA311
				?
0x154	0	8	U1	LLFSFDMPDATA312
				?
0x155	0	8	U1	LLFSFDMPDATA313
				?
0x156	0	8	U1	LLFSFDMPDATA314
				?
0x157	0	8	U1	LLFSFDMPDATA315
				?
0x158	0	8	U1	LLFSFDMPDATA316
				?
0x159	0	8	U1	LLFSFDMPDATA317
				?
0x15A	0	8	U1	LLFSFDMPDATA318
				?
0x15B	0	8	U1	LLFSFDMPDATA319
				?
0x15C	0	8	U1	LLFSFDMPDATA320
				?
0x15D	0	8	U1	LLFSFDMPDATA321
				?
0x15E	0	8	U1	LLFSFDMPDATA322
				?
0x15F	0	8	U1	LLFSFDMPDATA323
				?
0x160	0	8	U1	LLFSFDMPDATA324
				?
0x161	0	8	U1	LLFSFDMPDATA325

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x162	0	8	U1	LLFSFDMPDATA326
				?
0x163	0	8	U1	LLFSFDMPDATA327
				?
0x164	0	8	U1	LLFSFDMPDATA328
				?
0x165	0	8	U1	LLFSFDMPDATA329
				?
0x166	0	8	U1	LLFSFDMPDATA330
				?
0x167	0	8	U1	LLFSFDMPDATA331
				?
0x168	0	8	U1	LLFSFDMPDATA332
				?
0x169	0	8	U1	LLFSFDMPDATA333
				?
0x16A	0	8	U1	LLFSFDMPDATA334
				?
0x16B	0	8	U1	LLFSFDMPDATA335
				?
0x16C	0	8	U1	LLFSFDMPDATA336
				?
0x16D	0	8	U1	LLFSFDMPDATA337
				?
0x16E	0	8	U1	LLFSFDMPDATA338
				?
0x16F	0	8	U1	LLFSFDMPDATA339
				?
0x170	0	8	U1	LLFSFDMPDATA340
				?
0x171	0	8	U1	LLFSFDMPDATA341
				?
0x172	0	8	U1	LLFSFDMPDATA342
				?
0x173	0	8	U1	LLFSFDMPDATA343
				?
0x174	0	8	U1	LLFSFDMPDATA344
				?
0x175	0	8	U1	LLFSFDMPDATA345
				?
0x176	0	8	U1	LLFSFDMPDATA346
				?
0x177	0	8	U1	LLFSFDMPDATA347
				?
0x178	0	8	U1	LLFSFDMPDATA348
				?
0x179	0	8	U1	LLFSFDMPDATA349
				?
0x17A	0	8	U1	LLFSFDMPDATA350
				?
0x17B	0	8	U1	LLFSFDMPDATA351

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x17C	0	8	U1	LLFSFDMPDATA352
				?
0x17D	0	8	U1	LLFSFDMPDATA353
				?
0x17E	0	8	U1	LLFSFDMPDATA354
				?
0x17F	0	8	U1	LLFSFDMPDATA355
				?
0x180	0	8	U1	LLFSFDMPDATA356
				?
0x181	0	8	U1	LLFSFDMPDATA357
				?
0x182	0	8	U1	LLFSFDMPDATA358
				?
0x183	0	8	U1	LLFSFDMPDATA359
				?
0x184	0	8	U1	LLFSFDMPDATA360
				?
0x185	0	8	U1	LLFSFDMPDATA361
				?
0x186	0	8	U1	LLFSFDMPDATA362
				?
0x187	0	8	U1	LLFSFDMPDATA363
				?
0x188	0	8	U1	LLFSFDMPDATA364
				?
0x189	0	8	U1	LLFSFDMPDATA365
				?
0x18A	0	8	U1	LLFSFDMPDATA366
				?
0x18B	0	8	U1	LLFSFDMPDATA367
				?
0x18C	0	8	U1	LLFSFDMPDATA368
				?
0x18D	0	8	U1	LLFSFDMPDATA369
				?
0x18E	0	8	U1	LLFSFDMPDATA370
				?
0x18F	0	8	U1	LLFSFDMPDATA371
				?
0x190	0	8	U1	LLFSFDMPDATA372
				?
0x191	0	8	U1	LLFSFDMPDATA373
				?
0x192	0	8	U1	LLFSFDMPDATA374
				?
0x193	0	8	U1	LLFSFDMPDATA375
				?
0x194	0	8	U1	LLFSFDMPDATA376
				?
0x195	0	8	U1	LLFSFDMPDATA377

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x196	0	8	U1	LLFSFDMPDATA378
				?
0x197	0	8	U1	LLFSFDMPDATA379
				?
0x198	0	8	U1	LLFSFDMPDATA380
				?
0x199	0	8	U1	LLFSFDMPDATA381
				?
0x19A	0	8	U1	LLFSFDMPDATA382
				?
0x19B	0	8	U1	LLFSFDMPDATA383
				?
0x19C	0	8	U1	LLFSFDMPDATA384
				?
0x19D	0	8	U1	LLFSFDMPDATA385
				?
0x19E	0	8	U1	LLFSFDMPDATA386
				?
0x19F	0	8	U1	LLFSFDMPDATA387
				?
0x1A0	0	8	U1	LLFSFDMPDATA388
				?
0x1A1	0	8	U1	LLFSFDMPDATA389
				?

10 LHK Package

10.0 Overview

The LHK package provides monitoring facilities that are orthogonal and asynchronous to the monitoring that is based on the contents of physics events being read from the instrument. This is much more fundamental monitoring (e.g., temperatures, voltages, currents). LHK runs its own task.

The package supports the following functions:

- Housekeeping data stream

10.1 Command Packets

10.1.0 `ReqDiagPacket` (1616/0x650:0)

Description:

"Request a Housekeeping Diagnostic Packet" Telecommand Packet

Sends a request to the housekeeping system to send a packets using the diagnostic channel.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	LHKDIAGAPID ?
0x00C	0	32	U1234	LHKDIAGCOUNT ?
0x010	0	32	U1234	LHKDIAGINTERVAL ?

10.1.1 `SysReset` (1616/0x650:1)

Description:

"System Reset" Telecommand Packet

Resets the housekeeping system using configuration file parameters. File IDs can be null, which specifies loading of default configuration.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	LHKCFGFILE0 ?
0x00C	0	32	U1234	LHKCFGFILE1 ?

10.1.2 `StopDiag` (1616/0x650:2)

Description:

"Stop Diagnostic Sample" Telecommand Packet

Terminates the current diagnostic sample run.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description

10.2 Ranges

10.2.0 `LHKAPIDRNG` (LHK APID Range) Range

Description:

Valid range of APIDs for LHK

Definition:

Limits 528 - 555

Used by:

???

10.2.1 `LHKDIAGINTV` (Diagnostic Interval) Range

Description:

Range in milliseconds for a diagnostic sample interval.

Definition:

Limits 100 - 4000

Used by:

???

10.2.2 `LHKDIAGPKTCNT` (Diagnostic Packet Count) Range

Description:

Specifies the range of valid diagnostic sample packet counts.

Definition:

Limits 1 - 64

Used by:

???

10.3 Telemetry Packets

10.3.0 `TemEnvPwr0` (528/0x210)

Description:

"TEM Power Packet 0" Telemetry Packet

Contains power specific ADC values for TEMs 0, 1, and 2.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKT0TKR25VDST; LHKSTATUSBITS
				TEM0 TKR 2.5V digital status
	4	12	U12	LHKT0TKR25VD
				TEM0 TKR 2.5V digital raw
0x016	0	4	U12	LHKT0TKR25IDST; LHKSTATUSBITS
				TEM0 TKR 2.5I digital status
	4	12	U12	LHKT0TKR25ID
				TEM0 TKR 2.5I digital raw
0x018	0	4	U12	LHKT0TKR15VAAST; LHKSTATUSBITS
				TEM0 TKR 1.5V analog A status
	4	12	U12	LHKT0TKR15VAA
				TEM0 TKR 1.5V analog A raw
0x01A	0	4	U12	LHKT0TKR15IAAST
				TEM0 TKR 1.5I analog A status
	4	12	U12	LHKT0TKR15IAA
				TEM0 TKR 1.5I analog A raw
0x01C	0	4	U12	LHKT0TKR25VABST
				TEM0 TKR 2.5V analog B status
	4	12	U12	LHKT0TKR25VAB
				TEM0 TKR 2.5V analog B raw
0x01E	0	4	U12	LHKT0TKR25IABST
				TEM0 TKR 2.5I analog B status
	4	12	U12	LHKT0TKR25IAB
				TEM0 TKR 2.5I analog B raw
0x020	0	4	U12	LHKT0TKRBIASVST; LHKSTATUSBITS
				TEM0 TKR Bias V status
	4	12	U12	LHKT0TKRBIASV
				TEM0 TKR Bias V raw
0x022	0	4	U12	LHKT0TKRBIASIST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM0 TKR Bias I status
	4	12	U12	LHKT0TKRBIASI
				TEM0 TKR Bias I raw
0x024	0	4	U12	LHKT0CAL33VDST; LHKSTATUSBITS
				TEM0 CAL 3.3V digital status
	4	12	U12	LHKT0CAL33VD
				TEM0 CAL 3.3V digital raw
0x026	0	4	U12	LHKT0CAL33IDST; LHKSTATUSBITS
				TEM0 CAL 3.3I digital status
	4	12	U12	LHKT0CAL33ID
				TEM0 CAL 3.3I digital raw
0x028	0	4	U12	LHKT0CAL33VAST; LHKSTATUSBITS
				TEM0 CAL 3.3V analog status
	4	12	U12	LHKT0CAL33VA
				TEM0 CAL 3.3V analog raw
0x02A	0	4	U12	LHKT0CAL33IAST
				TEM0 CAL 3.3I analog status
	4	12	U12	LHKT0CAL33IA
				TEM0 CAL 3.3I analog raw
0x02C	0	4	U12	LHKT0CALBIASVST
				TEM0 CAL Bias V status
	4	12	U12	LHKT0CALBIASV
				TEM0 CAL Bias V raw
0x02E	0	4	U12	LHKT0CALBIASIST
				TEM0 CAL Bias I status
	4	12	U12	LHKT0CALBIASI
				TEM0 CAL Bias I raw
0x030	0	4	U12	LHKT0TEM33VST; LHKSTATUSBITS
				TEM0 TEM 3.3V status
	4	12	U12	LHKT0TEM33V
				TEM0 TEM 3.3V raw
0x032	0	4	U12	LHKT0TEM33IST; LHKSTATUSBITS
				TEM0 3.3I digital status
	4	12	U12	LHKT0TEM33I
				TEM0 3.3I digital raw
0x034	0	4	U12	LHKT1TKR25VDST; LHKSTATUSBITS
				TEM1 TKR 2.5V digital status
	4	12	U12	LHKT1TKR25VD
				TEM1 TKR 2.5V digital raw
0x036	0	4	U12	LHKT1TKR25IDST; LHKSTATUSBITS
				TEM1 TKR 2.5I digital status
	4	12	U12	LHKT1TKR25ID
				TEM1 TKR 2.5I digital raw
0x038	0	4	U12	LHKT1TKR15VAAST; LHKSTATUSBITS
				TEM1 TKR 1.5V analog A status
	4	12	U12	LHKT1TKR15VAA
				TEM1 TKR 1.5V analog A raw
0x03A	0	4	U12	LHKT1TKR15IAAST
				TEM1 TKR 1.5I analog A status
	4	12	U12	LHKT1TKR15IAA
				TEM1 TKR 1.5I analog A raw
0x03C	0	4	U12	LHKT1TKR25VABST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM1 TKR 2.5V analog B status
	4	12	U12	LHKT1TKR25VAB
				TEM1 TKR 2.5V analog B raw
0x03E	0	4	U12	LHKT1TKR25IABST
				TEM1 TKR 2.5I analog B status
	4	12	U12	LHKT1TKR25IAB
				TEM1 TKR 2.5I analog B raw
0x040	0	4	U12	LHKT1TKRBIASVST; LHKSTATUSBITS
				TEM1 TKR Bias V status
	4	12	U12	LHKT1TKRBIASV
				TEM1 TKR Bias V raw
0x042	0	4	U12	LHKT1TKRBIASIST; LHKSTATUSBITS
				TEM1 TKR Bias I status
	4	12	U12	LHKT1TKRBIASI
				TEM1 TKR Bias I raw
0x044	0	4	U12	LHKT1CAL33VDST; LHKSTATUSBITS
				TEM1 CAL 3.3V digital status
	4	12	U12	LHKT1CAL33VD
				TEM1 CAL 3.3V digital raw
0x046	0	4	U12	LHKT1CAL33IDST; LHKSTATUSBITS
				TEM1 CAL 3.3I digital status
	4	12	U12	LHKT1CAL33ID
				TEM1 CAL 3.3I digital raw
0x048	0	4	U12	LHKT1CAL33VAST; LHKSTATUSBITS
				TEM1 CAL 3.3V analog status
	4	12	U12	LHKT1CAL33VA
				TEM1 CAL 3.3V analog raw
0x04A	0	4	U12	LHKT1CAL33IAST
				TEM1 CAL 3.3I analog status
	4	12	U12	LHKT1CAL33IA
				TEM1 CAL 3.3I analog raw
0x04C	0	4	U12	LHKT1CALBIASVST
				TEM1 CAL Bias V status
	4	12	U12	LHKT1CALBIASV
				TEM1 CAL Bias V raw
0x04E	0	4	U12	LHKT1CALBIASIST
				TEM1 CAL Bias I status
	4	12	U12	LHKT1CALBIASI
				TEM1 CAL Bias I raw
0x050	0	4	U12	LHKT1TEM33VST; LHKSTATUSBITS
				TEM1 TEM 3.3V digital status
	4	12	U12	LHKT1TEM33V
				TEM1 TEM 3.3V digital raw
0x052	0	4	U12	LHKT1TEM33IST; LHKSTATUSBITS
				TEM1 TEM 3.3I digital status
	4	12	U12	LHKT1TEM33I
				TEM1 TEM 3.3I digital raw
0x054	0	4	U12	LHKT2TKR25VDST; LHKSTATUSBITS
				TEM2 TKR 2.5V digital status
	4	12	U12	LHKT2TKR25VD
				TEM2 TKR 2.5V digital raw
0x056	0	4	U12	LHKT2TKR25IDST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM2 TKR 2.5I digital status
	4	12	U12	LHKT2TKR25ID
				TEM2 TKR 2.5I digital raw
0x058	0	4	U12	LHKT2TKR15VAAST; LHKSTATUSBITS
				TEM2 TKR 1.5V analog A status
	4	12	U12	LHKT2TKR15VAA
				TEM2 TKR 1.5V analog A raw
0x05A	0	4	U12	LHKT2TKR15IAAST
				TEM2 TKR 1.5I analog A status
	4	12	U12	LHKT2TKR15IAA
				TEM2 TKR 1.5I analog A raw
0x05C	0	4	U12	LHKT2TKR25VABST
				TEM2 TKR 2.5V analog B status
	4	12	U12	LHKT2TKR25VAB
				TEM2 TKR 2.5V analog B raw
0x05E	0	4	U12	LHKT2TKR25IABST
				TEM2 TKR 2.5I analog B status
	4	12	U12	LHKT2TKR25IAB
				TEM2 TKR 2.5I analog B raw
0x060	0	4	U12	LHKT2TKRBIASVST; LHKSTATUSBITS
				TEM2 TKR Bias V status
	4	12	U12	LHKT2TKRBIASV
				TEM2 TKR Bias V raw
0x062	0	4	U12	LHKT2TKRBIASIST; LHKSTATUSBITS
				TEM2 TKR Bias I status
	4	12	U12	LHKT2TKRBIASI
				TEM2 TKR Bias I raw
0x064	0	4	U12	LHKT2CAL33VDST; LHKSTATUSBITS
				TEM2 CAL 3.3V digital status
	4	12	U12	LHKT2CAL33VD
				TEM2 CAL 3.3V digital raw
0x066	0	4	U12	LHKT2CAL33IDST; LHKSTATUSBITS
				TEM2 CAL 3.3I digital status
	4	12	U12	LHKT2CAL33ID
				TEM2 CAL 3.3I digital raw
0x068	0	4	U12	LHKT2CAL33VAST; LHKSTATUSBITS
				TEM2 CAL 3.3V analog status
	4	12	U12	LHKT2CAL33VA
				TEM2 CAL 3.3V analog raw
0x06A	0	4	U12	LHKT2CAL33IAST
				TEM2 CAL 3.3I analog status
	4	12	U12	LHKT2CAL33IA
				TEM2 CAL 3.3I analog raw
0x06C	0	4	U12	LHKT2CALBIASVST
				TEM2 CAL Bias V status
	4	12	U12	LHKT2CALBIASV
				TEM2 CAL Bias V raw
0x06E	0	4	U12	LHKT2CALBIASIST
				TEM2 CAL Bias I status
	4	12	U12	LHKT2CALBIASI
				TEM2 CAL Bias I raw
0x070	0	4	U12	LHKT2TEM33VST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM2 TEM 3.3V digital status
	4	12	U12	LHKT2TEM33V
				TEM2 TEM 3.3V digital raw
0x072	0	4	U12	LHKT2TEM33IST; LHKSTATUSBITS
				TEM2 TEM 3.3I digital status
	4	12	U12	LHKT2TEM33I
				TEM2 TEM 3.3I digital raw

10.3.1 `TemEnvPwr1` (529/0x211)

Description:

"TEM Power Packet 1" Telemetry Packet

Contains power specific ADC values for TEMs 3,4, and 5.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKT3TKR25VDST; LHKSTATUSBITS
				TEM3 TKR 2.5V digital status
	4	12	U12	LHKT3TKR25VD
				TEM3 TKR 2.5V digital raw
0x016	0	4	U12	LHKT3TKR25IDST; LHKSTATUSBITS
				TEM3 TKR 2.5I digital status
	4	12	U12	LHKT3TKR25ID
				TEM3 TKR 2.5I digital raw
0x018	0	4	U12	LHKT3TKR15VAAST; LHKSTATUSBITS
				TEM3 TKR 1.5V analog A status
	4	12	U12	LHKT3TKR15VAA
				TEM3 TKR 1.5V analog A raw
0x01A	0	4	U12	LHKT3TKR15IAAST
				TEM3 TKR 1.5I analog A status
	4	12	U12	LHKT3TKR15IAA
				TEM3 TKR 1.5I analog A raw
0x01C	0	4	U12	LHKT3TKR25VABST
				TEM3 TKR 2.5V analog B status
	4	12	U12	LHKT3TKR25VAB
				TEM3 TKR 2.5V analog B raw
0x01E	0	4	U12	LHKT3TKR25IABST
				TEM3 TKR 2.5I analog B status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKT3TKR25IAB TEM3 TKR 2.5I analog B raw
0x020	0	4	U12	LHKT3TKRBIASVST; LHKSTATUSBITS TEM3 TKR Bias V status
	4	12	U12	LHKT3TKRBIASV TEM3 TKR Bias V raw
0x022	0	4	U12	LHKT3TKRBIASIST; LHKSTATUSBITS TEM3 TKR Bias I status
	4	12	U12	LHKT3TKRBIASI TEM3 TKR Bias I raw
0x024	0	4	U12	LHKT3CAL33VDST; LHKSTATUSBITS TEM3 CAL 3.3V digital status
	4	12	U12	LHKT3CAL33VD TEM3 CAL 3.3V digital raw
0x026	0	4	U12	LHKT3CAL33IDST; LHKSTATUSBITS TEM3 CAL 3.3I digital status
	4	12	U12	LHKT3CAL33ID TEM3 CAL 3.3I digital raw
0x028	0	4	U12	LHKT3CAL33VAST; LHKSTATUSBITS TEM3 CAL 3.3V analog status
	4	12	U12	LHKT3CAL33VA TEM3 CAL 3.3V analog raw
0x02A	0	4	U12	LHKT3CAL33IAST TEM3 CAL 3.3I analog status
	4	12	U12	LHKT3CAL33IA TEM3 CAL 3.3I analog raw
0x02C	0	4	U12	LHKT3CALBIASVST TEM3 CAL Bias V status
	4	12	U12	LHKT3CALBIASV TEM3 CAL Bias V raw
0x02E	0	4	U12	LHKT3CALBIASIST TEM3 CAL Bias I status
	4	12	U12	LHKT3CALBIASI TEM3 CAL Bias I raw
0x030	0	4	U12	LHKT3TEM33VST; LHKSTATUSBITS TEM3 TEM 3.3V status
	4	12	U12	LHKT3TEM33V TEM3 TEM 3.3V raw
0x032	0	4	U12	LHKT3TEM33IST; LHKSTATUSBITS TEM3 3.3I digital status
	4	12	U12	LHKT3TEM33I TEM3 3.3I digital raw
0x034	0	4	U12	LHKT4TKR25VDST; LHKSTATUSBITS TEM4 TKR 2.5V digital status
	4	12	U12	LHKT4TKR25VD TEM4 TKR 2.5V digital raw
0x036	0	4	U12	LHKT4TKR25IDST; LHKSTATUSBITS TEM4 TKR 2.5I digital status
	4	12	U12	LHKT4TKR25ID TEM4 TKR 2.5I digital raw
0x038	0	4	U12	LHKT4TKR15VAAST; LHKSTATUSBITS TEM4 TKR 1.5V analog A status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKT4TKR15VAA TEM4 TKR 1.5V analog A raw
0x03A	0	4	U12	LHKT4TKR15IAAST TEM4 TKR 1.5I analog A status
	4	12	U12	LHKT4TKR15IAA TEM4 TKR 1.5I analog A raw
0x03C	0	4	U12	LHKT4TKR25VABST TEM4 TKR 2.5V analog B status
	4	12	U12	LHKT4TKR25VAB TEM4 TKR 2.5V analog B raw
0x03E	0	4	U12	LHKT4TKR25IABST TEM4 TKR 2.5I analog B status
	4	12	U12	LHKT4TKR25IAB TEM4 TKR 2.5I analog B raw
0x040	0	4	U12	LHKT4TKRBIASVST; LHKSTATUSBITS TEM4 TKR Bias V status
	4	12	U12	LHKT4TKRBIASV TEM4 TKR Bias V raw
0x042	0	4	U12	LHKT4TKRBIASIST; LHKSTATUSBITS TEM4 TKR Bias I status
	4	12	U12	LHKT4TKRBIASI TEM4 TKR Bias I raw
0x044	0	4	U12	LHKT4CAL33VDST; LHKSTATUSBITS TEM4 CAL 3.3V digital status
	4	12	U12	LHKT4CAL33VD TEM4 CAL 3.3V digital raw
0x046	0	4	U12	LHKT4CAL33IDST; LHKSTATUSBITS TEM4 CAL 3.3I digital status
	4	12	U12	LHKT4CAL33ID TEM4 CAL 3.3I digital raw
0x048	0	4	U12	LHKT4CAL33VAST; LHKSTATUSBITS TEM4 CAL 3.3V analog status
	4	12	U12	LHKT4CAL33VA TEM4 CAL 3.3V analog raw
0x04A	0	4	U12	LHKT4CAL33IAST TEM4 CAL 3.3I analog status
	4	12	U12	LHKT4CAL33IA TEM4 CAL 3.3I analog raw
0x04C	0	4	U12	LHKT4CALBIASVST TEM4 CAL Bias V status
	4	12	U12	LHKT4CALBIASV TEM4 CAL Bias V raw
0x04E	0	4	U12	LHKT4CALBIASIST TEM4 CAL Bias I status
	4	12	U12	LHKT4CALBIASI TEM4 CAL Bias I raw
0x050	0	4	U12	LHKT4TEM33VST; LHKSTATUSBITS TEM4 TEM 3.3V digital status
	4	12	U12	LHKT4TEM33V TEM4 TEM 3.3V digital raw
0x052	0	4	U12	LHKT4TEM33IST; LHKSTATUSBITS TEM4 TEM 3.3I digital status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKT4TEM33I
				TEM4 TEM 3.3I digital raw
0x054	0	4	U12	LHKT5TKR25VDST; LHKSTATUSBITS
				TEM5 TKR 2.5V digital status
	4	12	U12	LHKT5TKR25VD
				TEM5 TKR 2.5V digital raw
0x056	0	4	U12	LHKT5TKR25IDST; LHKSTATUSBITS
				TEM5 TKR 2.5I digital status
	4	12	U12	LHKT5TKR25ID
				TEM5 TKR 2.5I digital raw
0x058	0	4	U12	LHKT5TKR15VAAST; LHKSTATUSBITS
				TEM5 TKR 1.5V analog A status
	4	12	U12	LHKT5TKR15VAA
				TEM5 TKR 1.5V analog A raw
0x05A	0	4	U12	LHKT5TKR15IAAST
				TEM5 TKR 1.5I analog A status
	4	12	U12	LHKT5TKR15IAA
				TEM5 TKR 1.5I analog A raw
0x05C	0	4	U12	LHKT5TKR25VABST
				TEM5 TKR 2.5V analog B status
	4	12	U12	LHKT5TKR25VAB
				TEM5 TKR 2.5V analog B raw
0x05E	0	4	U12	LHKT5TKR25IABST
				TEM5 TKR 2.5I analog B status
	4	12	U12	LHKT5TKR25IAB
				TEM5 TKR 2.5I analog B raw
0x060	0	4	U12	LHKT5TKRBIASVST; LHKSTATUSBITS
				TEM5 TKR Bias V status
	4	12	U12	LHKT5TKRBIASV
				TEM5 TKR Bias V raw
0x062	0	4	U12	LHKT5TKRBIASIST; LHKSTATUSBITS
				TEM5 TKR Bias I status
	4	12	U12	LHKT5TKRBIASI
				TEM5 TKR Bias I raw
0x064	0	4	U12	LHKT5CAL33VDST; LHKSTATUSBITS
				TEM5 CAL 3.3V digital status
	4	12	U12	LHKT5CAL33VD
				TEM5 CAL 3.3V digital raw
0x066	0	4	U12	LHKT5CAL33IDST; LHKSTATUSBITS
				TEM5 CAL 3.3I digital status
	4	12	U12	LHKT5CAL33ID
				TEM5 CAL 3.3I digital raw
0x068	0	4	U12	LHKT5CAL33VAST; LHKSTATUSBITS
				TEM5 CAL 3.3V analog status
	4	12	U12	LHKT5CAL33VA
				TEM5 CAL 3.3V analog raw
0x06A	0	4	U12	LHKT5CAL33IAST
				TEM5 CAL 3.3I analog status
	4	12	U12	LHKT5CAL33IA
				TEM5 CAL 3.3I analog raw
0x06C	0	4	U12	LHKT5CALBIASVST
				TEM5 CAL Bias V status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKT5CALBIASV TEM5 CAL Bias V raw
0x06E	0	4	U12	LHKT5CALBIASIST TEM5 CAL Bias I status
	4	12	U12	LHKT5CALBIASI TEM5 CAL Bias I raw
0x070	0	4	U12	LHKT5TEM33VST; LHKSTATUSBITS TEM5 TEM 3.3V digital status
	4	12	U12	LHKT5TEM33V TEM5 TEM 3.3V digital raw
0x072	0	4	U12	LHKT5TEM33IST; LHKSTATUSBITS TEM5 TEM 3.3I digital status
	4	12	U12	LHKT5TEM33I TEM5 TEM 3.3I digital raw

10.3.2 `TemEnvPwr2` (530/0x212)

Description:

"TEM Power Packet 2" Telemetry Packet

Contains power specific ADC values for TEMs 6, 7, and 8.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKT6TKR25VDST; LHKSTATUSBITS TEM6 TKR 2.5V digital status
	4	12	U12	LHKT6TKR25VD TEM6 TKR 2.5V digital raw
0x016	0	4	U12	LHKT6TKR25IDST; LHKSTATUSBITS TEM6 TKR 2.5I digital status
	4	12	U12	LHKT6TKR25ID TEM6 TKR 2.5I digital raw
0x018	0	4	U12	LHKT6TKR15VAAST; LHKSTATUSBITS TEM6 TKR 1.5V analog A status
	4	12	U12	LHKT6TKR15VAA TEM6 TKR 1.5V analog A raw
0x01A	0	4	U12	LHKT6TKR15IAAST TEM6 TKR 1.5I analog A status
	4	12	U12	LHKT6TKR15IAA

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM6 TKR 1.5I analog A raw
0x01C	0	4	U12	LHKT6TKR25VABST
				TEM6 TKR 2.5V analog B status
	4	12	U12	LHKT6TKR25VAB
				TEM6 TKR 2.5V analog B raw
0x01E	0	4	U12	LHKT6TKR25IABST
				TEM6 TKR 2.5I analog B status
	4	12	U12	LHKT6TKR25IAB
				TEM6 TKR 2.5I analog B raw
0x020	0	4	U12	LHKT6TKRBIASVST; LHKSTATUSBITS
				TEM6 TKR Bias V status
	4	12	U12	LHKT6TKRBIASV
				TEM6 TKR Bias V raw
0x022	0	4	U12	LHKT6TKRBIASIST; LHKSTATUSBITS
				TEM6 TKR Bias I status
	4	12	U12	LHKT6TKRBIASI
				TEM6 TKR Bias I raw
0x024	0	4	U12	LHKT6CAL33VDST; LHKSTATUSBITS
				TEM6 CAL 3.3V digital status
	4	12	U12	LHKT6CAL33VD
				TEM6 CAL 3.3V digital raw
0x026	0	4	U12	LHKT6CAL33IDST; LHKSTATUSBITS
				TEM6 CAL 3.3I digital status
	4	12	U12	LHKT6CAL33ID
				TEM6 CAL 3.3I digital raw
0x028	0	4	U12	LHKT6CAL33VAST; LHKSTATUSBITS
				TEM6 CAL 3.3V analog status
	4	12	U12	LHKT6CAL33VA
				TEM6 CAL 3.3V analog raw
0x02A	0	4	U12	LHKT6CAL33IAST
				TEM6 CAL 3.3I analog status
	4	12	U12	LHKT6CAL33IA
				TEM6 CAL 3.3I analog raw
0x02C	0	4	U12	LHKT6CALBIASVST
				TEM6 CAL Bias V status
	4	12	U12	LHKT6CALBIASV
				TEM6 CAL Bias V raw
0x02E	0	4	U12	LHKT6CALBIASIST
				TEM6 CAL Bias I status
	4	12	U12	LHKT6CALBIASI
				TEM6 CAL Bias I raw
0x030	0	4	U12	LHKT6TEM33VST; LHKSTATUSBITS
				TEM6 TEM 3.3V status
	4	12	U12	LHKT6TEM33V
				TEM6 TEM 3.3V raw
0x032	0	4	U12	LHKT6TEM33IST; LHKSTATUSBITS
				TEM6 3.3I digital status
	4	12	U12	LHKT6TEM33I
				TEM6 3.3I digital raw
0x034	0	4	U12	LHKT7TKR25VDST; LHKSTATUSBITS
				TEM7 TKR 2.5V digital status
	4	12	U12	LHKT7TKR25VD

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM7 TKR 2.5V digital raw
0x036	0	4	U12	LHKT7TKR25IDST; LHKSTATUSBITS
				TEM7 TKR 2.5I digital status
	4	12	U12	LHKT7TKR25ID
				TEM7 TKR 2.5I digital raw
0x038	0	4	U12	LHKT7TKR15VAAST; LHKSTATUSBITS
				TEM7 TKR 1.5V analog A status
	4	12	U12	LHKT7TKR15VAA
				TEM7 TKR 1.5V analog A raw
0x03A	0	4	U12	LHKT7TKR15IAAST
				TEM7 TKR 1.5I analog A status
	4	12	U12	LHKT7TKR15IAA
				TEM7 TKR 1.5I analog A raw
0x03C	0	4	U12	LHKT7TKR25VABST
				TEM7 TKR 2.5V analog B status
	4	12	U12	LHKT7TKR25VAB
				TEM7 TKR 2.5V analog B raw
0x03E	0	4	U12	LHKT7TKR25IABST
				TEM7 TKR 2.5I analog B status
	4	12	U12	LHKT7TKR25IAB
				TEM7 TKR 2.5I analog B raw
0x040	0	4	U12	LHKT7TKRBIASVST; LHKSTATUSBITS
				TEM7 TKR Bias V status
	4	12	U12	LHKT7TKRBIASV
				TEM7 TKR Bias V raw
0x042	0	4	U12	LHKT7TKRBIASIST; LHKSTATUSBITS
				TEM7 TKR Bias I status
	4	12	U12	LHKT7TKRBIASI
				TEM7 TKR Bias I raw
0x044	0	4	U12	LHKT7CAL33VDST; LHKSTATUSBITS
				TEM7 CAL 3.3V digital status
	4	12	U12	LHKT7CAL33VD
				TEM7 CAL 3.3V digital raw
0x046	0	4	U12	LHKT7CAL33IDST; LHKSTATUSBITS
				TEM7 CAL 3.3I digital status
	4	12	U12	LHKT7CAL33ID
				TEM7 CAL 3.3I digital raw
0x048	0	4	U12	LHKT7CAL33VAST; LHKSTATUSBITS
				TEM7 CAL 3.3V analog status
	4	12	U12	LHKT7CAL33VA
				TEM7 CAL 3.3V analog raw
0x04A	0	4	U12	LHKT7CAL33IAST
				TEM7 CAL 3.3I analog status
	4	12	U12	LHKT7CAL33IA
				TEM7 CAL 3.3I analog raw
0x04C	0	4	U12	LHKT7CALBIASVST
				TEM7 CAL Bias V status
	4	12	U12	LHKT7CALBIASV
				TEM7 CAL Bias V raw
0x04E	0	4	U12	LHKT7CALBIASIST
				TEM7 CAL Bias I status
	4	12	U12	LHKT7CALBIASI

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM7 CAL Bias I raw
0x050	0	4	U12	LHKT7TEM33VST; LHKSTATUSBITS
				TEM7 TEM 3.3V digital status
	4	12	U12	LHKT7TEM33V
				TEM7 TEM 3.3V digital raw
0x052	0	4	U12	LHKT7TEM33IST; LHKSTATUSBITS
				TEM7 TEM 3.3I digital status
	4	12	U12	LHKT7TEM33I
				TEM7 TEM 3.3I digital raw
0x054	0	4	U12	LHKT8TKR25VDST; LHKSTATUSBITS
				TEM8 TKR 2.5V digital status
	4	12	U12	LHKT8TKR25VD
				TEM8 TKR 2.5V digital raw
0x056	0	4	U12	LHKT8TKR25IDST; LHKSTATUSBITS
				TEM8 TKR 2.5I digital status
	4	12	U12	LHKT8TKR25ID
				TEM8 TKR 2.5I digital raw
0x058	0	4	U12	LHKT8TKR15VAAST; LHKSTATUSBITS
				TEM8 TKR 1.5V analog A status
	4	12	U12	LHKT8TKR15VAA
				TEM8 TKR 1.5V analog A raw
0x05A	0	4	U12	LHKT8TKR15IAAST
				TEM8 TKR 1.5I analog A status
	4	12	U12	LHKT8TKR15IAA
				TEM8 TKR 1.5I analog A raw
0x05C	0	4	U12	LHKT8TKR25VABST
				TEM8 TKR 2.5V analog B status
	4	12	U12	LHKT8TKR25VAB
				TEM8 TKR 2.5V analog B raw
0x05E	0	4	U12	LHKT8TKR25IABST
				TEM8 TKR 2.5I analog B status
	4	12	U12	LHKT8TKR25IAB
				TEM8 TKR 2.5I analog B raw
0x060	0	4	U12	LHKT8TKRBIASVST; LHKSTATUSBITS
				TEM8 TKR Bias V status
	4	12	U12	LHKT8TKRBIASV
				TEM8 TKR Bias V raw
0x062	0	4	U12	LHKT8TKRBIASIST; LHKSTATUSBITS
				TEM8 TKR Bias I status
	4	12	U12	LHKT8TKRBIASI
				TEM8 TKR Bias I raw
0x064	0	4	U12	LHKT8CAL33VDST; LHKSTATUSBITS
				TEM8 CAL 3.3V digital status
	4	12	U12	LHKT8CAL33VD
				TEM8 CAL 3.3V digital raw
0x066	0	4	U12	LHKT8CAL33IDST; LHKSTATUSBITS
				TEM8 CAL 3.3I digital status
	4	12	U12	LHKT8CAL33ID
				TEM8 CAL 3.3I digital raw
0x068	0	4	U12	LHKT8CAL33VAST; LHKSTATUSBITS
				TEM8 CAL 3.3V analog status
	4	12	U12	LHKT8CAL33VA

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM8 CAL 3.3V analog raw
0x06A	0	4	U12	LHKT8CAL33IAST
				TEM8 CAL 3.3I analog status
	4	12	U12	LHKT8CAL33IA
				TEM8 CAL 3.3I analog raw
0x06C	0	4	U12	LHKT8CALBIASVST
				TEM8 CAL Bias V status
	4	12	U12	LHKT8CALBIASV
				TEM8 CAL Bias V raw
0x06E	0	4	U12	LHKT8CALBIASIST
				TEM8 CAL Bias I status
	4	12	U12	LHKT8CALBIASI
				TEM8 CAL Bias I raw
0x070	0	4	U12	LHKT8TEM33VST; LHKSTATUSBITS
				TEM8 TEM 3.3V digital status
	4	12	U12	LHKT8TEM33V
				TEM8 TEM 3.3V digital raw
0x072	0	4	U12	LHKT8TEM33IST; LHKSTATUSBITS
				TEM8 TEM 3.3I digital status
	4	12	U12	LHKT8TEM33I
				TEM8 TEM 3.3I digital raw

10.3.3 `TemEnvPwr3` (531/0x213)

Description:

"TEM Power Packet 3" Telemetry Packet

Contains power specific ADC values for TEMs 9, 10, and 11.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKT9TKR25VDST; LHKSTATUSBITS
				TEM9 TKR 2.5V digital status
	4	12	U12	LHKT9TKR25VD
				TEM9 TKR 2.5V digital raw
0x016	0	4	U12	LHKT9TKR25IDST; LHKSTATUSBITS
				TEM9 TKR 2.5I digital status
	4	12	U12	LHKT9TKR25ID
				TEM9 TKR 2.5I digital raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x018	0	4	U12	LHKT9TKR15VAAST; LHKSTATUSBITS TEM9 TKR 1.5V analog A status
	4	12	U12	LHKT9TKR15VAA TEM9 TKR 1.5V analog A raw
0x01A	0	4	U12	LHKT9TKR15IAAST TEM9 TKR 1.5I analog A status
	4	12	U12	LHKT9TKR15IAA TEM9 TKR 1.5I analog A raw
0x01C	0	4	U12	LHKT9TKR25VABST TEM9 TKR 2.5V analog B status
	4	12	U12	LHKT9TKR25VAB TEM9 TKR 2.5V analog B raw
0x01E	0	4	U12	LHKT9TKR25IABST TEM9 TKR 2.5I analog B status
	4	12	U12	LHKT9TKR25IAB TEM9 TKR 2.5I analog B raw
0x020	0	4	U12	LHKT9TKRBIASVST; LHKSTATUSBITS TEM9 TKR Bias V status
	4	12	U12	LHKT9TKRBIASV TEM9 TKR Bias V raw
0x022	0	4	U12	LHKT9TKRBIASIST; LHKSTATUSBITS TEM9 TKR Bias I status
	4	12	U12	LHKT9TKRBIASI TEM9 TKR Bias I raw
0x024	0	4	U12	LHKT9CAL33VDST; LHKSTATUSBITS TEM9 CAL 3.3V digital status
	4	12	U12	LHKT9CAL33VD TEM9 CAL 3.3V digital raw
0x026	0	4	U12	LHKT9CAL33IDST; LHKSTATUSBITS TEM9 CAL 3.3I digital status
	4	12	U12	LHKT9CAL33ID TEM9 CAL 3.3I digital raw
0x028	0	4	U12	LHKT9CAL33VAST; LHKSTATUSBITS TEM9 CAL 3.3V analog status
	4	12	U12	LHKT9CAL33VA TEM9 CAL 3.3V analog raw
0x02A	0	4	U12	LHKT9CAL33IAST TEM9 CAL 3.3I analog status
	4	12	U12	LHKT9CAL33IA TEM9 CAL 3.3I analog raw
0x02C	0	4	U12	LHKT9CALBIASVST TEM9 CAL Bias V status
	4	12	U12	LHKT9CALBIASV TEM9 CAL Bias V raw
0x02E	0	4	U12	LHKT9CALBIASIST TEM9 CAL Bias I status
	4	12	U12	LHKT9CALBIASI TEM9 CAL Bias I raw
0x030	0	4	U12	LHKT9TEM33VST; LHKSTATUSBITS TEM9 TEM 3.3V status
	4	12	U12	LHKT9TEM33V TEM9 TEM 3.3V raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x032	0	4	U12	LHKT9TEM33IST; LHKSTATUSBITS
				TEM9 3.3I digital status
	4	12	U12	LHKT9TEM33I
				TEM9 3.3I digital raw
0x034	0	4	U12	LHKTATKR25VDST; LHKSTATUSBITS
				TEMA TKR 2.5V digital status
	4	12	U12	LHKTATKR25VD
				TEMA TKR 2.5V digital raw
0x036	0	4	U12	LHKTATKR25IDST; LHKSTATUSBITS
				TEMA TKR 2.5I digital status
	4	12	U12	LHKTATKR25ID
				TEMA TKR 2.5I digital raw
0x038	0	4	U12	LHKTATKR15VAAST; LHKSTATUSBITS
				TEMA TKR 1.5V analog A status
	4	12	U12	LHKTATKR15VAA
				TEMA TKR 1.5V analog A raw
0x03A	0	4	U12	LHKTATKR15IAAST
				TEMA TKR 1.5I analog A status
	4	12	U12	LHKTATKR15IAA
				TEMA TKR 1.5I analog A raw
0x03C	0	4	U12	LHKTATKR25VABST
				TEMA TKR 2.5V analog B status
	4	12	U12	LHKTATKR25VAB
				TEMA TKR 2.5V analog B raw
0x03E	0	4	U12	LHKTATKR25IABST
				TEMA TKR 2.5I analog B status
	4	12	U12	LHKTATKR25IAB
				TEMA TKR 2.5I analog B raw
0x040	0	4	U12	LHKTATKRBIASVST; LHKSTATUSBITS
				TEMA TKR Bias V status
	4	12	U12	LHKTATKRBIASV
				TEMA TKR Bias V raw
0x042	0	4	U12	LHKTATKRBIASIST; LHKSTATUSBITS
				TEMA TKR Bias I status
	4	12	U12	LHKTATKRBIASI
				TEMA TKR Bias I raw
0x044	0	4	U12	LHKTACAL33VDST; LHKSTATUSBITS
				TEMA CAL 3.3V digital status
	4	12	U12	LHKTACAL33VD
				TEMA CAL 3.3V digital raw
0x046	0	4	U12	LHKTACAL33IDST; LHKSTATUSBITS
				TEMA CAL 3.3I digital status
	4	12	U12	LHKTACAL33ID
				TEMA CAL 3.3I digital raw
0x048	0	4	U12	LHKTACAL33VAST; LHKSTATUSBITS
				TEMA CAL 3.3V analog status
	4	12	U12	LHKTACAL33VA
				TEMA CAL 3.3V analog raw
0x04A	0	4	U12	LHKTACAL33IAST
				TEMA CAL 3.3I analog status
	4	12	U12	LHKTACAL33IA
				TEMA CAL 3.3I analog raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x04C	0	4	U12	LHKTACALBIASVST
				TEMA CAL Bias V status
	4	12	U12	LHKTACALBIASV
				TEMA CAL Bias V raw
0x04E	0	4	U12	LHKTACALBIASIST
				TEMA CAL Bias I status
	4	12	U12	LHKTACALBIASI
				TEMA CAL Bias I raw
0x050	0	4	U12	LHKTATEM33VST; LHKSTATUSBITS
				TEMA TEM 3.3V digital status
	4	12	U12	LHKTATEM33V
				TEMA TEM 3.3V digital raw
0x052	0	4	U12	LHKTATEM33IST; LHKSTATUSBITS
				TEMA TEM 3.3I digital status
	4	12	U12	LHKTATEM33I
				TEMA TEM 3.3I digital raw
0x054	0	4	U12	LHKTBTKR25VDST; LHKSTATUSBITS
				TEMB TKR 2.5V digital status
	4	12	U12	LHKTBTKR25VD
				TEMB TKR 2.5V digital raw
0x056	0	4	U12	LHKTBTKR25IDST; LHKSTATUSBITS
				TEMB TKR 2.5I digital status
	4	12	U12	LHKTBTKR25ID
				TEMB TKR 2.5I digital raw
0x058	0	4	U12	LHKTBTKR15VAAST; LHKSTATUSBITS
				TEMB TKR 1.5V analog A status
	4	12	U12	LHKTBTKR15VAA
				TEMB TKR 1.5V analog A raw
0x05A	0	4	U12	LHKTBTKR15IAAST
				TEMB TKR 1.5I analog A status
	4	12	U12	LHKTBTKR15IAA
				TEMB TKR 1.5I analog A raw
0x05C	0	4	U12	LHKTBTKR25VABST
				TEMB TKR 2.5V analog B status
	4	12	U12	LHKTBTKR25VAB
				TEMB TKR 2.5V analog B raw
0x05E	0	4	U12	LHKTBTKR25IABST
				TEMB TKR 2.5I analog B status
	4	12	U12	LHKTBTKR25IAB
				TEMB TKR 2.5I analog B raw
0x060	0	4	U12	LHKTBTKRBIASVST; LHKSTATUSBITS
				TEMB TKR Bias V status
	4	12	U12	LHKTBTKRBIASV
				TEMB TKR Bias V raw
0x062	0	4	U12	LHKTBTKRBIASIST; LHKSTATUSBITS
				TEMB TKR Bias I status
	4	12	U12	LHKTBTKRBIASI
				TEMB TKR Bias I raw
0x064	0	4	U12	LHKTBCAL33VDST; LHKSTATUSBITS
				TEMB CAL 3.3V digital status
	4	12	U12	LHKTBCAL33VD
				TEMB CAL 3.3V digital raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x066	0	4	U12	LHKTBCAL33IDST; LHKSTATUSBITS TEMB CAL 3.3I digital status
	4	12	U12	LHKTBCAL33ID TEMB CAL 3.3I digital raw
0x068	0	4	U12	LHKTBCAL33VAST; LHKSTATUSBITS TEMB CAL 3.3V analog status
	4	12	U12	LHKTBCAL33VA TEMB CAL 3.3V analog raw
0x06A	0	4	U12	LHKTBCAL33IAST TEMB CAL 3.3I analog status
	4	12	U12	LHKTBCAL33IA TEMB CAL 3.3I analog raw
0x06C	0	4	U12	LHKTBCALBIASVST TEMB CAL Bias V status
	4	12	U12	LHKTBCALBIASV TEMB CAL Bias V raw
0x06E	0	4	U12	LHKTBCALBIASIST TEMB CAL Bias I status
	4	12	U12	LHKTBCALBIASI TEMB CAL Bias I raw
0x070	0	4	U12	LHKTBTEM33VST; LHKSTATUSBITS TEMB TEM 3.3V digital status
	4	12	U12	LHKTBTEM33V TEMB TEM 3.3V digital raw
0x072	0	4	U12	LHKTBTEM33IST; LHKSTATUSBITS TEMB TEM 3.3I digital status
	4	12	U12	LHKTBTEM33I TEMB TEM 3.3I digital raw

10.3.4 `TemEnvPwr4` (532/0x214)

Description:

"TEM Power Packet 4" Telemetry Packet

Contains power specific ADC values for TEMs 12, 13, and 14.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKTCTKR25VDST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMC TKR 2.5V digital status
	4	12	U12	LHKTCTKR25VD
				TEMC TKR 2.5V digital raw
0x016	0	4	U12	LHKTCTKR25IDST; LHKSTATUSBITS
				TEMC TKR 2.5I digital status
	4	12	U12	LHKTCTKR25ID
				TEMC TKR 2.5I digital raw
0x018	0	4	U12	LHKTCTKR15VAAST; LHKSTATUSBITS
				TEMC TKR 1.5V analog A status
	4	12	U12	LHKTCTKR15VAA
				TEMC TKR 1.5V analog A raw
0x01A	0	4	U12	LHKTCTKR15IAAST
				TEMC TKR 1.5I analog A status
	4	12	U12	LHKTCTKR15IAA
				TEMC TKR 1.5I analog A raw
0x01C	0	4	U12	LHKTCTKR25VABST
				TEMC TKR 2.5V analog B status
	4	12	U12	LHKTCTKR25VAB
				TEMC TKR 2.5V analog B raw
0x01E	0	4	U12	LHKTCTKR25IABST
				TEMC TKR 2.5I analog B status
	4	12	U12	LHKTCTKR25IAB
				TEMC TKR 2.5I analog B raw
0x020	0	4	U12	LHKTCTKRBIASVST; LHKSTATUSBITS
				TEMC TKR Bias V status
	4	12	U12	LHKTCTKRBIASV
				TEMC TKR Bias V raw
0x022	0	4	U12	LHKTCTKRBIASIST; LHKSTATUSBITS
				TEMC TKR Bias I status
	4	12	U12	LHKTCTKRBIASI
				TEMC TKR Bias I raw
0x024	0	4	U12	LHKTCCAL33VDST; LHKSTATUSBITS
				TEMC CAL 3.3V digital status
	4	12	U12	LHKTCCAL33VD
				TEMC CAL 3.3V digital raw
0x026	0	4	U12	LHKTCCAL33IDST; LHKSTATUSBITS
				TEMC CAL 3.3I digital status
	4	12	U12	LHKTCCAL33ID
				TEMC CAL 3.3I digital raw
0x028	0	4	U12	LHKTCCAL33VAST; LHKSTATUSBITS
				TEMC CAL 3.3V analog status
	4	12	U12	LHKTCCAL33VA
				TEMC CAL 3.3V analog raw
0x02A	0	4	U12	LHKTCCAL33IAST
				TEMC CAL 3.3I analog status
	4	12	U12	LHKTCCAL33IA
				TEMC CAL 3.3I analog raw
0x02C	0	4	U12	LHKTCCALBIASVST
				TEMC CAL Bias V status
	4	12	U12	LHKTCCALBIASV
				TEMC CAL Bias V raw
0x02E	0	4	U12	LHKTCCALBIASIST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMC CAL Bias I status
	4	12	U12	LHKTCCALBIASI
				TEMC CAL Bias I raw
0x030	0	4	U12	LHKTCTEM33VST; LHKSTATUSBITS
				TEMC TEM 3.3V status
	4	12	U12	LHKTCTEM33V
				TEMC TEM 3.3V raw
0x032	0	4	U12	LHKTCTEM33IST; LHKSTATUSBITS
				TEMC 3.3I digital status
	4	12	U12	LHKTCTEM33I
				TEMC 3.3I digital raw
0x034	0	4	U12	LHKTDTKR25VDST; LHKSTATUSBITS
				TEMD TKR 2.5V digital status
	4	12	U12	LHKTDTKR25VD
				TEMD TKR 2.5V digital raw
0x036	0	4	U12	LHKTDTKR25IDST; LHKSTATUSBITS
				TEMD TKR 2.5I digital status
	4	12	U12	LHKTDTKR25ID
				TEMD TKR 2.5I digital raw
0x038	0	4	U12	LHKTDTKR15VAAST; LHKSTATUSBITS
				TEMD TKR 1.5V analog A status
	4	12	U12	LHKTDTKR15VAA
				TEMD TKR 1.5V analog A raw
0x03A	0	4	U12	LHKTDTKR15IAAST
				TEMD TKR 1.5I analog A status
	4	12	U12	LHKTDTKR15IAA
				TEMD TKR 1.5I analog A raw
0x03C	0	4	U12	LHKTDTKR25VABST
				TEMD TKR 2.5V analog B status
	4	12	U12	LHKTDTKR25VAB
				TEMD TKR 2.5V analog B raw
0x03E	0	4	U12	LHKTDTKR25IABST
				TEMD TKR 2.5I analog B status
	4	12	U12	LHKTDTKR25IAB
				TEMD TKR 2.5I analog B raw
0x040	0	4	U12	LHKTDTKRBIASVST; LHKSTATUSBITS
				TEMD TKR Bias V status
	4	12	U12	LHKTDTKRBIASV
				TEMD TKR Bias V raw
0x042	0	4	U12	LHKTDTKRBIASIST; LHKSTATUSBITS
				TEMD TKR Bias I status
	4	12	U12	LHKTDTKRBIASI
				TEMD TKR Bias I raw
0x044	0	4	U12	LHKTDCAL33VDST; LHKSTATUSBITS
				TEMD CAL 3.3V digital status
	4	12	U12	LHKTDCAL33VD
				TEMD CAL 3.3V digital raw
0x046	0	4	U12	LHKTDCAL33IDST; LHKSTATUSBITS
				TEMD CAL 3.3I digital status
	4	12	U12	LHKTDCAL33ID
				TEMD CAL 3.3I digital raw
0x048	0	4	U12	LHKTDCAL33VAST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMD CAL 3.3V analog status
	4	12	U12	LHKTDCAL33VA
				TEMD CAL 3.3V analog raw
0x04A	0	4	U12	LHKTDCAL33IAST
				TEMD CAL 3.3I analog status
	4	12	U12	LHKTDCAL33IA
				TEMD CAL 3.3I analog raw
0x04C	0	4	U12	LHKTDCALBIASVST
				TEMD CAL Bias V status
	4	12	U12	LHKTDCALBIASV
				TEMD CAL Bias V raw
0x04E	0	4	U12	LHKTDCALBIASIST
				TEMD CAL Bias I status
	4	12	U12	LHKTDCALBIASI
				TEMD CAL Bias I raw
0x050	0	4	U12	LHKTDTEM33VST; LHKSTATUSBITS
				TEMD TEM 3.3V digital status
	4	12	U12	LHKTDTEM33V
				TEMD TEM 3.3V digital raw
0x052	0	4	U12	LHKTDTEM33IST; LHKSTATUSBITS
				TEMD TEM 3.3I digital status
	4	12	U12	LHKTDTEM33I
				TEMD TEM 3.3I digital raw
0x054	0	4	U12	LHKTETKR25VDST; LHKSTATUSBITS
				TEME TKR 2.5V digital status
	4	12	U12	LHKTETKR25VD
				TEME TKR 2.5V digital raw
0x056	0	4	U12	LHKTETKR25IDST; LHKSTATUSBITS
				TEME TKR 2.5I digital status
	4	12	U12	LHKTETKR25ID
				TEME TKR 2.5I digital raw
0x058	0	4	U12	LHKTETKR15VAAST; LHKSTATUSBITS
				TEME TKR 1.5V analog A status
	4	12	U12	LHKTETKR15VAA
				TEME TKR 1.5V analog A raw
0x05A	0	4	U12	LHKTETKR15IAAST
				TEME TKR 1.5I analog A status
	4	12	U12	LHKTETKR15IAA
				TEME TKR 1.5I analog A raw
0x05C	0	4	U12	LHKTETKR25VABST
				TEME TKR 2.5V analog B status
	4	12	U12	LHKTETKR25VAB
				TEME TKR 2.5V analog B raw
0x05E	0	4	U12	LHKTETKR25IABST
				TEME TKR 2.5I analog B status
	4	12	U12	LHKTETKR25IAB
				TEME TKR 2.5I analog B raw
0x060	0	4	U12	LHKTETKRBIASVST; LHKSTATUSBITS
				TEME TKR Bias V status
	4	12	U12	LHKTETKRBIASV
				TEME TKR Bias V raw
0x062	0	4	U12	LHKTETKRBIASIST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEME TKR Bias I status
	4	12	U12	LHKTETKRBIASI
				TEME TKR Bias I raw
0x064	0	4	U12	LHKTECAL33VDST; LHKSTATUSBITS
				TEME CAL 3.3V digital status
	4	12	U12	LHKTECAL33VD
				TEME CAL 3.3V digital raw
0x066	0	4	U12	LHKTECAL33IDST; LHKSTATUSBITS
				TEME CAL 3.3I digital status
	4	12	U12	LHKTECAL33ID
				TEME CAL 3.3I digital raw
0x068	0	4	U12	LHKTECAL33VAST; LHKSTATUSBITS
				TEME CAL 3.3V analog status
	4	12	U12	LHKTECAL33VA
				TEME CAL 3.3V analog raw
0x06A	0	4	U12	LHKTECAL33IAST
				TEME CAL 3.3I analog status
	4	12	U12	LHKTECAL33IA
				TEME CAL 3.3I analog raw
0x06C	0	4	U12	LHKTECALBIASVST
				TEME CAL Bias V status
	4	12	U12	LHKTECALBIASV
				TEME CAL Bias V raw
0x06E	0	4	U12	LHKTECALBIASIST
				TEME CAL Bias I status
	4	12	U12	LHKTECALBIASI
				TEME CAL Bias I raw
0x070	0	4	U12	LHKTETEM33VST; LHKSTATUSBITS
				TEME TEM 3.3V digital status
	4	12	U12	LHKTETEM33V
				TEME TEM 3.3V digital raw
0x072	0	4	U12	LHKTETEM33IST; LHKSTATUSBITS
				TEME TEM 3.3I digital status
	4	12	U12	LHKTETEM33I
				TEME TEM 3.3I digital raw

10.3.5 `TemEnvPwr5` (533/0x215)

Description:

"TEM Power Packet 5" Telemetry Packet

Contains powr specific ADC values for TEM 15.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKTFTKR25VDST; LHKSTATUSBITS TEMF TKR 2.5V digital status
	4	12	U12	LHKTFTKR25VD TEMF TKR 2.5V digital raw
0x016	0	4	U12	LHKTFTKR25IDST; LHKSTATUSBITS TEMF TKR 2.5I digital status
	4	12	U12	LHKTFTKR25ID TEMF TKR 2.5I digital raw
0x018	0	4	U12	LHKTFTKR15VAAST; LHKSTATUSBITS TEMF TKR 1.5V analog A status
	4	12	U12	LHKTFTKR15VAA TEMF TKR 1.5V analog A raw
0x01A	0	4	U12	LHKTFTKR15IAAST TEMF TKR 1.5I analog A status
	4	12	U12	LHKTFTKR15IAA TEMF TKR 1.5I analog A raw
0x01C	0	4	U12	LHKTFTKR25VABST TEMF TKR 2.5V analog B status
	4	12	U12	LHKTFTKR25VAB TEMF TKR 2.5V analog B raw
0x01E	0	4	U12	LHKTFTKR25IABST TEMF TKR 2.5I analog B status
	4	12	U12	LHKTFTKR25IAB TEMF TKR 2.5I analog B raw
0x020	0	4	U12	LHKTFTKRBIASVST; LHKSTATUSBITS TEMF TKR Bias V status
	4	12	U12	LHKTFTKRBIASV TEMF TKR Bias V raw
0x022	0	4	U12	LHKTFTKRBIASIST; LHKSTATUSBITS TEMF TKR Bias I status
	4	12	U12	LHKTFTKRBIASI TEMF TKR Bias I raw
0x024	0	4	U12	LHKTFCAL33VDST; LHKSTATUSBITS TEMF CAL 3.3V digital status
	4	12	U12	LHKTFCAL33VD TEMF CAL 3.3V digital raw
0x026	0	4	U12	LHKTFCAL33IDST; LHKSTATUSBITS TEMF CAL 3.3I digital status
	4	12	U12	LHKTFCAL33ID TEMF CAL 3.3I digital raw
0x028	0	4	U12	LHKTFCAL33VAST; LHKSTATUSBITS TEMF CAL 3.3V analog status
	4	12	U12	LHKTFCAL33VA TEMF CAL 3.3V analog raw
0x02A	0	4	U12	LHKTFCAL33IAST TEMF CAL 3.3I analog status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKTFCAL33IA TEMF CAL 3.3I analog raw
0x02C	0	4	U12	LHKTFCALBIASVST TEMF CAL Bias V status
	4	12	U12	LHKTFCALBIASV TEMF CAL Bias V raw
0x02E	0	4	U12	LHKTFCALBIASIST TEMF CAL Bias I status
	4	12	U12	LHKTFCALBIASI TEMF CAL Bias I raw
0x030	0	4	U12	LHKTFTEM33VST; LHKSTATUSBITS TEMF TEM 3.3V status
	4	12	U12	LHKTFTEM33V TEMF TEM 3.3V raw
0x032	0	4	U12	LHKTFTEM33IST; LHKSTATUSBITS TEMF 3.3I digital status
	4	12	U12	LHKTFTEM33I TEMF 3.3I digital raw
0x034	0	16	U12	LHKSPARE16 Spare 16 bit field
0x036	0	16	U12	LHKSPARE16 Spare 16 bit field
0x038	0	16	U12	LHKSPARE16 Spare 16 bit field
0x03A	0	16	U12	LHKSPARE16 Spare 16 bit field
0x03C	0	16	U12	LHKSPARE16 Spare 16 bit field
0x03E	0	16	U12	LHKSPARE16 Spare 16 bit field
0x040	0	16	U12	LHKSPARE16 Spare 16 bit field
0x042	0	16	U12	LHKSPARE16 Spare 16 bit field
0x044	0	16	U12	LHKSPARE16 Spare 16 bit field
0x046	0	16	U12	LHKSPARE16 Spare 16 bit field
0x048	0	16	U12	LHKSPARE16 Spare 16 bit field
0x04A	0	16	U12	LHKSPARE16 Spare 16 bit field
0x04C	0	16	U12	LHKSPARE16 Spare 16 bit field
0x04E	0	16	U12	LHKSPARE16 Spare 16 bit field
0x050	0	16	U12	LHKSPARE16 Spare 16 bit field
0x052	0	16	U12	LHKSPARE16 Spare 16 bit field
0x054	0	16	U12	LHKSPARE16 Spare 16 bit field

Offset	S	L	Type	ITOS name, attribute(s), and description
0x056	0	16	U12	LHKSPARE16 Spare 16 bit field
0x058	0	16	U12	LHKSPARE16 Spare 16 bit field
0x05A	0	16	U12	LHKSPARE16 Spare 16 bit field
0x05C	0	16	U12	LHKSPARE16 Spare 16 bit field
0x05E	0	16	U12	LHKSPARE16 Spare 16 bit field
0x060	0	16	U12	LHKSPARE16 Spare 16 bit field
0x062	0	16	U12	LHKSPARE16 Spare 16 bit field
0x064	0	16	U12	LHKSPARE16 Spare 16 bit field
0x066	0	16	U12	LHKSPARE16 Spare 16 bit field
0x068	0	16	U12	LHKSPARE16 Spare 16 bit field
0x06A	0	16	U12	LHKSPARE16 Spare 16 bit field
0x06C	0	16	U12	LHKSPARE16 Spare 16 bit field
0x06E	0	16	U12	LHKSPARE16 Spare 16 bit field
0x070	0	16	U12	LHKSPARE16 Spare 16 bit field
0x072	0	16	U12	LHKSPARE16 Spare 16 bit field

10.3.6 `TemEnvTemp0` (534/0x216)

Description:

"TEM Temperature Packet 0" Telemetry Packet

Contains temperature specific ADC values for TEMs 0 and 1.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x014	0	4	U12	LHKT0CALAF0T0ST; LHKSTATUSBITS
				TEM0 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT0CALAF0T0
				TEM0 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKT0CALAF0T1ST; LHKSTATUSBITS
				TEM0 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT0CALAF0T1
				TEM0 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKT0CALAF1T0ST; LHKSTATUSBITS
				TEM0 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT0CALAF1T0
				TEM0 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKT0CALAF1T1ST
				TEM0 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT0CALAF1T1
				TEM0 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKT0CALAF2T0ST
				TEM0 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT0CALAF2T0
				TEM0 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKT0CALAF2T1ST
				TEM0 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT0CALAF2T1
				TEM0 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKT0CALAF3T0ST; LHKSTATUSBITS
				TEM0 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT0CALAF3T0
				TEM0 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKT0CALAF3T1ST; LHKSTATUSBITS
				TEM0 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT0CALAF3T1
				TEM0 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKT0TKRC0T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT0TKRC0T0
				TEM0 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKT0TKRC0T1ST; LHKSTATUSBITS
				TEM0 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT0TKRC0T1
				TEM0 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKT0TKRC1T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT0TKRC1T0
				TEM0 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKT0TKRC1T1ST
				TEM0 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT0TKRC1T1
				TEM0 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKT0TKRC2T0ST
				TEM0 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT0TKRC2T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM0 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKT0TKRC2T1ST
				TEM0 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT0TKRC2T1
				TEM0 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKT0TKRC3T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT0TKRC3T0
				TEM0 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKT0TKRC3T1ST; LHKSTATUSBITS
				TEM0 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT0TKRC3T1
				TEM0 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKT0TKRC4T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT0TKRC4T0
				TEM0 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKT0TKRC4T1ST; LHKSTATUSBITS
				TEM0 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT0TKRC4T1
				TEM0 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKT0TKRC5T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT0TKRC5T0
				TEM0 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKT0TKRC5T1ST
				TEM0 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT0TKRC5T1
				TEM0 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKT0TKRC6T0ST
				TEM0 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT0TKRC6T0
				TEM0 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKT0TKRC6T1ST
				TEM0 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT0TKRC6T1
				TEM0 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKT0TKRC7T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT0TKRC7T0
				TEM0 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKT0TKRC7T1ST; LHKSTATUSBITS
				TEM0 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT0TKRC7T1
				TEM0 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKT1CALAF0T0ST; LHKSTATUSBITS
				TEM1 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT1CALAF0T0
				TEM1 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKT1CALAF0T1ST; LHKSTATUSBITS
				TEM1 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT1CALAF0T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM1 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKT1CALAF1T0ST; LHKSTATUSBITS
				TEM1 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT1CALAF1T0
				TEM1 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKT1CALAF1T1ST
				TEM1 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT1CALAF1T1
				TEM1 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKT1CALAF2T0ST
				TEM1 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT1CALAF2T0
				TEM1 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKT1CALAF2T1ST
				TEM1 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT1CALAF2T1
				TEM1 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKT1CALAF3T0ST; LHKSTATUSBITS
				TEM1 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT1CALAF3T0
				TEM1 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKT1CALAF3T1ST; LHKSTATUSBITS
				TEM1 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT1CALAF3T1
				TEM1 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKT1TKRC0T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT1TKRC0T0
				TEM1 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKT1TKRC0T1ST; LHKSTATUSBITS
				TEM1 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT1TKRC0T1
				TEM1 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKT1TKRC1T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT1TKRC1T0
				TEM1 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKT1TKRC1T1ST
				TEM1 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT1TKRC1T1
				TEM1 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKT1TKRC2T0ST
				TEM1 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT1TKRC2T0
				TEM1 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKT1TKRC2T1ST
				TEM1 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT1TKRC2T1
				TEM1 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKT1TKRC3T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT1TKRC3T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM1 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKT1TKRC3T1ST; LHKSTATUSBITS
				TEM1 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT1TKRC3T1
				TEM1 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKT1TKRC4T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT1TKRC4T0
				TEM1 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKT1TKRC4T1ST; LHKSTATUSBITS
				TEM1 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT1TKRC4T1
				TEM1 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKT1TKRC5T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT1TKRC5T0
				TEM1 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKT1TKRC5T1ST
				TEM1 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT1TKRC5T1
				TEM1 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKT1TKRC6T0ST
				TEM1 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT1TKRC6T0
				TEM1 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKT1TKRC6T1ST
				TEM1 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT1TKRC6T1
				TEM1 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKT1TKRC7T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT1TKRC7T0
				TEM1 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKT1TKRC7T1ST; LHKSTATUSBITS
				TEM1 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT1TKRC7T1
				TEM1 TKR Cable 7 Temp 1 raw

10.3.7 `TemEnvTemp1` (535/0x217)

Description:

"TEM Temperature Packet 1" Telemetry Packet

Contains temperature specific ADC values for TEMs 2 and 3.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKT2CALAF0T0ST; LHKSTATUSBITS
				TEM2 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT2CALAF0T0
				TEM2 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKT2CALAF0T1ST; LHKSTATUSBITS
				TEM2 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT2CALAF0T1
				TEM2 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKT2CALAF1T0ST; LHKSTATUSBITS
				TEM2 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT2CALAF1T0
				TEM2 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKT2CALAF1T1ST
				TEM2 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT2CALAF1T1
				TEM2 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKT2CALAF2T0ST
				TEM2 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT2CALAF2T0
				TEM2 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKT2CALAF2T1ST
				TEM2 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT2CALAF2T1
				TEM2 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKT2CALAF3T0ST; LHKSTATUSBITS
				TEM2 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT2CALAF3T0
				TEM2 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKT2CALAF3T1ST; LHKSTATUSBITS
				TEM2 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT2CALAF3T1
				TEM2 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKT2TKRC0T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT2TKRC0T0
				TEM2 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKT2TKRC0T1ST; LHKSTATUSBITS
				TEM2 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT2TKRC0T1
				TEM2 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKT2TKRC1T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT2TKRC1T0
				TEM2 TKR Cable 1 Temp 0 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x02A	0	4	U12	LHKT2TKRC1T1ST
				TEM2 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT2TKRC1T1
				TEM2 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKT2TKRC2T0ST
				TEM2 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT2TKRC2T0
				TEM2 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKT2TKRC2T1ST
				TEM2 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT2TKRC2T1
				TEM2 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKT2TKRC3T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT2TKRC3T0
				TEM2 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKT2TKRC3T1ST; LHKSTATUSBITS
				TEM2 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT2TKRC3T1
				TEM2 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKT2TKRC4T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT2TKRC4T0
				TEM2 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKT2TKRC4T1ST; LHKSTATUSBITS
				TEM2 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT2TKRC4T1
				TEM2 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKT2TKRC5T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT2TKRC5T0
				TEM2 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKT2TKRC5T1ST
				TEM2 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT2TKRC5T1
				TEM2 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKT2TKRC6T0ST
				TEM2 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT2TKRC6T0
				TEM2 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKT2TKRC6T1ST
				TEM2 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT2TKRC6T1
				TEM2 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKT2TKRC7T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT2TKRC7T0
				TEM2 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKT2TKRC7T1ST; LHKSTATUSBITS
				TEM2 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT2TKRC7T1
				TEM2 TKR Cable 7 Temp 1 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x044	0	4	U12	LHKT3CALAF0T0ST; LHKSTATUSBITS TEM3 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT3CALAF0T0 TEM3 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKT3CALAF0T1ST; LHKSTATUSBITS TEM3 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT3CALAF0T1 TEM3 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKT3CALAF1T0ST; LHKSTATUSBITS TEM3 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT3CALAF1T0 TEM3 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKT3CALAF1T1ST TEM3 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT3CALAF1T1 TEM3 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKT3CALAF2T0ST TEM3 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT3CALAF2T0 TEM3 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKT3CALAF2T1ST TEM3 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT3CALAF2T1 TEM3 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKT3CALAF3T0ST; LHKSTATUSBITS TEM3 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT3CALAF3T0 TEM3 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKT3CALAF3T1ST; LHKSTATUSBITS TEM3 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT3CALAF3T1 TEM3 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKT3TKRC0T0ST; LHKSTATUSBITS TEM3 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT3TKRC0T0 TEM3 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKT3TKRC0T1ST; LHKSTATUSBITS TEM3 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT3TKRC0T1 TEM3 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKT3TKRC1T0ST; LHKSTATUSBITS TEM3 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT3TKRC1T0 TEM3 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKT3TKRC1T1ST TEM3 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT3TKRC1T1 TEM3 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKT3TKRC2T0ST TEM3 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT3TKRC2T0 TEM3 TKR Cable 2 Temp 0 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x05E	0	4	U12	LHKT3TKRC2T1ST TEM3 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT3TKRC2T1 TEM3 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKT3TKRC3T0ST; LHKSTATUSBITS TEM3 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT3TKRC3T0 TEM3 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKT3TKRC3T1ST; LHKSTATUSBITS TEM3 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT3TKRC3T1 TEM3 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKT3TKRC4T0ST; LHKSTATUSBITS TEM3 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT3TKRC4T0 TEM3 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKT3TKRC4T1ST; LHKSTATUSBITS TEM3 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT3TKRC4T1 TEM3 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKT3TKRC5T0ST; LHKSTATUSBITS TEM3 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT3TKRC5T0 TEM3 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKT3TKRC5T1ST TEM3 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT3TKRC5T1 TEM3 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKT3TKRC6T0ST TEM3 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT3TKRC6T0 TEM3 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKT3TKRC6T1ST TEM3 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT3TKRC6T1 TEM3 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKT3TKRC7T0ST; LHKSTATUSBITS TEM3 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT3TKRC7T0 TEM3 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKT3TKRC7T1ST; LHKSTATUSBITS TEM3 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT3TKRC7T1 TEM3 TKR Cable 7 Temp 1 raw

10.3.8 `TemEnvTemp2` (536/0x218)

Description:

"TEM Temperature Packet 2" Telemetry Packet

Contains temperature specific ADC values for TEMs 4 and 5.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKT4CALAF0T0ST; LHKSTATUSBITS
				TEM4 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT4CALAF0T0
				TEM4 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKT4CALAF0T1ST; LHKSTATUSBITS
				TEM4 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT4CALAF0T1
				TEM4 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKT4CALAF1T0ST; LHKSTATUSBITS
				TEM4 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT4CALAF1T0
				TEM4 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKT4CALAF1T1ST
				TEM4 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT4CALAF1T1
				TEM4 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKT4CALAF2T0ST
				TEM4 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT4CALAF2T0
				TEM4 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKT4CALAF2T1ST
				TEM4 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT4CALAF2T1
				TEM4 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKT4CALAF3T0ST; LHKSTATUSBITS
				TEM4 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT4CALAF3T0
				TEM4 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKT4CALAF3T1ST; LHKSTATUSBITS
				TEM4 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT4CALAF3T1
				TEM4 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKT4TKRC0T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT4TKRC0T0
				TEM4 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKT4TKRC0T1ST; LHKSTATUSBITS
				TEM4 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT4TKRC0T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM4 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKT4TKRC1T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT4TKRC1T0
				TEM4 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKT4TKRC1T1ST
				TEM4 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT4TKRC1T1
				TEM4 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKT4TKRC2T0ST
				TEM4 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT4TKRC2T0
				TEM4 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKT4TKRC2T1ST
				TEM4 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT4TKRC2T1
				TEM4 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKT4TKRC3T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT4TKRC3T0
				TEM4 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKT4TKRC3T1ST; LHKSTATUSBITS
				TEM4 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT4TKRC3T1
				TEM4 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKT4TKRC4T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT4TKRC4T0
				TEM4 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKT4TKRC4T1ST; LHKSTATUSBITS
				TEM4 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT4TKRC4T1
				TEM4 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKT4TKRC5T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT4TKRC5T0
				TEM4 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKT4TKRC5T1ST
				TEM4 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT4TKRC5T1
				TEM4 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKT4TKRC6T0ST
				TEM4 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT4TKRC6T0
				TEM4 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKT4TKRC6T1ST
				TEM4 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT4TKRC6T1
				TEM4 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKT4TKRC7T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT4TKRC7T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM4 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKT4TKRC7T1ST; LHKSTATUSBITS
				TEM4 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT4TKRC7T1
				TEM4 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKT5CALAF0T0ST; LHKSTATUSBITS
				TEM5 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT5CALAF0T0
				TEM5 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKT5CALAF0T1ST; LHKSTATUSBITS
				TEM5 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT5CALAF0T1
				TEM5 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKT5CALAF1T0ST; LHKSTATUSBITS
				TEM5 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT5CALAF1T0
				TEM5 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKT5CALAF1T1ST
				TEM5 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT5CALAF1T1
				TEM5 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKT5CALAF2T0ST
				TEM5 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT5CALAF2T0
				TEM5 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKT5CALAF2T1ST
				TEM5 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT5CALAF2T1
				TEM5 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKT5CALAF3T0ST; LHKSTATUSBITS
				TEM5 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT5CALAF3T0
				TEM5 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKT5CALAF3T1ST; LHKSTATUSBITS
				TEM5 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT5CALAF3T1
				TEM5 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKT5TKRC0T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT5TKRC0T0
				TEM5 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKT5TKRC0T1ST; LHKSTATUSBITS
				TEM5 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT5TKRC0T1
				TEM5 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKT5TKRC1T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT5TKRC1T0
				TEM5 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKT5TKRC1T1ST
				TEM5 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT5TKRC1T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM5 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKT5TKRC2T0ST
				TEM5 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT5TKRC2T0
				TEM5 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKT5TKRC2T1ST
				TEM5 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT5TKRC2T1
				TEM5 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKT5TKRC3T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT5TKRC3T0
				TEM5 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKT5TKRC3T1ST; LHKSTATUSBITS
				TEM5 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT5TKRC3T1
				TEM5 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKT5TKRC4T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT5TKRC4T0
				TEM5 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKT5TKRC4T1ST; LHKSTATUSBITS
				TEM5 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT5TKRC4T1
				TEM5 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKT5TKRC5T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT5TKRC5T0
				TEM5 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKT5TKRC5T1ST
				TEM5 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT5TKRC5T1
				TEM5 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKT5TKRC6T0ST
				TEM5 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT5TKRC6T0
				TEM5 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKT5TKRC6T1ST
				TEM5 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT5TKRC6T1
				TEM5 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKT5TKRC7T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT5TKRC7T0
				TEM5 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKT5TKRC7T1ST; LHKSTATUSBITS
				TEM5 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT5TKRC7T1
				TEM5 TKR Cable 7 Temp 1 raw

10.3.9 `TemEnvTemp3` (537/0x219)

Description:

"TEM Temperature Packet 3" Telemetry Packet

Contains temperature specific ADC values for TEMs 6 and 7.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKT6CALAF0T0ST; LHKSTATUSBITS TEM6 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT6CALAF0T0 TEM6 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKT6CALAF0T1ST; LHKSTATUSBITS TEM6 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT6CALAF0T1 TEM6 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKT6CALAF1T0ST; LHKSTATUSBITS TEM6 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT6CALAF1T0 TEM6 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKT6CALAF1T1ST TEM6 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT6CALAF1T1 TEM6 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKT6CALAF2T0ST TEM6 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT6CALAF2T0 TEM6 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKT6CALAF2T1ST TEM6 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT6CALAF2T1 TEM6 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKT6CALAF3T0ST; LHKSTATUSBITS TEM6 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT6CALAF3T0 TEM6 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKT6CALAF3T1ST; LHKSTATUSBITS TEM6 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT6CALAF3T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM6 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKT6TKRC0T0ST; LHKSTATUSBITS
				TEM6 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT6TKRC0T0
				TEM6 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKT6TKRC0T1ST; LHKSTATUSBITS
				TEM6 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT6TKRC0T1
				TEM6 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKT6TKRC1T0ST; LHKSTATUSBITS
				TEM6 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT6TKRC1T0
				TEM6 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKT6TKRC1T1ST
				TEM6 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT6TKRC1T1
				TEM6 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKT6TKRC2T0ST
				TEM6 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT6TKRC2T0
				TEM6 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKT6TKRC2T1ST
				TEM6 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT6TKRC2T1
				TEM6 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKT6TKRC3T0ST; LHKSTATUSBITS
				TEM6 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT6TKRC3T0
				TEM6 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKT6TKRC3T1ST; LHKSTATUSBITS
				TEM6 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT6TKRC3T1
				TEM6 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKT6TKRC4T0ST; LHKSTATUSBITS
				TEM6 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT6TKRC4T0
				TEM6 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKT6TKRC4T1ST; LHKSTATUSBITS
				TEM6 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT6TKRC4T1
				TEM6 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKT6TKRC5T0ST; LHKSTATUSBITS
				TEM6 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT6TKRC5T0
				TEM6 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKT6TKRC5T1ST
				TEM6 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT6TKRC5T1
				TEM6 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKT6TKRC6T0ST
				TEM6 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT6TKRC6T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM6 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKT6TKRC6T1ST
				TEM6 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT6TKRC6T1
				TEM6 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKT6TKRC7T0ST; LHKSTATUSBITS
				TEM6 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT6TKRC7T0
				TEM6 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKT6TKRC7T1ST; LHKSTATUSBITS
				TEM6 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT6TKRC7T1
				TEM6 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKT7CALAF0T0ST; LHKSTATUSBITS
				TEM7 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT7CALAF0T0
				TEM7 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKT7CALAF0T1ST; LHKSTATUSBITS
				TEM7 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT7CALAF0T1
				TEM7 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKT7CALAF1T0ST; LHKSTATUSBITS
				TEM7 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT7CALAF1T0
				TEM7 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKT7CALAF1T1ST
				TEM7 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT7CALAF1T1
				TEM7 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKT7CALAF2T0ST
				TEM7 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT7CALAF2T0
				TEM7 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKT7CALAF2T1ST
				TEM7 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT7CALAF2T1
				TEM7 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKT7CALAF3T0ST; LHKSTATUSBITS
				TEM7 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT7CALAF3T0
				TEM7 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKT7CALAF3T1ST; LHKSTATUSBITS
				TEM7 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT7CALAF3T1
				TEM7 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKT7TKRC0T0ST; LHKSTATUSBITS
				TEM7 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT7TKRC0T0
				TEM7 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKT7TKRC0T1ST; LHKSTATUSBITS
				TEM7 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT7TKRC0T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM7 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKT7TKRC1T0ST; LHKSTATUSBITS
				TEM7 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT7TKRC1T0
				TEM7 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKT7TKRC1T1ST
				TEM7 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT7TKRC1T1
				TEM7 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKT7TKRC2T0ST
				TEM7 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT7TKRC2T0
				TEM7 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKT7TKRC2T1ST
				TEM7 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT7TKRC2T1
				TEM7 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKT7TKRC3T0ST; LHKSTATUSBITS
				TEM7 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT7TKRC3T0
				TEM7 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKT7TKRC3T1ST; LHKSTATUSBITS
				TEM7 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT7TKRC3T1
				TEM7 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKT7TKRC4T0ST; LHKSTATUSBITS
				TEM7 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT7TKRC4T0
				TEM7 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKT7TKRC4T1ST; LHKSTATUSBITS
				TEM7 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT7TKRC4T1
				TEM7 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKT7TKRC5T0ST; LHKSTATUSBITS
				TEM7 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT7TKRC5T0
				TEM7 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKT7TKRC5T1ST
				TEM7 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT7TKRC5T1
				TEM7 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKT7TKRC6T0ST
				TEM7 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT7TKRC6T0
				TEM7 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKT7TKRC6T1ST
				TEM7 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT7TKRC6T1
				TEM7 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKT7TKRC7T0ST; LHKSTATUSBITS
				TEM7 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT7TKRC7T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM7 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKT7TKRC7T1ST; LHKSTATUSBITS
				TEM7 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT7TKRC7T1
				TEM7 TKR Cable 7 Temp 1 raw

10.3.10 `TemEnvTemp4` (538/0x21A)

Description:

"TEM Temperature Packet 4" Telemetry Packet

Contains temperature specific ADC values for TEMs 8 and 9.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKT8CALAF0T0ST; LHKSTATUSBITS
				TEM8 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT8CALAF0T0
				TEM8 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKT8CALAF0T1ST; LHKSTATUSBITS
				TEM8 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT8CALAF0T1
				TEM8 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKT8CALAF1T0ST; LHKSTATUSBITS
				TEM8 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT8CALAF1T0
				TEM8 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKT8CALAF1T1ST
				TEM8 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT8CALAF1T1
				TEM8 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKT8CALAF2T0ST
				TEM8 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT8CALAF2T0
				TEM8 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKT8CALAF2T1ST
				TEM8 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT8CALAF2T1
				TEM8 CAL AFEE2 Temp 1 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x020	0	4	U12	LHKT8CALAF3T0ST; LHKSTATUSBITS TEM8 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT8CALAF3T0 TEM8 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKT8CALAF3T1ST; LHKSTATUSBITS TEM8 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT8CALAF3T1 TEM8 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKT8TKRC0T0ST; LHKSTATUSBITS TEM8 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT8TKRC0T0 TEM8 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKT8TKRC0T1ST; LHKSTATUSBITS TEM8 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT8TKRC0T1 TEM8 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKT8TKRC1T0ST; LHKSTATUSBITS TEM8 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT8TKRC1T0 TEM8 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKT8TKRC1T1ST TEM8 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT8TKRC1T1 TEM8 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKT8TKRC2T0ST TEM8 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT8TKRC2T0 TEM8 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKT8TKRC2T1ST TEM8 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT8TKRC2T1 TEM8 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKT8TKRC3T0ST; LHKSTATUSBITS TEM8 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT8TKRC3T0 TEM8 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKT8TKRC3T1ST; LHKSTATUSBITS TEM8 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT8TKRC3T1 TEM8 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKT8TKRC4T0ST; LHKSTATUSBITS TEM8 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT8TKRC4T0 TEM8 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKT8TKRC4T1ST; LHKSTATUSBITS TEM8 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT8TKRC4T1 TEM8 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKT8TKRC5T0ST; LHKSTATUSBITS TEM8 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT8TKRC5T0 TEM8 TKR Cable 5 Temp 0 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x03A	0	4	U12	LHKT8TKRC5T1ST
				TEM8 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT8TKRC5T1
				TEM8 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKT8TKRC6T0ST
				TEM8 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT8TKRC6T0
				TEM8 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKT8TKRC6T1ST
				TEM8 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT8TKRC6T1
				TEM8 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKT8TKRC7T0ST; LHKSTATUSBITS
				TEM8 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT8TKRC7T0
				TEM8 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKT8TKRC7T1ST; LHKSTATUSBITS
				TEM8 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT8TKRC7T1
				TEM8 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKT9CALAF0T0ST; LHKSTATUSBITS
				TEM9 CAL AFEE0 Temp 0 status
	4	12	U12	LHKT9CALAF0T0
				TEM9 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKT9CALAF0T1ST; LHKSTATUSBITS
				TEM9 CAL AFEE0 Temp 1 status
	4	12	U12	LHKT9CALAF0T1
				TEM9 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKT9CALAF1T0ST; LHKSTATUSBITS
				TEM9 CAL AFEE1 Temp 0 status
	4	12	U12	LHKT9CALAF1T0
				TEM9 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKT9CALAF1T1ST
				TEM9 CAL AFEE1 Temp 1 status
	4	12	U12	LHKT9CALAF1T1
				TEM9 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKT9CALAF2T0ST
				TEM9 CAL AFEE2 Temp 0 status
	4	12	U12	LHKT9CALAF2T0
				TEM9 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKT9CALAF2T1ST
				TEM9 CAL AFEE2 Temp 1 status
	4	12	U12	LHKT9CALAF2T1
				TEM9 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKT9CALAF3T0ST; LHKSTATUSBITS
				TEM9 CAL AFEE3 Temp 0 status
	4	12	U12	LHKT9CALAF3T0
				TEM9 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKT9CALAF3T1ST; LHKSTATUSBITS
				TEM9 CAL AFEE3 Temp 1 status
	4	12	U12	LHKT9CALAF3T1
				TEM9 CAL AFEE3 Temp 1 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x054	0	4	U12	LHKT9TKRC0T0ST; LHKSTATUSBITS TEM9 TKR Cable 0 Tem 0 status
	4	12	U12	LHKT9TKRC0T0 TEM9 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKT9TKRC0T1ST; LHKSTATUSBITS TEM9 TKR Cable 0 Temp 1 status
	4	12	U12	LHKT9TKRC0T1 TEM9 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKT9TKRC1T0ST; LHKSTATUSBITS TEM9 TKR Cable 1 Temp 0 status
	4	12	U12	LHKT9TKRC1T0 TEM9 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKT9TKRC1T1ST TEM9 TKR Cable 1 Temp 1 status
	4	12	U12	LHKT9TKRC1T1 TEM9 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKT9TKRC2T0ST TEM9 TKR Cable 2 Temp 0 status
	4	12	U12	LHKT9TKRC2T0 TEM9 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKT9TKRC2T1ST TEM9 TKR Cable 2 Temp 1 status
	4	12	U12	LHKT9TKRC2T1 TEM9 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKT9TKRC3T0ST; LHKSTATUSBITS TEM9 TKR Cable 3 Temp 0 status
	4	12	U12	LHKT9TKRC3T0 TEM9 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKT9TKRC3T1ST; LHKSTATUSBITS TEM9 TKR Cable 3 Temp 1 status
	4	12	U12	LHKT9TKRC3T1 TEM9 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKT9TKRC4T0ST; LHKSTATUSBITS TEM9 TKR Cable 4 Tem 0 status
	4	12	U12	LHKT9TKRC4T0 TEM9 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKT9TKRC4T1ST; LHKSTATUSBITS TEM9 TKR Cable 4 Temp 1 status
	4	12	U12	LHKT9TKRC4T1 TEM9 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKT9TKRC5T0ST; LHKSTATUSBITS TEM9 TKR Cable 5 Temp 0 status
	4	12	U12	LHKT9TKRC5T0 TEM9 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKT9TKRC5T1ST TEM9 TKR Cable 5 Temp 1 status
	4	12	U12	LHKT9TKRC5T1 TEM9 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKT9TKRC6T0ST TEM9 TKR Cable 6 Temp 0 status
	4	12	U12	LHKT9TKRC6T0 TEM9 TKR Cable 6 Temp 0 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x06E	0	4	U12	LHKT9TKRC6T1ST TEM9 TKR Cable 6 Temp 1 status
	4	12	U12	LHKT9TKRC6T1 TEM9 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKT9TKRC7T0ST; LHKSTATUSBITS TEM9 TKR Cable 7 Temp 0 status
	4	12	U12	LHKT9TKRC7T0 TEM9 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKT9TKRC7T1ST; LHKSTATUSBITS TEM9 TKR Cable 7 Temp 1 status
	4	12	U12	LHKT9TKRC7T1 TEM9 TKR Cable 7 Temp 1 raw

10.3.11 `TemEnvTemp5` (539/0x21B)

Description:

"TEM Temperature Packet 5" Telemetry Packet

Contains temperature specific ADC values for TEMs A and B.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKTACALAF0T0ST; LHKSTATUSBITS TEMA CAL AFEE0 Temp 0 status
	4	12	U12	LHKTACALAF0T0 TEMA CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKTACALAF0T1ST; LHKSTATUSBITS TEMA CAL AFEE0 Temp 1 status
	4	12	U12	LHKTACALAF0T1 TEMA CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKTACALAF1T0ST; LHKSTATUSBITS TEMA CAL AFEE1 Temp 0 status
	4	12	U12	LHKTACALAF1T0 TEMA CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKTACALAF1T1ST TEMA CAL AFEE1 Temp 1 status
	4	12	U12	LHKTACALAF1T1 TEMA CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKTACALAF2T0ST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMA CAL AFEE2 Temp 0 status
	4	12	U12	LHKTACALAF2T0
				TEMA CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKTACALAF2T1ST
				TEMA CAL AFEE2 Temp 1 status
	4	12	U12	LHKTACALAF2T1
				TEMA CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKTACALAF3T0ST; LHKSTATUSBITS
				TEMA CAL AFEE3 Temp 0 status
	4	12	U12	LHKTACALAF3T0
				TEMA CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKTACALAF3T1ST; LHKSTATUSBITS
				TEMA CAL AFEE3 Temp 1 status
	4	12	U12	LHKTACALAF3T1
				TEMA CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKTATKRC0T0ST; LHKSTATUSBITS
				TEMA TKR Cable 0 Tem 0 status
	4	12	U12	LHKTATKRC0T0
				TEMA TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKTATKRC0T1ST; LHKSTATUSBITS
				TEMA TKR Cable 0 Temp 1 status
	4	12	U12	LHKTATKRC0T1
				TEMA TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKTATKRC1T0ST; LHKSTATUSBITS
				TEMA TKR Cable 1 Temp 0 status
	4	12	U12	LHKTATKRC1T0
				TEMA TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKTATKRC1T1ST
				TEMA TKR Cable 1 Temp 1 status
	4	12	U12	LHKTATKRC1T1
				TEMA TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKTATKRC2T0ST
				TEMA TKR Cable 2 Temp 0 status
	4	12	U12	LHKTATKRC2T0
				TEMA TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKTATKRC2T1ST
				TEMA TKR Cable 2 Temp 1 status
	4	12	U12	LHKTATKRC2T1
				TEMA TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKTATKRC3T0ST; LHKSTATUSBITS
				TEMA TKR Cable 3 Temp 0 status
	4	12	U12	LHKTATKRC3T0
				TEMA TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKTATKRC3T1ST; LHKSTATUSBITS
				TEMA TKR Cable 3 Temp 1 status
	4	12	U12	LHKTATKRC3T1
				TEMA TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKTATKRC4T0ST; LHKSTATUSBITS
				TEMA TKR Cable 4 Tem 0 status
	4	12	U12	LHKTATKRC4T0
				TEMA TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKTATKRC4T1ST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMA TKR Cable 4 Temp 1 status
	4	12	U12	LHKTATKRC4T1
				TEMA TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKTATKRC5T0ST; LHKSTATUSBITS
				TEMA TKR Cable 5 Temp 0 status
	4	12	U12	LHKTATKRC5T0
				TEMA TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKTATKRC5T1ST
				TEMA TKR Cable 5 Temp 1 status
	4	12	U12	LHKTATKRC5T1
				TEMA TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKTATKRC6T0ST
				TEMA TKR Cable 6 Temp 0 status
	4	12	U12	LHKTATKRC6T0
				TEMA TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKTATKRC6T1ST
				TEMA TKR Cable 6 Temp 1 status
	4	12	U12	LHKTATKRC6T1
				TEMA TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKTATKRC7T0ST; LHKSTATUSBITS
				TEMA TKR Cable 7 Temp 0 status
	4	12	U12	LHKTATKRC7T0
				TEMA TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKTATKRC7T1ST; LHKSTATUSBITS
				TEMA TKR Cable 7 Temp 1 status
	4	12	U12	LHKTATKRC7T1
				TEMA TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKTBCALAF0T0ST; LHKSTATUSBITS
				TEMB CAL AFEE0 Temp 0 status
	4	12	U12	LHKTBCALAF0T0
				TEMB CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKTBCALAF0T1ST; LHKSTATUSBITS
				TEMB CAL AFEE0 Temp 1 status
	4	12	U12	LHKTBCALAF0T1
				TEMB CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKTBCALAF1T0ST; LHKSTATUSBITS
				TEMB CAL AFEE1 Temp 0 status
	4	12	U12	LHKTBCALAF1T0
				TEMB CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKTBCALAF1T1ST
				TEMB CAL AFEE1 Temp 1 status
	4	12	U12	LHKTBCALAF1T1
				TEMB CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKTBCALAF2T0ST
				TEMB CAL AFEE2 Temp 0 status
	4	12	U12	LHKTBCALAF2T0
				TEMB CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKTBCALAF2T1ST
				TEMB CAL AFEE2 Temp 1 status
	4	12	U12	LHKTBCALAF2T1
				TEMB CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKTBCALAF3T0ST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMB CAL AFEE3 Temp 0 status
	4	12	U12	LHKTBCALAF3T0
				TEMB CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKTBCALAF3T1ST; LHKSTATUSBITS
				TEMB CAL AFEE3 Temp 1 status
	4	12	U12	LHKTBCALAF3T1
				TEMB CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKTBTKRC0T0ST; LHKSTATUSBITS
				TEMB TKR Cable 0 Tem 0 status
	4	12	U12	LHKTBTKRC0T0
				TEMB TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKTBTKRC0T1ST; LHKSTATUSBITS
				TEMB TKR Cable 0 Temp 1 status
	4	12	U12	LHKTBTKRC0T1
				TEMB TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKTBTKRC1T0ST; LHKSTATUSBITS
				TEMB TKR Cable 1 Temp 0 status
	4	12	U12	LHKTBTKRC1T0
				TEMB TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKTBTKRC1T1ST
				TEMB TKR Cable 1 Temp 1 status
	4	12	U12	LHKTBTKRC1T1
				TEMB TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKTBTKRC2T0ST
				TEMB TKR Cable 2 Temp 0 status
	4	12	U12	LHKTBTKRC2T0
				TEMB TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKTBTKRC2T1ST
				TEMB TKR Cable 2 Temp 1 status
	4	12	U12	LHKTBTKRC2T1
				TEMB TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKTBTKRC3T0ST; LHKSTATUSBITS
				TEMB TKR Cable 3 Temp 0 status
	4	12	U12	LHKTBTKRC3T0
				TEMB TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKTBTKRC3T1ST; LHKSTATUSBITS
				TEMB TKR Cable 3 Temp 1 status
	4	12	U12	LHKTBTKRC3T1
				TEMB TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKTBTKRC4T0ST; LHKSTATUSBITS
				TEMB TKR Cable 4 Tem 0 status
	4	12	U12	LHKTBTKRC4T0
				TEMB TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKTBTKRC4T1ST; LHKSTATUSBITS
				TEMB TKR Cable 4 Temp 1 status
	4	12	U12	LHKTBTKRC4T1
				TEMB TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKTBTKRC5T0ST; LHKSTATUSBITS
				TEMB TKR Cable 5 Temp 0 status
	4	12	U12	LHKTBTKRC5T0
				TEMB TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKTBTKRC5T1ST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMB TKR Cable 5 Temp 1 status
	4	12	U12	LHKTBTKRC5T1
				TEMB TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKTBTKRC6T0ST
				TEMB TKR Cable 6 Temp 0 status
	4	12	U12	LHKTBTKRC6T0
				TEMB TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKTBTKRC6T1ST
				TEMB TKR Cable 6 Temp 1 status
	4	12	U12	LHKTBTKRC6T1
				TEMB TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKTBTKRC7T0ST; LHKSTATUSBITS
				TEMB TKR Cable 7 Temp 0 status
	4	12	U12	LHKTBTKRC7T0
				TEMB TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKTBTKRC7T1ST; LHKSTATUSBITS
				TEMB TKR Cable 7 Temp 1 status
	4	12	U12	LHKTBTKRC7T1
				TEMB TKR Cable 7 Temp 1 raw

10.3.12 `TemEnvTemp6` (540/0x21C)

Description:

"TEM Temperature Packet 6" Telemetry Packet

Contains temperature specific ADC values for TEMs C and D.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKTCCALAF0T0ST; LHKSTATUSBITS
				TEMC CAL AFEE0 Temp 0 status
	4	12	U12	LHKTCCALAF0T0
				TEMC CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKTCCALAF0T1ST; LHKSTATUSBITS
				TEMC CAL AFEE0 Temp 1 status
	4	12	U12	LHKTCCALAF0T1
				TEMC CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKTCCALAF1T0ST; LHKSTATUSBITS
				TEMC CAL AFEE1 Temp 0 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKTCCALAF1T0 TEMC CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKTCCALAF1T1ST TEMC CAL AFEE1 Temp 1 status
	4	12	U12	LHKTCCALAF1T1 TEMC CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKTCCALAF2T0ST TEMC CAL AFEE2 Temp 0 status
	4	12	U12	LHKTCCALAF2T0 TEMC CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKTCCALAF2T1ST TEMC CAL AFEE2 Temp 1 status
	4	12	U12	LHKTCCALAF2T1 TEMC CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKTCCALAF3T0ST; LHKSTATUSBITS TEMC CAL AFEE3 Temp 0 status
	4	12	U12	LHKTCCALAF3T0 TEMC CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKTCCALAF3T1ST; LHKSTATUSBITS TEMC CAL AFEE3 Temp 1 status
	4	12	U12	LHKTCCALAF3T1 TEMC CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKTCTKRC0T0ST; LHKSTATUSBITS TEMC TKR Cable 0 Tem 0 status
	4	12	U12	LHKTCTKRC0T0 TEMC TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKTCTKRC0T1ST; LHKSTATUSBITS TEMC TKR Cable 0 Temp 1 status
	4	12	U12	LHKTCTKRC0T1 TEMC TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKTCTKRC1T0ST; LHKSTATUSBITS TEMC TKR Cable 1 Temp 0 status
	4	12	U12	LHKTCTKRC1T0 TEMC TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKTCTKRC1T1ST TEMC TKR Cable 1 Temp 1 status
	4	12	U12	LHKTCTKRC1T1 TEMC TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKTCTKRC2T0ST TEMC TKR Cable 2 Temp 0 status
	4	12	U12	LHKTCTKRC2T0 TEMC TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKTCTKRC2T1ST TEMC TKR Cable 2 Temp 1 status
	4	12	U12	LHKTCTKRC2T1 TEMC TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKTCTKRC3T0ST; LHKSTATUSBITS TEMC TKR Cable 3 Temp 0 status
	4	12	U12	LHKTCTKRC3T0 TEMC TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKTCTKRC3T1ST; LHKSTATUSBITS TEMC TKR Cable 3 Temp 1 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKTCTKRC3T1 TEMC TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKTCTKRC4T0ST; LHKSTATUSBITS TEMC TKR Cable 4 Tem 0 status
	4	12	U12	LHKTCTKRC4T0 TEMC TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKTCTKRC4T1ST; LHKSTATUSBITS TEMC TKR Cable 4 Temp 1 status
	4	12	U12	LHKTCTKRC4T1 TEMC TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKTCTKRC5T0ST; LHKSTATUSBITS TEMC TKR Cable 5 Temp 0 status
	4	12	U12	LHKTCTKRC5T0 TEMC TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKTCTKRC5T1ST TEMC TKR Cable 5 Temp 1 status
	4	12	U12	LHKTCTKRC5T1 TEMC TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKTCTKRC6T0ST TEMC TKR Cable 6 Temp 0 status
	4	12	U12	LHKTCTKRC6T0 TEMC TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKTCTKRC6T1ST TEMC TKR Cable 6 Temp 1 status
	4	12	U12	LHKTCTKRC6T1 TEMC TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKTCTKRC7T0ST; LHKSTATUSBITS TEMC TKR Cable 7 Temp 0 status
	4	12	U12	LHKTCTKRC7T0 TEMC TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKTCTKRC7T1ST; LHKSTATUSBITS TEMC TKR Cable 7 Temp 1 status
	4	12	U12	LHKTCTKRC7T1 TEMC TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKTDCALAF0T0ST; LHKSTATUSBITS TEMD CAL AFEE0 Temp 0 status
	4	12	U12	LHKTDCALAF0T0 TEMD CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKTDCALAF0T1ST; LHKSTATUSBITS TEMD CAL AFEE0 Temp 1 status
	4	12	U12	LHKTDCALAF0T1 TEMD CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKTDCALAF1T0ST; LHKSTATUSBITS TEMD CAL AFEE1 Temp 0 status
	4	12	U12	LHKTDCALAF1T0 TEMD CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKTDCALAF1T1ST TEMD CAL AFEE1 Temp 1 status
	4	12	U12	LHKTDCALAF1T1 TEMD CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKTDCALAF2T0ST TEMD CAL AFEE2 Temp 0 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKTDCALAF2T0 TEMD CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKTDCALAF2T1ST TEMD CAL AFEE2 Temp 1 status
	4	12	U12	LHKTDCALAF2T1 TEMD CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKTDCALAF3T0ST; LHKSTATUSBITS TEMD CAL AFEE3 Temp 0 status
	4	12	U12	LHKTDCALAF3T0 TEMD CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKTDCALAF3T1ST; LHKSTATUSBITS TEMD CAL AFEE3 Temp 1 status
	4	12	U12	LHKTDCALAF3T1 TEMD CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKTDTKRC0T0ST; LHKSTATUSBITS TEMD TKR Cable 0 Tem 0 status
	4	12	U12	LHKTDTKRC0T0 TEMD TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKTDTKRC0T1ST; LHKSTATUSBITS TEMD TKR Cable 0 Temp 1 status
	4	12	U12	LHKTDTKRC0T1 TEMD TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKTDTKRC1T0ST; LHKSTATUSBITS TEMD TKR Cable 1 Temp 0 status
	4	12	U12	LHKTDTKRC1T0 TEMD TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKTDTKRC1T1ST TEMD TKR Cable 1 Temp 1 status
	4	12	U12	LHKTDTKRC1T1 TEMD TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKTDTKRC2T0ST TEMD TKR Cable 2 Temp 0 status
	4	12	U12	LHKTDTKRC2T0 TEMD TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKTDTKRC2T1ST TEMD TKR Cable 2 Temp 1 status
	4	12	U12	LHKTDTKRC2T1 TEMD TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKTDTKRC3T0ST; LHKSTATUSBITS TEMD TKR Cable 3 Temp 0 status
	4	12	U12	LHKTDTKRC3T0 TEMD TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKTDTKRC3T1ST; LHKSTATUSBITS TEMD TKR Cable 3 Temp 1 status
	4	12	U12	LHKTDTKRC3T1 TEMD TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKTDTKRC4T0ST; LHKSTATUSBITS TEMD TKR Cable 4 Tem 0 status
	4	12	U12	LHKTDTKRC4T0 TEMD TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKTDTKRC4T1ST; LHKSTATUSBITS TEMD TKR Cable 4 Temp 1 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKTDTKRC4T1 TEMD TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKTDTKRC5T0ST; LHKSTATUSBITS TEMD TKR Cable 5 Temp 0 status
	4	12	U12	LHKTDTKRC5T0 TEMD TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKTDTKRC5T1ST TEMD TKR Cable 5 Temp 1 status
	4	12	U12	LHKTDTKRC5T1 TEMD TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKTDTKRC6T0ST TEMD TKR Cable 6 Temp 0 status
	4	12	U12	LHKTDTKRC6T0 TEMD TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKTDTKRC6T1ST TEMD TKR Cable 6 Temp 1 status
	4	12	U12	LHKTDTKRC6T1 TEMD TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKTDTKRC7T0ST; LHKSTATUSBITS TEMD TKR Cable 7 Temp 0 status
	4	12	U12	LHKTDTKRC7T0 TEMD TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKTDTKRC7T1ST; LHKSTATUSBITS TEMD TKR Cable 7 Temp 1 status
	4	12	U12	LHKTDTKRC7T1 TEMD TKR Cable 7 Temp 1 raw

10.3.13 `TemEnvTemp7` (541/0x21D)

Description:

"TEM Temperature Packet 7" Telemetry Packet

Contains temperature specific ADC values for TEMs E and F.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKTECALAF0T0ST; LHKSTATUSBITS TEME CAL AFEE0 Temp 0 status
	4	12	U12	LHKTECALAF0T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEME CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKTECALAF0T1ST; LHKSTATUSBITS
				TEME CAL AFEE0 Temp 1 status
	4	12	U12	LHKTECALAF0T1
				TEME CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKTECALAF1T0ST; LHKSTATUSBITS
				TEME CAL AFEE1 Temp 0 status
	4	12	U12	LHKTECALAF1T0
				TEME CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKTECALAF1T1ST
				TEME CAL AFEE1 Temp 1 status
	4	12	U12	LHKTECALAF1T1
				TEME CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKTECALAF2T0ST
				TEME CAL AFEE2 Temp 0 status
	4	12	U12	LHKTECALAF2T0
				TEME CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKTECALAF2T1ST
				TEME CAL AFEE2 Temp 1 status
	4	12	U12	LHKTECALAF2T1
				TEME CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKTECALAF3T0ST; LHKSTATUSBITS
				TEME CAL AFEE3 Temp 0 status
	4	12	U12	LHKTECALAF3T0
				TEME CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKTECALAF3T1ST; LHKSTATUSBITS
				TEME CAL AFEE3 Temp 1 status
	4	12	U12	LHKTECALAF3T1
				TEME CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKTETKRC0T0ST; LHKSTATUSBITS
				TEME TKR Cable 0 Tem 0 status
	4	12	U12	LHKTETKRC0T0
				TEME TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKTETKRC0T1ST; LHKSTATUSBITS
				TEME TKR Cable 0 Temp 1 status
	4	12	U12	LHKTETKRC0T1
				TEME TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKTETKRC1T0ST; LHKSTATUSBITS
				TEME TKR Cable 1 Temp 0 status
	4	12	U12	LHKTETKRC1T0
				TEME TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKTETKRC1T1ST
				TEME TKR Cable 1 Temp 1 status
	4	12	U12	LHKTETKRC1T1
				TEME TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKTETKRC2T0ST
				TEME TKR Cable 2 Temp 0 status
	4	12	U12	LHKTETKRC2T0
				TEME TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKTETKRC2T1ST
				TEME TKR Cable 2 Temp 1 status
	4	12	U12	LHKTETKRC2T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEME TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKTETKRC3T0ST; LHKSTATUSBITS
				TEME TKR Cable 3 Temp 0 status
	4	12	U12	LHKTETKRC3T0
				TEME TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKTETKRC3T1ST; LHKSTATUSBITS
				TEME TKR Cable 3 Temp 1 status
	4	12	U12	LHKTETKRC3T1
				TEME TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKTETKRC4T0ST; LHKSTATUSBITS
				TEME TKR Cable 4 Tem 0 status
	4	12	U12	LHKTETKRC4T0
				TEME TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKTETKRC4T1ST; LHKSTATUSBITS
				TEME TKR Cable 4 Temp 1 status
	4	12	U12	LHKTETKRC4T1
				TEME TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKTETKRC5T0ST; LHKSTATUSBITS
				TEME TKR Cable 5 Temp 0 status
	4	12	U12	LHKTETKRC5T0
				TEME TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKTETKRC5T1ST
				TEME TKR Cable 5 Temp 1 status
	4	12	U12	LHKTETKRC5T1
				TEME TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKTETKRC6T0ST
				TEME TKR Cable 6 Temp 0 status
	4	12	U12	LHKTETKRC6T0
				TEME TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKTETKRC6T1ST
				TEME TKR Cable 6 Temp 1 status
	4	12	U12	LHKTETKRC6T1
				TEME TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKTETKRC7T0ST; LHKSTATUSBITS
				TEME TKR Cable 7 Temp 0 status
	4	12	U12	LHKTETKRC7T0
				TEME TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKTETKRC7T1ST; LHKSTATUSBITS
				TEME TKR Cable 7 Temp 1 status
	4	12	U12	LHKTETKRC7T1
				TEME TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKTFCALAF0T0ST; LHKSTATUSBITS
				TEMF CAL AFEE0 Temp 0 status
	4	12	U12	LHKTFCALAF0T0
				TEMF CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKTFCALAF0T1ST; LHKSTATUSBITS
				TEMF CAL AFEE0 Temp 1 status
	4	12	U12	LHKTFCALAF0T1
				TEMF CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKTFCALAF1T0ST; LHKSTATUSBITS
				TEMF CAL AFEE1 Temp 0 status
	4	12	U12	LHKTFCALAF1T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMF CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKTFCALAF1T1ST
				TEMF CAL AFEE1 Temp 1 status
	4	12	U12	LHKTFCALAF1T1
				TEMF CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKTFCALAF2T0ST
				TEMF CAL AFEE2 Temp 0 status
	4	12	U12	LHKTFCALAF2T0
				TEMF CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKTFCALAF2T1ST
				TEMF CAL AFEE2 Temp 1 status
	4	12	U12	LHKTFCALAF2T1
				TEMF CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKTFCALAF3T0ST; LHKSTATUSBITS
				TEMF CAL AFEE3 Temp 0 status
	4	12	U12	LHKTFCALAF3T0
				TEMF CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKTFCALAF3T1ST; LHKSTATUSBITS
				TEMF CAL AFEE3 Temp 1 status
	4	12	U12	LHKTFCALAF3T1
				TEMF CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKTFTKRC0T0ST; LHKSTATUSBITS
				TEMF TKR Cable 0 Tem 0 status
	4	12	U12	LHKTFTKRC0T0
				TEMF TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKTFTKRC0T1ST; LHKSTATUSBITS
				TEMF TKR Cable 0 Temp 1 status
	4	12	U12	LHKTFTKRC0T1
				TEMF TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKTFTKRC1T0ST; LHKSTATUSBITS
				TEMF TKR Cable 1 Temp 0 status
	4	12	U12	LHKTFTKRC1T0
				TEMF TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKTFTKRC1T1ST
				TEMF TKR Cable 1 Temp 1 status
	4	12	U12	LHKTFTKRC1T1
				TEMF TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKTFTKRC2T0ST
				TEMF TKR Cable 2 Temp 0 status
	4	12	U12	LHKTFTKRC2T0
				TEMF TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKTFTKRC2T1ST
				TEMF TKR Cable 2 Temp 1 status
	4	12	U12	LHKTFTKRC2T1
				TEMF TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKTFTKRC3T0ST; LHKSTATUSBITS
				TEMF TKR Cable 3 Temp 0 status
	4	12	U12	LHKTFTKRC3T0
				TEMF TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKTFTKRC3T1ST; LHKSTATUSBITS
				TEMF TKR Cable 3 Temp 1 status
	4	12	U12	LHKTFTKRC3T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMF TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKTFTKRC4T0ST; LHKSTATUSBITS
				TEMF TKR Cable 4 Tem 0 status
	4	12	U12	LHKTFTKRC4T0
				TEMF TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKTFTKRC4T1ST; LHKSTATUSBITS
				TEMF TKR Cable 4 Temp 1 status
	4	12	U12	LHKTFTKRC4T1
				TEMF TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKTFTKRC5T0ST; LHKSTATUSBITS
				TEMF TKR Cable 5 Temp 0 status
	4	12	U12	LHKTFTKRC5T0
				TEMF TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKTFTKRC5T1ST
				TEMF TKR Cable 5 Temp 1 status
	4	12	U12	LHKTFTKRC5T1
				TEMF TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKTFTKRC6T0ST
				TEMF TKR Cable 6 Temp 0 status
	4	12	U12	LHKTFTKRC6T0
				TEMF TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKTFTKRC6T1ST
				TEMF TKR Cable 6 Temp 1 status
	4	12	U12	LHKTFTKRC6T1
				TEMF TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKTFTKRC7T0ST; LHKSTATUSBITS
				TEMF TKR Cable 7 Temp 0 status
	4	12	U12	LHKTFTKRC7T0
				TEMF TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKTFTKRC7T1ST; LHKSTATUSBITS
				TEMF TKR Cable 7 Temp 1 status
	4	12	U12	LHKTFTKRC7T1
				TEMF TKR Cable 7 Temp 1 raw

10.3.14 `PduEnv0` (542/0x21E)

Description:

"PDU Environmental Packet 0" Telemetry Packet

PDU Packet 0

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	1	U1	LHKP0TEMFPM; LDPDUTEMPWRST PDU0 TEMF Power Mgt Switch
	1	1	U1	LHKP0TEMEPM PDU0 TEME Power Mgt Switch
	2	1	U1	LHKP0TEMDPM PDU0 TEMD Power Mgt Switch
	3	1	U1	LHKP0TEMCPM PDU0 TEMC Power Mgt Switch
	4	1	U1	LHKP0TEMBPM PDU0 TEMB Power Mgt Switch
	5	1	U1	LHKP0TEMAPM PDU0 TEMA Power Mgt Switch
	6	1	U1	LHKP0TEM9PM PDU0 TEM9 Power Mgt Switch
	7	1	U1	LHKP0TEM8PM PDU0 TEM8 Power Mgt Switch
	8	1	U1	LHKP0TEM7PM PDU0 TEM7 Power Mgt Switch
	9	1	U1	LHKP0TEM6PM PDU0 TEM6 Power Mgt Switch
	10	1	U1	LHKP0TEM5PM PDU0 TEM5 Power Mgt Switch
	11	1	U1	LHKP0TEM4PM PDU0 TEM4 Power Mgt Switch
	12	1	U1	LHKP0TEM3PM PDU0 TEM3 Power Mgt Switch
	13	1	U1	LHKP0TEM2PM PDU0 TEM2 Power Mgt Switch
	14	1	U1	LHKP0TEM1PM PDU0 TEM1 Power Mgt Switch
	15	1	U1	LHKP0TEM0PM PDU0 TEM0 Power Mgt Switch
0x016	0	10	U12	LHKSPARE10 Spare 10 bits
	10	1	U1	LHKP0EPU2CNVT PDU0 EPU2 Power Converter Switch
	11	1	U1	LHKP0EPU1CNVT PDU0 EPU1 Power Converter Switch
	12	1	U1	LHKP0EPU0CNVT PDU0 EPU0 Power Converter Switch
	13	1	U1	LHKP0EPU2PM PDU0 EPU2 Power Mgt Switch
	14	1	U1	LHKP0EPU1PM PDU0 EPU1 Power Mgt Switch
	15	1	U1	LHKP0EPU0PM PDU0 EPU0 Power Mgt Switch
0x018	0	13	U12	LHKSPARE13 Spare 13 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
	13	1	U1	LHKP0ACDCNVT PDU0 ACD Converter Switch
	14	1	I1	LHKP0ACDPSP PDU0 ACD Power Supply Switch
	15	1	I1	LHKP0ACDPM PDU0 ACD Power Mgt Switch
0x01A	0	4	U12	LHKP0TEM033VST PDU0 TEM0 3.3V digital status
	4	12	U12	LHKP0TEM033V PDU0 TEM0 3.3V digital raw
0x01C	0	4	U12	LHKP0TEM133VST PDU0 TEM1 3.3V digital status
	4	12	U12	LHKP0TEM133V PDU0 TEM1 3.3V digital raw
0x01E	0	4	U12	LHKP0TEM233VST PDU0 TEM2 3.3V digital status
	4	12	U12	LHKP0TEM233V PDU0 TEM2 3.3V digital raw
0x020	0	4	U12	LHKP0TEM333VST; LHKSTATUSBITS PDU0 TEM3 3.3V digital status
	4	12	U12	LHKP0TEM333V PDU0 TEM3 3.3V digital raw
0x022	0	4	U12	LHKP0TEM433VST; LHKSTATUSBITS PDU0 TEM4 3.3V digital status
	4	12	U12	LHKP0TEM433V PDU0 TEM4 3.3V digital raw
0x024	0	4	U12	LHKP0TEM533VST; LHKSTATUSBITS PDU0 TEM5 3.3V digital status
	4	12	U12	LHKP0TEM533V PDU0 TEM5 3.3V digital raw
0x026	0	4	U12	LHKP0TEM633VST; LHKSTATUSBITS PDU0 TEM6 3.3V digital status
	4	12	U12	LHKP0TEM633V PDU0 TEM6 3.3V digital raw
0x028	0	4	U12	LHKP0TEM733VST; LHKSTATUSBITS PDU0 TEM7 3.3V digital status
	4	12	U12	LHKP0TEM733V PDU0 TEM7 3.3V digital raw
0x02A	0	4	U12	LHKP0TEM833VST PDU0 TEM8 3.3V digital status
	4	12	U12	LHKP0TEM833V PDU0 TEM8 3.3V digital raw
0x02C	0	4	U12	LHKP0TEM933VST PDU0 TEM9 3.3V digital status
	4	12	U12	LHKP0TEM933V PDU0 TEM9 3.3V digital raw
0x02E	0	4	U12	LHKP0TEMA33VST PDU0 TEMA 3.3V digital status
	4	12	U12	LHKP0TEMA33V PDU0 TEMA 3.3V digital raw
0x030	0	4	U12	LHKP0TEMB33VST; LHKSTATUSBITS PDU0 TEMB 3.3V digital status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKP0TEMB33V PDU0 TEMB 3.3V digital raw
0x032	0	4	U12	LHKP0TEMC33VST; LHKSTATUSBITS PDU0 TEMC 3.3V digital status
	4	12	U12	LHKP0TEMC33V PDU0 TEMC 3.3V digital raw
0x034	0	4	U12	LHKP0TEMD33VST; LHKSTATUSBITS PDU0 TEMD 3.3V digital status
	4	12	U12	LHKP0TEMD33V PDU0 TEMD 3.3V digital raw
0x036	0	4	U12	LHKP0TEME33VST; LHKSTATUSBITS PDU0 TEME 3.3V digital status
	4	12	U12	LHKP0TEME33V PDU0 TEME 3.3V digital raw
0x038	0	4	U12	LHKP0TEMF33VST; LHKSTATUSBITS PDU0 TEMF 3.3V digital status
	4	12	U12	LHKP0TEMF33V PDU0 TEMF 3.3V digital raw
0x03A	0	4	U12	LHKP0TEM0PCTST PDU0 TEM0 PCB temperature status
	4	12	U12	LHKP0TEM0PCT PDU0 TEM0 PCB temperature raw
0x03C	0	4	U12	LHKP0TEM1PCTST PDU0 TEM1 PCB temperature status
	4	12	U12	LHKP0TEM1PCT PDU0 TEM1 PCB temperature raw
0x03E	0	4	U12	LHKP0TEM2PCTST PDU0 TEM2 PCB temperature status
	4	12	U12	LHKP0TEM2PCT PDU0 TEM2 PCB temperature raw
0x040	0	4	U12	LHKP0TEM3PCTST; LHKSTATUSBITS PDU0 TEM3 PCB temperature status
	4	12	U12	LHKP0TEM3PCT PDU0 TEM3 PCB temperature raw
0x042	0	4	U12	LHKP0TEM4PCTST; LHKSTATUSBITS PDU0 TEM4 PCB temperature status
	4	12	U12	LHKP0TEM4PCT PDU0 TEM4 PCB temperature raw
0x044	0	4	U12	LHKP0TEM5PCTST; LHKSTATUSBITS PDU0 TEM5 PCB temperature status
	4	12	U12	LHKP0TEM5PCT PDU0 TEM5 PCB temperature raw
0x046	0	4	U12	LHKP0TEM6PCTST; LHKSTATUSBITS PDU0 TEM6 PCB temperature status
	4	12	U12	LHKP0TEM6PCT PDU0 TEM6 PCB temperature raw
0x048	0	4	U12	LHKP0TEM7PCTST; LHKSTATUSBITS PDU0 TEM7 PCB temperature status
	4	12	U12	LHKP0TEM7PCT PDU0 TEM7 PCB temperature raw
0x04A	0	4	U12	LHKP0TEM8PCTST PDU0 TEM8 PCB temperature status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKP0TEM8PCT
				PDU0 TEM8 PCB temperature raw
0x04C	0	4	U12	LHKP0TEM9PCTST
				PDU0 TEM9 PCB temperature status
	4	12	U12	LHKP0TEM9PCT
				PDU0 TEM9 PCB temperature raw
0x04E	0	4	U12	LHKP0TEMAPCTST
				PDU0 TEMA PCB temperature status
	4	12	U12	LHKP0TEMAPCT
				PDU0 TEMA PCB temperature raw
0x050	0	4	U12	LHKP0TEMBPCTST; LHKSTATUSBITS
				PDU0 TEMB PCB temperature status
	4	12	U12	LHKP0TEMBPCT
				PDU0 TEMB PCB temperature raw
0x052	0	4	U12	LHKP0TEMCPCTST; LHKSTATUSBITS
				PDU0 TEMC PCB temperature status
	4	12	U12	LHKP0TEMCPCT
				PDU0 TEMC PCB temperature raw
0x054	0	4	U12	LHKP0TEMDPCTST; LHKSTATUSBITS
				PDU0 TEMD PCB temperature status
	4	12	U12	LHKP0TEMDPCT
				PDU0 TEMD PCB temperature raw
0x056	0	4	U12	LHKP0TEMEPCTST; LHKSTATUSBITS
				PDU0 TEME PCB temperature status
	4	12	U12	LHKP0TEMEPCT
				PDU0 TEME PCB temperature raw
0x058	0	4	U12	LHKP0TEMFPCTST; LHKSTATUSBITS
				PDU0 TEMF PCB temperature status
	4	12	U12	LHKP0TEMFPCT
				PDU0 TEMF PCB temperature raw
0x05A	0	4	U12	LHKP0EPU033VST
				PDU EPU0 3.3V digital status
	4	12	U12	LHKP0EPU033V
				PDU0 EPU0 3.3V digital raw
0x05C	0	4	U12	LHKP0EPU133VST
				PDU0 EPU1 3.3V digital status
	4	12	U12	LHKP0EPU133V
				PDU0 EPU1 3.3V digital raw
0x05E	0	4	U12	LHKP0EPU233VST
				PDU0 EPU2 3.3V digital status
	4	12	U12	LHKP0EPU233V
				PDU0 EPU2 3.3V digital raw
0x060	0	4	U12	LHKP0EPU0TST; LHKSTATUSBITS
				PDU0 EPU0 temperature status
	4	12	U12	LHKP0EPU0T
				PDU0 EPU0 temperature raw
0x062	0	4	U12	LHKP0EPU1TST; LHKSTATUSBITS
				PDU0 EPU1 temperature status
	4	12	U12	LHKP0EPU1T
				PDU0 EPU1 temperature raw
0x064	0	4	U12	LHKP0EPU2TST; LHKSTATUSBITS
				PDU0 EPU2 temperature status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKP0EPU2T
				PDU0 EPU2 temperature raw
0x066	0	4	U12	LHKAFR33ISUMST
				AEM FREE Board 3.3 Current Sum Status
	4	12	U12	LHKAFR33ISUM
				AEM FREE Board 3.3 Current Sum
0x068	0	4	U12	LHKADABTEMPSTAT
				DAQ Board Temperature Status
	4	12	U12	LHKADABTEMP
				DAQ Board Temperature
0x06A	0	4	U12	LHKAFR28ISUMST
				AEM FREE Board 28V Current Sum Status
	4	12	U12	LHKAFR28ISUM
				AEM FREE Board 28V Current Sum
0x06C	0	4	U12	LHKADAB33VSTAT
				DAQ Board 3.3V Status
	4	12	U12	LHKADAB33V
				DAQ Board 3.3V
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.15 `PduEnv1` (543/0x21F)

Description:

"PDU Environmental Packet 1" Telemetry Packet

PDU Packet 1

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x014	0	4	U12	LHKP0TEM0PSTST; LHKSTATUSBITS
				PDU0 TEM0 power supply temperature status
	4	12	U12	LHKP0TEM0PST
				PDU0 TEM0 power supply temperature raw
0x016	0	4	U12	LHKP0TEM1PSTST; LHKSTATUSBITS
				PDU0 TEM1 power supply temperature status
	4	12	U12	LHKP0TEM1PST
				PDU0 TEM1 power supply temperature raw
0x018	0	4	U12	LHKP0TEM2PSTST; LHKSTATUSBITS
				PDU0 TEM2 power supply temperature status
	4	12	U12	LHKP0TEM2PST
				PDU0 TEM2 power supply temperature raw
0x01A	0	4	U12	LHKP0TEM3PSTST
				PDU0 TEM3 power supply temperature status
	4	12	U12	LHKP0TEM3PST
				PDU0 TEM3 power supply temperature raw
0x01C	0	4	U12	LHKP0TEM4PSTST
				PDU0 TEM4 power supply temperature status
	4	12	U12	LHKP0TEM4PST
				PDU0 TEM4 power supply temperature raw
0x01E	0	4	U12	LHKP0TEM5PSTST
				PDU0 TEM5 power supply temperature status
	4	12	U12	LHKP0TEM5PST
				PDU0 TEM5 power supply temperature raw
0x020	0	4	U12	LHKP0TEM6PSTST; LHKSTATUSBITS
				PDU0 TEM6 power supply temperature status
	4	12	U12	LHKP0TEM6PST
				PDU0 TEM6 power supply temperature raw
0x022	0	4	U12	LHKP0TEM7PSTST; LHKSTATUSBITS
				PDU0 TEM7 power supply temperature status
	4	12	U12	LHKP0TEM7PST
				PDU0 TEM7 power supply temperature raw
0x024	0	4	U12	LHKP0TEM8PSTST; LHKSTATUSBITS
				PDU0 TEM8 power supply temperature status
	4	12	U12	LHKP0TEM8PST
				PDU0 TEM8 power supply temperature raw
0x026	0	4	U12	LHKP0TEM9PSTST; LHKSTATUSBITS
				PDU0 TEM9 power supply temperature status
	4	12	U12	LHKP0TEM9PST
				PDU0 TEM9 power supply temperature raw
0x028	0	4	U12	LHKP0TEMAPSTST; LHKSTATUSBITS
				PDU0 TEMA power supply temperature status
	4	12	U12	LHKP0TEMAPST
				PDU0 TEMA power supply temperature raw
0x02A	0	4	U12	LHKP0TEMBPSTST
				PDU0 TEMB power supply temperature status
	4	12	U12	LHKP0TEMBPST
				PDU0 TEMB power supply temperature raw
0x02C	0	4	U12	LHKP0TEMCPSTST
				PDU0 TEMC power supply temperature status
	4	12	U12	LHKP0TEMCPST

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU0 TEMC power supply temperature raw
0x02E	0	4	U12	LHKP0TEMDPSTST
				PDU0 TEMD power supply temperature status
	4	12	U12	LHKP0TEMDPST
				PDU0 TEMD power supply temperature raw
0x030	0	4	U12	LHKP0TEMEPSTST; LHKSTATUSBITS
				PDU0 TEME power supply temperature status
	4	12	U12	LHKP0TEMEPST
				PDU0 TEME power supply temperature raw
0x032	0	4	U12	LHKP0TEMFPSTST; LHKSTATUSBITS
				PDU0 TEMF power supply temperature status
	4	12	U12	LHKP0TEMFPST
				PDU0 TEMF power supply temperature raw
0x034	0	4	U12	LHKP0CAL0BPTST; LHKSTATUSBITS
				PDU0 TEM0 CAL baseplate temperature status
	4	12	U12	LHKP0CAL0BPT
				PDU0 TEM0 CAL baseplate temperature raw
0x036	0	4	U12	LHKP0CAL1BPTST; LHKSTATUSBITS
				PDU0 TEM1 CAL baseplate temperature status
	4	12	U12	LHKP0CAL1BPT
				PDU0 TEM1 CAL baseplate temperature raw
0x038	0	4	U12	LHKP0CAL2BPTST; LHKSTATUSBITS
				PDU0 TEM2 CAL baseplate temperature status
	4	12	U12	LHKP0CAL2BPT
				PDU0 TEM2 CAL baseplate temperature raw
0x03A	0	4	U12	LHKP0CAL3BPTST
				PDU0 TEM3 CAL baseplate temperature status
	4	12	U12	LHKP0CAL3BPT
				PDU0 TEM3 CAL baseplate temperature raw
0x03C	0	4	U12	LHKP0CAL4BPTST
				PDU0 TEM4 CAL baseplate temperature status
	4	12	U12	LHKP0CAL4BPT
				PDU0 TEM4 CAL baseplate temperature raw
0x03E	0	4	U12	LHKP0CAL5BPTST
				PDU0 TEM5 CAL baseplate temperature status
	4	12	U12	LHKP0CAL5BPT
				PDU0 TEM5 CAL baseplate temperature raw
0x040	0	4	U12	LHKP0CAL6BPTST; LHKSTATUSBITS
				PDU0 TEM6 CAL baseplate temperature status
	4	12	U12	LHKP0CAL6BPT
				PDU0 TEM6 CAL baseplate temperature raw
0x042	0	4	U12	LHKP0CAL7BPTST; LHKSTATUSBITS
				PDU0 TEM7 CAL baseplate temperature status
	4	12	U12	LHKP0CAL7BPT
				PDU0 TEM7 CAL baseplate temperature raw
0x044	0	4	U12	LHKP0CAL8BPTST; LHKSTATUSBITS
				PDU0 TEM8 CAL baseplate temperature status
	4	12	U12	LHKP0CAL8BPT
				PDU0 TEM8 CAL baseplate temperature raw
0x046	0	4	U12	LHKP0CAL9BPTST; LHKSTATUSBITS
				PDU0 TEM9 CAL baseplate temperature status
	4	12	U12	LHKP0CAL9BPT

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU0 TEM9 CAL baseplate temperature raw
0x048	0	4	U12	LHKP0CALABPTST; LHKSTATUSBITS
				PDU0 TEMA CAL baseplate temperature status
	4	12	U12	LHKP0CALABPT
				PDU0 TEMA CAL baseplate temperature raw
0x04A	0	4	U12	LHKP0CALBBPTST
				PDU0 TEMB CAL baseplate temperature status
	4	12	U12	LHKP0CALBBPT
				PDU0 TEMB CAL baseplate temperature raw
0x04C	0	4	U12	LHKP0CALCBPTST
				PDU0 TEMC CAL baseplate temperature status
	4	12	U12	LHKP0CALCBPT
				PDU0 TEMC CAL baseplate temperature raw
0x04E	0	4	U12	LHKP0CALDBPTST
				PDU0 TEMD CAL baseplate temperature status
	4	12	U12	LHKP0CALDBPT
				PDU0 TEMD CAL baseplate temperature raw
0x050	0	4	U12	LHKP0CALEBPTST; LHKSTATUSBITS
				PDU0 TEME CAL baseplate temperature status
	4	12	U12	LHKP0CALEBPT
				PDU0 TEME CAL baseplate temperature raw
0x052	0	4	U12	LHKP0CALFBPTST; LHKSTATUSBITS
				PDU0 TEMF CAL baseplate temperature status
	4	12	U12	LHKP0CALFBPT
				PDU0 TEMF CAL baseplate temperature raw
0x054	0	8	U1	LHKSPARE08
				Spare 8 bits
0x055	0	8	U1	LHKSPARE08
				Spare 8 bits
0x056	0	8	U1	LHKSPARE08
				Spare 8 bits
0x057	0	8	U1	LHKSPARE08
				Spare 8 bits
0x058	0	8	U1	LHKSPARE08
				Spare 8 bits
0x059	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.16 `PduEnv2` (544/0x220)

Description:

"PDU Environmental Packet 2" Telemetry Packet

PDU Packet 2

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKP0PHP0DSITST; LHKSTATUSBITS +Y VCHP 0 DSHP Interface temperature status
	4	12	U12	LHKP0PHP0DSIT +Y VCHP 0 DSHP Interface temperature raw
0x016	0	4	U12	LHKP0PHP1DSITST; LHKSTATUSBITS +Y VCHP 1 DSHP Interface temperature status
	4	12	U12	LHKP0PHP1DSIT +Y VCHP 1 DSHP Interface temperature raw
0x018	0	4	U12	LHKP0PHP2DSITST; LHKSTATUSBITS +Y VCHP 2 DSHP Interface temperature status
	4	12	U12	LHKP0PHP2DSIT +Y VCHP 2 DSHP Interface temperature raw
0x01A	0	4	U12	LHKP0PHP3DSITST +Y VCHP 3 DSHP Interface temperature status
	4	12	U12	LHKP0PHP3DSIT +Y VCHP 3 DSHP Interface temperature raw
0x01C	0	4	U12	LHKP0PHP4DSITST +Y VCHP 4 DSHP Interface temperature status
	4	12	U12	LHKP0PHP4DSIT +Y VCHP 4 DSHP Interface temperature raw
0x01E	0	4	U12	LHKP0PHP5DSITST +Y VCHP 5 DSHP Interface temperature status
	4	12	U12	LHKP0PHP5DSIT +Y VCHP 5 DSHP Interface temperature raw
0x020	0	4	U12	LHKP0MHP0DSITST; LHKSTATUSBITS -Y VCHP 0 DSHP Interface temperature status
	4	12	U12	LHKP0MHP0DSIT -Y VCHP 0 DSHP Interface temperature raw
0x022	0	4	U12	LHKP0MHP1DSITST; LHKSTATUSBITS -Y VCHP 1 DSHP Interface temperature status
	4	12	U12	LHKP0MHP1DSIT -Y VCHP 1 DSHP Interface temperature raw
0x024	0	4	U12	LHKP0MHP2DSITST; LHKSTATUSBITS -Y VCHP 2 DSHP Interface temperature status
	4	12	U12	LHKP0MHP2DSIT -Y VCHP 2 DSHP Interface temperature raw
0x026	0	4	U12	LHKP0MHP3DSITST; LHKSTATUSBITS -Y VCHP 3 DSHP Interface temperature status
	4	12	U12	LHKP0MHP3DSIT -Y VCHP 3 DSHP Interface temperature raw
0x028	0	4	U12	LHKP0MHP4DSITST; LHKSTATUSBITS -Y VCHP 4 DSHP Interface temperature status
	4	12	U12	LHKP0MHP4DSIT -Y VCHP 4 DSHP Interface temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x02A	0	4	U12	LHKP0MHP5DSITST -Y VCHP 5 DSHP Interface temperature status
	4	12	U12	LHKP0MHP5DSIT -Y VCHP 5 DSHP Interface temperature raw
0x02C	0	4	U12	LHKP0PHP0XLITST +Y VCHP 0 XLHP Interface temperature status
	4	12	U12	LHKP0PHP0XLIT +Y VCHP 0 XLHP Interface temperature raw
0x02E	0	4	U12	LHKP0PHP1XLITST +Y VCHP 1 XLHP Interface temperature status
	4	12	U12	LHKP0PHP1XLIT +Y VCHP 1 XLHP Interface temperature raw
0x030	0	4	U12	LHKP0PHP2XLITST; LHKSTATUSBITS +Y VCHP 2 XLHP Interface temperature status
	4	12	U12	LHKP0PHP2XLIT +Y VCHP 2 XLHP Interface temperature raw
0x032	0	4	U12	LHKP0PHP3XLITST; LHKSTATUSBITS +Y VCHP 3 XLHP Interface temperature status
	4	12	U12	LHKP0PHP3XLIT +Y VCHP 3 XLHP Interface temperature raw
0x034	0	4	U12	LHKP0PHP4XLITST; LHKSTATUSBITS +Y VCHP 4 XLHP Interface temperature status
	4	12	U12	LHKP0PHP4XLIT +Y VCHP 4 XLHP Interface temperature raw
0x036	0	4	U12	LHKP0PHP5XLITST; LHKSTATUSBITS +Y VCHP 5 XLHP Interface temperature status
	4	12	U12	LHKP0PHP5XLIT +Y VCHP 5 XLHP Interface temperature raw
0x038	0	4	U12	LHKP0MHP0XLITST; LHKSTATUSBITS -Y VCHP 0 XLHP Interface temperature status
	4	12	U12	LHKP0MHP0XLIT -Y VCHP 0 XLHP Interface temperature raw
0x03A	0	4	U12	LHKP0MHP1XLITST -Y VCHP 1 XLHP Interface temperature status
	4	12	U12	LHKP0MHP1XLIT -Y VCHP 1 XLHP Interface temperature raw
0x03C	0	4	U12	LHKP0MHP2XLITST -Y VCHP 2 XLHP Interface temperature status
	4	12	U12	LHKP0MHP2XLIT -Y VCHP 2 XLHP Interface temperature raw
0x03E	0	4	U12	LHKP0MHP3XLITST -Y VCHP 3 XLHP Interface temperature status
	4	12	U12	LHKP0MHP3XLIT -Y VCHP 3 XLHP Interface temperature raw
0x040	0	4	U12	LHKP0MHP4XLITST; LHKSTATUSBITS -Y VCHP 4 XLHP Interface temperature status
	4	12	U12	LHKP0MHP4XLIT -Y VCHP 4 XLHP Interface temperature raw
0x042	0	4	U12	LHKP0MHP5XLITST; LHKSTATUSBITS -Y VCHP 5 XLHP Interface temperature status
	4	12	U12	LHKP0MHP5XLIT -Y VCHP 5 XLHP Interface temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x044	0	4	U12	LHKP0PHP0RVHTST; LHKSTATUSBITS +Y VCHP 0 reservoir heater temperature status
	4	12	U12	LHKP0PHP0RVHT +Y VCHP 0 reservoir heater temperature raw
0x046	0	4	U12	LHKP0PHP1RVHTST; LHKSTATUSBITS +Y VCHP 1 reservoir heater temperature status
	4	12	U12	LHKP0PHP1RVHT +Y VCHP 1 reservoir heater temperature raw
0x048	0	4	U12	LHKP0PHP2RVHTST; LHKSTATUSBITS +Y VCHP 2 reservoir heater temperature status
	4	12	U12	LHKP0PHP2RVHT +Y VCHP 2 reservoir heater temperature raw
0x04A	0	4	U12	LHKP0PHP3RVHTST +Y VCHP 3 reservoir heater temperature status
	4	12	U12	LHKP0PHP3RVHT +Y VCHP 3 reservoir heater temperature raw
0x04C	0	4	U12	LHKP0PHP4RVHTST +Y VCHP 4 reservoir heater temperature status
	4	12	U12	LHKP0PHP4RVHT +Y VCHP 4 reservoir heater temperature raw
0x04E	0	4	U12	LHKP0PHP5RVHTST +Y VCHP 5 reservoir heater temperature status
	4	12	U12	LHKP0PHP5RVHT +Y VCHP 5 reservoir heater temperature raw
0x050	0	4	U12	LHKP0MHP0RVHTST; LHKSTATUSBITS -Y VCHP 0 reservoir heater temperature status
	4	12	U12	LHKP0MHP0RVHT -Y VCHP 0 reservoir heater temperature raw
0x052	0	4	U12	LHKP0MHP1RVHTST; LHKSTATUSBITS -Y VCHP 1 reservoir heater temperature status
	4	12	U12	LHKP0MHP1RVHT -Y VCHP 1 reservoir heater temperature raw
0x054	0	4	U12	LHKP0MHP2RVHTST; LHKSTATUSBITS -Y VCHP 2 reservoir heater temperature status
	4	12	U12	LHKP0MHP2RVHT -Y VCHP 2 reservoir heater temperature raw
0x056	0	4	U12	LHKP0MHP3RVHTST; LHKSTATUSBITS -Y VCHP 3 reservoir heater temperature status
	4	12	U12	LHKP0MHP3RVHT -Y VCHP 3 reservoir heater temperature raw
0x058	0	4	U12	LHKP0MHP4RVHTST; LHKSTATUSBITS -Y VCHP 4 reservoir heater temperature status
	4	12	U12	LHKP0MHP4RVHT -Y VCHP 4 reservoir heater temperature raw
0x05A	0	4	U12	LHKP0MHP5RVHTST -Y VCHP 5 reservoir heater temperature status
	4	12	U12	LHKP0MHP5RVHT -Y VCHP 5 reservoir heater temperature raw
0x05C	0	8	U1	LHKSPARE08 Spare 8 bits
0x05D	0	8	U1	LHKSPARE08 Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x05E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.17 `PduEnv3` (545/0x221)

Description:

"PDU Environmental Packet 3" Telemetry Packet

PDU Packet 3

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKP0GRID0TST; LHKSTATUSBITS
				Grid 0 temperature status
	4	12	U12	LHKP0GRID0T
				Grid 0 temperature raw
0x016	0	4	U12	LHKP0GRID1TST; LHKSTATUSBITS
				Grid 1 temperature status
	4	12	U12	LHKP0GRID1T
				Grid 1 temperature raw
0x018	0	4	U12	LHKP0GRID2TST; LHKSTATUSBITS
				Grid 2 temperature status
	4	12	U12	LHKP0GRID2T
				Grid 2 temperature raw
0x01A	0	4	U12	LHKP0GRID3TST
				Grid 3 temperature status
	4	12	U12	LHKP0GRID3T
				Grid 3 temperature raw
0x01C	0	4	U12	LHKP0GRID4TST
				Grid 4 temperature status
	4	12	U12	LHKP0GRID4T
				Grid 4 temperature raw
0x01E	0	4	U12	LHKP0GRID5TST
				Grid 5 temperature status
	4	12	U12	LHKP0GRID5T
				Grid 5 temperature raw
0x020	0	4	U12	LHKP0GRID6TST; LHKSTATUSBITS
				Grid 6 temperature status
	4	12	U12	LHKP0GRID6T
				Grid 6 temperature raw
0x022	0	4	U12	LHKP0GRID7TST; LHKSTATUSBITS
				Grid 7 temperature status
	4	12	U12	LHKP0GRID7T
				Grid 7 temperature raw
0x024	0	4	U12	LHKP0GRID8TST; LHKSTATUSBITS
				Grid 8 temperature status
	4	12	U12	LHKP0GRID8T
				Grid 8 temperature raw
0x026	0	4	U12	LHKP0GRID9TST; LHKSTATUSBITS
				Grid 9 temperature status
	4	12	U12	LHKP0GRID9T

Offset	S	L	Type	ITOS name, attribute(s), and description
				Grid 9 temperature raw
0x028	0	4	U12	LHKP0GRID10TST; LHKSTATUSBITS
				Grid 10 temperature status
	4	12	U12	LHKP0GRID10T
				Grid 10 temperature raw
0x02A	0	4	U12	LHKP0GRID11TST
				Grid 11 temperature status
	4	12	U12	LHKP0GRID11T
				Grid 11 temperature raw
0x02C	0	4	U12	?
				?
	4	12	U12	LHKP0ACDSHT0
				ACD shell temperature 0 raw
0x02E	0	4	U12	LHKP0ACDSHT0ST
				ACD shell temperature 0 status
	4	12	U12	LHKP0ACDSHT1
				ACD shell temperature 1 raw
0x030	0	4	U12	LHKP0ACDPRT0ST; LHKSTATUSBITS
				ACD PMT rail temperature 0 status
	4	12	U12	LHKP0ACDPRT0
				ACD PMT rail temperature 0 raw
0x032	0	4	U12	LHKP0ACDPRT1ST; LHKSTATUSBITS
				ACD PMT rail temperature 1 status
	4	12	U12	LHKP0ACDPRT1
				ACD PMT rail temperature 1 raw
0x034	0	4	U12	LHKP0ACDPRT2ST; LHKSTATUSBITS
				ACD PMT rail temperature 2 status
	4	12	U12	LHKP0ACDPRT2
				ACD PMT rail temperature 2 raw
0x036	0	4	U12	LHKP0ACDPRT3ST; LHKSTATUSBITS
				ACD PMT rail temperature 3 status
	4	12	U12	LHKP0ACDPRT3
				ACD PMT rail temperature 3 raw
0x038	0	4	U12	LHKP0ACDBGT0ST; LHKSTATUSBITS
				ACD BEA grid temperature 0 status
	4	12	U12	LHKP0ACDBGT0
				ACD BEA grid temperature 0 raw
0x03A	0	4	U12	LHKP0ACDBGT1ST
				ACD BEA grid temperature 1 status
	4	12	U12	LHKP0ACDBGT1
				ACD BEA grid temperature 1 raw
0x03C	0	4	U12	LHKP0RADAFHT0ST
				Radiator 0 antifreeze heater temperature status
	4	12	U12	LHKP0RADAFHT0
				Radiator 0 antifreeze heater temperature raw
0x03E	0	4	U12	LHKP0RADAFHT1ST
				Radiator 1 antifreeze heater temperature status
	4	12	U12	LHKP0RADAFHT1
				Radiator 1 antifreeze heater temperature raw
0x040	0	4	U12	LHKP0GRAD0IFTST; LHKSTATUSBITS
				Grid radiator 0 interface temperature status
	4	12	U12	LHKP0GRAD0IFT

Offset	S	L	Type	ITOS name, attribute(s), and description
				Grid radiator 0 interface temperature raw
0x042	0	4	U12	LHKP0GRAD1IFTST; LHKSTATUSBITS
				Grid radiator 1 interface temperature status
	4	12	U12	LHKP0GRAD1IFT
				Grid radiator 1 interface temperature raw
0x044	0	4	U12	LHKP0GRAD2IFTST; LHKSTATUSBITS
				Grid radiator 2 interface temperature raw status
	4	12	U12	LHKP0GRAD2IFT
				Grid radiator 2 interface temperature raw
0x046	0	4	U12	LHKP0GRAD3IFTST; LHKSTATUSBITS
				Grid radiator 3 interface temperature raw status
	4	12	U12	LHKP0GRAD3IFT
				Grid radiator 3 interface temperature raw
0x048	0	4	U12	LHKP0RAD0TST; LHKSTATUSBITS
				Radiator 0 temperature status
	4	12	U12	LHKP0RAD0T
				Radiator 0 temperature raw
0x04A	0	4	U12	LHKP0RAD1TST
				Radiator 1 temperature status
	4	12	U12	LHKP0RAD1T
				Radiator 1 temperature raw
0x04C	0	4	U12	LHKP0RAD2TST
				Radiator 2 temperature status
	4	12	U12	LHKP0RAD2T
				Radiator 2 temperature raw
0x04E	0	4	U12	LHKP0RAD3TST
				Radiator 3 temperature status
	4	12	U12	LHKP0RAD3T
				Radiator 3 temperature raw
0x050	0	4	U12	LHKP0RAD4TST; LHKSTATUSBITS
				Radiator 4 temperature status
	4	12	U12	LHKP0RAD4T
				Radiator 4 temperature raw
0x052	0	4	U12	LHKP0RAD5TST; LHKSTATUSBITS
				Radiator 5 temperature status
	4	12	U12	LHKP0RAD5T
				Radiator 5 temperature raw
0x054	0	4	U12	LHKP0RAD6TST; LHKSTATUSBITS
				Radiator 6 temperature status
	4	12	U12	LHKP0RAD6T
				Radiator 6 temperature raw
0x056	0	4	U12	LHKP0RAD7TST; LHKSTATUSBITS
				Radiator 7 temperature status
	4	12	U12	LHKP0RAD7T
				Radiator 7 temperature raw
0x058	0	4	U12	LHKP0RAD8TST; LHKSTATUSBITS
				Radiator 8 temperature status
	4	12	U12	LHKP0RAD8T
				Radiator 8 temperature raw
0x05A	0	4	U12	LHKP0RAD9TST
				Radiator 9 temperature status
	4	12	U12	LHKP0RAD9T

Offset	S	L	Type	ITOS name, attribute(s), and description
				Radiator 9 temperature raw
0x05C	0	4	U12	LHKP0RAD10TST
				Radiator 10 temperature status
	4	12	U12	LHKP0RAD10T
				Radiator 10 temperature raw
0x05E	0	4	U12	LHKP0RAD11TST
				Radiator 11 temperature status
	4	12	U12	LHKP0RAD11T
				Radiator 11 temperature raw
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.18 `PduEnv4` (546/0x222)

Description:

"PDU Environmental Packet 4" Telemetry Packet

PDU Packet 4

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	1	U1	LHKP1TEMFPM; LDPDUTEMPWRST PDU1 TEMF Power Mgt Switch
	1	1	U1	LHKP1TEMEPM PDU1 TEME Power Mgt Switch
	2	1	U1	LHKP1TEMDPM PDU1 TEMD Power Mgt Switch
	3	1	U1	LHKP1TEMCPM PDU1 TEMC Power Mgt Switch
	4	1	U1	LHKP1TEMBPM PDU1 TEMB Power Mgt Switch
	5	1	U1	LHKP1TEMAPM PDU1 TEMA Power Mgt Switch
	6	1	U1	LHKP1TEM9PM PDU1 TEM9 Power Mgt Switch
	7	1	U1	LHKP1TEM8PM PDU1 TEM8 Power Mgt Switch
	8	1	U1	LHKP1TEM7PM PDU1 TEM7 Power Mgt Switch
	9	1	U1	LHKP1TEM6PM PDU1 TEM6 Power Mgt Switch
	10	1	U1	LHKP1TEM5PM PDU1 TEM5 Power Mgt Switch
	11	1	U1	LHKP1TEM4PM PDU1 TEM4 Power Mgt Switch
	12	1	U1	LHKP1TEM3PM PDU1 TEM3 Power Mgt Switch
	13	1	U1	LHKP1TEM2PM PDU1 TEM2 Power Mgt Switch
	14	1	U1	LHKP1TEM1PM PDU1 TEM1 Power Mgt Switch
	15	1	U1	LHKP1TEM0PM

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU1 TEM0 Power Mgt Switch
0x016	0	10	U12	LHKSPARE10
				Spare 10 bits
	10	1	U1	LHKP1EPU2CNVT
				PDU1 EPU2 Power Converter Switch
	11	1	U1	LHKP1EPU1CNVT
				PDU1 EPU1 Power Converter Switch
	12	1	U1	LHKP1EPU0CNVT
				PDU1 EPU0 Power Converter Switch
	13	1	U1	LHKP1EPU2PM
				PDU1 EPU2 Power Mgt Switch
	14	1	U1	LHKP1EPU1PM
				PDU1 EPU1 Power Mgt Switch
	15	1	U1	LHKP1EPU0PM
				PDU1 EPU0 Power Mgt Switch
0x018	0	13	U12	LHKSPARE13
				Spare 13 bits
	13	1	U1	LHKP1ACDCNVT
				PDU1 ACD Converter Switch
	14	1	I1	LHKP1ACDPSP
				PDU1 ACD Power Supply Switch
	15	1	I1	LHKP1ACDPM
				PDU1 ACD Power Mgt Switch
0x01A	0	4	U12	LHKP1TEM033VST
				PDU1 TEM0 3.3V digital status
	4	12	U12	LHKP1TEM033V
				PDU1 TEM0 3.3V digital raw
0x01C	0	4	U12	LHKP1TEM133VST
				PDU1 TEM1 3.3V digital status
	4	12	U12	LHKP1TEM133V
				PDU1 TEM1 3.3V digital raw
0x01E	0	4	U12	LHKP1TEM233VST
				PDU1 TEM2 3.3V digital status
	4	12	U12	LHKP1TEM233V
				PDU1 TEM2 3.3V digital raw
0x020	0	4	U12	LHKP1TEM333VST; LHKSTATUSBITS
				PDU1 TEM3 3.3V digital status
	4	12	U12	LHKP1TEM333V
				PDU1 TEM3 3.3V digital raw
0x022	0	4	U12	LHKP1TEM433VST; LHKSTATUSBITS
				PDU1 TEM4 3.3V digital status
	4	12	U12	LHKP1TEM433V
				PDU1 TEM4 3.3V digital raw
0x024	0	4	U12	LHKP1TEM533VST; LHKSTATUSBITS
				PDU1 TEM5 3.3V digital status
	4	12	U12	LHKP1TEM533V
				PDU1 TEM5 3.3V digital raw
0x026	0	4	U12	LHKP1TEM633VST; LHKSTATUSBITS
				PDU1 TEM6 3.3V digital status
	4	12	U12	LHKP1TEM633V
				PDU1 TEM6 3.3V digital raw
0x028	0	4	U12	LHKP1TEM733VST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU1 TEM7 3.3V digital status
	4	12	U12	LHKP1TEM733V
				PDU1 TEM7 3.3V digital raw
0x02A	0	4	U12	LHKP1TEM833VST
				PDU1 TEM8 3.3V digital status
	4	12	U12	LHKP1TEM833V
				PDU1 TEM8 3.3V digital raw
0x02C	0	4	U12	LHKP1TEM933VST
				PDU1 TEM9 3.3V digital status
	4	12	U12	LHKP1TEM933V
				PDU1 TEM9 3.3V digital raw
0x02E	0	4	U12	LHKP1TEMA33VST
				PDU1 TEMA 3.3V digital status
	4	12	U12	LHKP1TEMA33V
				PDU1 TEMA 3.3V digital raw
0x030	0	4	U12	LHKP1TEMB33VST; LHKSTATUSBITS
				PDU1 TEMB 3.3V digital status
	4	12	U12	LHKP1TEMB33V
				PDU1 TEMB 3.3V digital raw
0x032	0	4	U12	LHKP1TEMC33VST; LHKSTATUSBITS
				PDU1 TEMC 3.3V digital status
	4	12	U12	LHKP1TEMC33V
				PDU1 TEMC 3.3V digital raw
0x034	0	4	U12	LHKP1TEMD33VST; LHKSTATUSBITS
				PDU1 TEMD 3.3V digital status
	4	12	U12	LHKP1TEMD33V
				PDU1 TEMD 3.3V digital raw
0x036	0	4	U12	LHKP1TEME33VST; LHKSTATUSBITS
				PDU1 TEME 3.3V digital status
	4	12	U12	LHKP1TEME33V
				PDU1 TEME 3.3V digital raw
0x038	0	4	U12	LHKP1TEMF33VST; LHKSTATUSBITS
				PDU1 TEMF 3.3V digital status
	4	12	U12	LHKP1TEMF33V
				PDU1 TEMF 3.3V digital raw
0x03A	0	4	U12	LHKP1TEM0PCTST
				PDU1 TEM0 PCB temperature status
	4	12	U12	LHKP1TEM0PCT
				PDU1 TEM0 PCB temperature raw
0x03C	0	4	U12	LHKP1TEM1PCTST
				PDU1 TEM1 PCB temperature status
	4	12	U12	LHKP1TEM1PCT
				PDU1 TEM1 PCB temperature raw
0x03E	0	4	U12	LHKP1TEM2PCTST
				PDU1 TEM2 PCB temperature status
	4	12	U12	LHKP1TEM2PCT
				PDU1 TEM2 PCB temperature raw
0x040	0	4	U12	LHKP1TEM3PCTST; LHKSTATUSBITS
				PDU1 TEM3 PCB temperature status
	4	12	U12	LHKP1TEM3PCT
				PDU1 TEM3 PCB temperature raw
0x042	0	4	U12	LHKP1TEM4PCTST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU1 TEM4 PCB temperature status
	4	12	U12	LHKP1TEM4PCT
				PDU1 TEM4 PCB temperature raw
0x044	0	4	U12	LHKP1TEM5PCTST; LHKSTATUSBITS
				PDU1 TEM5 PCB temperature status
	4	12	U12	LHKP1TEM5PCT
				PDU1 TEM5 PCB temperature raw
0x046	0	4	U12	LHKP1TEM6PCTST; LHKSTATUSBITS
				PDU1 TEM6 PCB temperature status
	4	12	U12	LHKP1TEM6PCT
				PDU1 TEM6 PCB temperature raw
0x048	0	4	U12	LHKP1TEM7PCTST; LHKSTATUSBITS
				PDU1 TEM7 PCB temperature status
	4	12	U12	LHKP1TEM7PCT
				PDU1 TEM7 PCB temperature raw
0x04A	0	4	U12	LHKP1TEM8PCTST
				PDU1 TEM8 PCB temperature status
	4	12	U12	LHKP1TEM8PCT
				PDU1 TEM8 PCB temperature raw
0x04C	0	4	U12	LHKP1TEM9PCTST
				PDU1 TEM9 PCB temperature status
	4	12	U12	LHKP1TEM9PCT
				PDU1 TEM9 PCB temperature raw
0x04E	0	4	U12	LHKP1TEMAPCTST
				PDU1 TEMA PCB temperature status
	4	12	U12	LHKP1TEMAPCT
				PDU1 TEMA PCB temperature raw
0x050	0	4	U12	LHKP1TEMBPCTST; LHKSTATUSBITS
				PDU1 TEMB PCB temperature status
	4	12	U12	LHKP1TEMBPCT
				PDU1 TEMB PCB temperature raw
0x052	0	4	U12	LHKP1TEMCPCTST; LHKSTATUSBITS
				PDU1 TEMC PCB temperature status
	4	12	U12	LHKP1TEMCPCT
				PDU1 TEMC PCB temperature raw
0x054	0	4	U12	LHKP1TEMDPCTST; LHKSTATUSBITS
				PDU1 TEMD PCB temperature status
	4	12	U12	LHKP1TEMDPCT
				PDU1 TEMD PCB temperature raw
0x056	0	4	U12	LHKP1TEMEPCTST; LHKSTATUSBITS
				PDU1 TEME PCB temperature status
	4	12	U12	LHKP1TEMEPCT
				PDU1 TEME PCB temperature raw
0x058	0	4	U12	LHKP1TEMFPCTST; LHKSTATUSBITS
				PDU1 TEMF PCB temperature status
	4	12	U12	LHKP1TEMFPCT
				PDU1 TEMF PCB temperature raw
0x05A	0	4	U12	LHKP1EPU033VST
				PDU EPU0 3.3V digital status
	4	12	U12	LHKP1EPU033V
				PDU1 EPU0 3.3V digital raw
0x05C	0	4	U12	LHKP1EPU133VST

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU1 EPU1 3.3V digital status
	4	12	U12	LHKP1EPU133V
				PDU1 EPU1 3.3V digital raw
0x05E	0	4	U12	LHKP1EPU233VST
				PDU1 EPU2 3.3V digital status
	4	12	U12	LHKP1EPU233V
				PDU1 EPU2 3.3V digital raw
0x060	0	4	U12	LHKP1EPU0TST; LHKSTATUSBITS
				PDU1 EPU0 temperature status
	4	12	U12	LHKP1EPU0T
				PDU1 EPU0 temperature raw
0x062	0	4	U12	LHKP1EPU1TST; LHKSTATUSBITS
				PDU1 EPU1 temperature status
	4	12	U12	LHKP1EPU1T
				PDU1 EPU1 temperature raw
0x064	0	4	U12	LHKP1EPU2TST; LHKSTATUSBITS
				PDU1 EPU2 temperature status
	4	12	U12	LHKP1EPU2T
				PDU1 EPU2 temperature raw
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.19 `PduEnv5` (547/0x223)

Description:

"PDU Environmental Packet 5" Telemetry Packet

PDU Packet 5

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKP1TEM0PSTST; LHKSTATUSBITS
				PDU1 TEM0 power supply temperature status
	4	12	U12	LHKP1TEM0PST
				PDU1 TEM0 power supply temperature raw
0x016	0	4	U12	LHKP1TEM1PSTST; LHKSTATUSBITS
				PDU1 TEM1 power supply temperature status
	4	12	U12	LHKP1TEM1PST
				PDU1 TEM1 power supply temperature raw
0x018	0	4	U12	LHKP1TEM2PSTST; LHKSTATUSBITS
				PDU1 TEM2 power supply temperature status
	4	12	U12	LHKP1TEM2PST
				PDU1 TEM2 power supply temperature raw
0x01A	0	4	U12	LHKP1TEM3PSTST
				PDU1 TEM3 power supply temperature status
	4	12	U12	LHKP1TEM3PST
				PDU1 TEM3 power supply temperature raw
0x01C	0	4	U12	LHKP1TEM4PSTST
				PDU1 TEM4 power supply temperature status
	4	12	U12	LHKP1TEM4PST
				PDU1 TEM4 power supply temperature raw
0x01E	0	4	U12	LHKP1TEM5PSTST
				PDU1 TEM5 power supply temperature status
	4	12	U12	LHKP1TEM5PST
				PDU1 TEM5 power supply temperature raw
0x020	0	4	U12	LHKP1TEM6PSTST; LHKSTATUSBITS
				PDU1 TEM6 power supply temperature status
	4	12	U12	LHKP1TEM6PST
				PDU1 TEM6 power supply temperature raw
0x022	0	4	U12	LHKP1TEM7PSTST; LHKSTATUSBITS
				PDU1 TEM7 power supply temperature status
	4	12	U12	LHKP1TEM7PST

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU1 TEM7 power supply temperature raw
0x024	0	4	U12	LHKP1TEM8PSTST; LHKSTATUSBITS
				PDU1 TEM8 power supply temperature status
	4	12	U12	LHKP1TEM8PST
				PDU1 TEM8 power supply temperature raw
0x026	0	4	U12	LHKP1TEM9PSTST; LHKSTATUSBITS
				PDU1 TEM9 power supply temperature status
	4	12	U12	LHKP1TEM9PST
				PDU1 TEM9 power supply temperature raw
0x028	0	4	U12	LHKP1TEMAPSTST; LHKSTATUSBITS
				PDU1 TEMA power supply temperature status
	4	12	U12	LHKP1TEMAPST
				PDU1 TEMA power supply temperature raw
0x02A	0	4	U12	LHKP1TEMBPSTST
				PDU1 TEMB power supply temperature status
	4	12	U12	LHKP1TEMBPST
				PDU1 TEMB power supply temperature raw
0x02C	0	4	U12	LHKP1TEMCPSTST
				PDU1 TEMC power supply temperature status
	4	12	U12	LHKP1TEMCPST
				PDU1 TEMC power supply temperature raw
0x02E	0	4	U12	LHKP1TEMDPSTST
				PDU1 TEMD power supply temperature status
	4	12	U12	LHKP1TEMDPST
				PDU1 TEMD power supply temperature raw
0x030	0	4	U12	LHKP1TEMEPSTST; LHKSTATUSBITS
				PDU1 TEME power supply temperature status
	4	12	U12	LHKP1TEMEPST
				PDU1 TEME power supply temperature raw
0x032	0	4	U12	LHKP1TEMFPSTST; LHKSTATUSBITS
				PDU1 TEMF power supply temperature status
	4	12	U12	LHKP1TEMFPST
				PDU1 TEMF power supply temperature raw
0x034	0	4	U12	LHKP1CAL0BPTST; LHKSTATUSBITS
				PDU1 TEM0 CAL baseplate temperature status
	4	12	U12	LHKP1CAL0BPT
				PDU1 TEM0 CAL baseplate temperature raw
0x036	0	4	U12	LHKP1CAL1BPTST; LHKSTATUSBITS
				PDU1 TEM1 CAL baseplate temperature status
	4	12	U12	LHKP1CAL1BPT
				PDU1 TEM1 CAL baseplate temperature raw
0x038	0	4	U12	LHKP1CAL2BPTST; LHKSTATUSBITS
				PDU1 TEM2 CAL baseplate temperature status
	4	12	U12	LHKP1CAL2BPT
				PDU1 TEM2 CAL baseplate temperature raw
0x03A	0	4	U12	LHKP1CAL3BPTST
				PDU1 TEM3 CAL baseplate temperature status
	4	12	U12	LHKP1CAL3BPT
				PDU1 TEM3 CAL baseplate temperature raw
0x03C	0	4	U12	LHKP1CAL4BPTST
				PDU1 TEM4 CAL baseplate temperature status
	4	12	U12	LHKP1CAL4BPT

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU1 TEM4 CAL baseplate temperature raw
0x03E	0	4	U12	LHKP1CAL5BPTST
				PDU1 TEM5 CAL baseplate temperature status
	4	12	U12	LHKP1CAL5BPT
				PDU1 TEM5 CAL baseplate temperature raw
0x040	0	4	U12	LHKP1CAL6BPTST; LHKSTATUSBITS
				PDU1 TEM6 CAL baseplate temperature status
	4	12	U12	LHKP1CAL6BPT
				PDU1 TEM6 CAL baseplate temperature raw
0x042	0	4	U12	LHKP1CAL7BPTST; LHKSTATUSBITS
				PDU1 TEM7 CAL baseplate temperature status
	4	12	U12	LHKP1CAL7BPT
				PDU1 TEM7 CAL baseplate temperature raw
0x044	0	4	U12	LHKP1CAL8BPTST; LHKSTATUSBITS
				PDU1 TEM8 CAL baseplate temperature status
	4	12	U12	LHKP1CAL8BPT
				PDU1 TEM8 CAL baseplate temperature raw
0x046	0	4	U12	LHKP1CAL9BPTST; LHKSTATUSBITS
				PDU1 TEM9 CAL baseplate temperature status
	4	12	U12	LHKP1CAL9BPT
				PDU1 TEM9 CAL baseplate temperature raw
0x048	0	4	U12	LHKP1CALABPTST; LHKSTATUSBITS
				PDU1 TEMA CAL baseplate temperature status
	4	12	U12	LHKP1CALABPT
				PDU1 TEMA CAL baseplate temperature raw
0x04A	0	4	U12	LHKP1CALBBPTST
				PDU1 TEMB CAL baseplate temperature status
	4	12	U12	LHKP1CALBBPT
				PDU1 TEMB CAL baseplate temperature raw
0x04C	0	4	U12	LHKP1CALCBPTST
				PDU1 TEMC CAL baseplate temperature status
	4	12	U12	LHKP1CALCBPT
				PDU1 TEMC CAL baseplate temperature raw
0x04E	0	4	U12	LHKP1CALDBPTST
				PDU1 TEMD CAL baseplate temperature status
	4	12	U12	LHKP1CALDBPT
				PDU1 TEMD CAL baseplate temperature raw
0x050	0	4	U12	LHKP1CALEBPTST; LHKSTATUSBITS
				PDU1 TEME CAL baseplate temperature status
	4	12	U12	LHKP1CALEBPT
				PDU1 TEME CAL baseplate temperature raw
0x052	0	4	U12	LHKP1CALFBPTST; LHKSTATUSBITS
				PDU1 TEMF CAL baseplate temperature status
	4	12	U12	LHKP1CALFBPT
				PDU1 TEMF CAL baseplate temperature raw
0x054	0	8	U1	LHKSPARE08
				Spare 8 bits
0x055	0	8	U1	LHKSPARE08
				Spare 8 bits
0x056	0	8	U1	LHKSPARE08
				Spare 8 bits
0x057	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x058	0	8	U1	LHKSPARE08
				Spare 8 bits
0x059	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.20 `PduEnv6` (548/0x224)

Description:

"PDU Environmental Packet 6" Telemetry Packet

PDU Packet 6

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKP1PHP0DSITST; LHKSTATUSBITS
				+Y VCHP 0 DSHP Interface temperature status
	4	12	U12	LHKP1PHP0DSIT
				+Y VCHP 0 DSHP Interface temperature raw
0x016	0	4	U12	LHKP1PHP1DSITST; LHKSTATUSBITS
				+Y VCHP 1 DSHP Interface temperature status
	4	12	U12	LHKP1PHP1DSIT
				+Y VCHP 1 DSHP Interface temperature raw
0x018	0	4	U12	LHKP1PHP2DSITST; LHKSTATUSBITS
				+Y VCHP 2 DSHP Interface temperature status
	4	12	U12	LHKP1PHP2DSIT
				+Y VCHP 2 DSHP Interface temperature raw
0x01A	0	4	U12	LHKP1PHP3DSITST
				+Y VCHP 3 DSHP Interface temperature status
	4	12	U12	LHKP1PHP3DSIT
				+Y VCHP 3 DSHP Interface temperature raw
0x01C	0	4	U12	LHKP1PHP4DSITST
				+Y VCHP 4 DSHP Interface temperature status
	4	12	U12	LHKP1PHP4DSIT
				+Y VCHP 4 DSHP Interface temperature raw
0x01E	0	4	U12	LHKP1PHP5DSITST
				+Y VCHP 5 DSHP Interface temperature status
	4	12	U12	LHKP1PHP5DSIT
				+Y VCHP 5 DSHP Interface temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x020	0	4	U12	LHKP1MHP0DSITST; LHKSTATUSBITS -Y VCHP 0 DSHP Interface temperature status
	4	12	U12	LHKP1MHP0DSIT -Y VCHP 0 DSHP Interface temperature raw
0x022	0	4	U12	LHKP1MHP1DSITST; LHKSTATUSBITS -Y VCHP 1 DSHP Interface temperature status
	4	12	U12	LHKP1MHP1DSIT -Y VCHP 1 DSHP Interface temperature raw
0x024	0	4	U12	LHKP1MHP2DSITST; LHKSTATUSBITS -Y VCHP 2 DSHP Interface temperature status
	4	12	U12	LHKP1MHP2DSIT -Y VCHP 2 DSHP Interface temperature raw
0x026	0	4	U12	LHKP1MHP3DSITST; LHKSTATUSBITS -Y VCHP 3 DSHP Interface temperature status
	4	12	U12	LHKP1MHP3DSIT -Y VCHP 3 DSHP Interface temperature raw
0x028	0	4	U12	LHKP1MHP4DSITST; LHKSTATUSBITS -Y VCHP 4 DSHP Interface temperature status
	4	12	U12	LHKP1MHP4DSIT -Y VCHP 4 DSHP Interface temperature raw
0x02A	0	4	U12	LHKP1MHP5DSITST -Y VCHP 5 DSHP Interface temperature status
	4	12	U12	LHKP1MHP5DSIT -Y VCHP 5 DSHP Interface temperature raw
0x02C	0	4	U12	LHKP1PHP0XLITST +Y VCHP 0 XLHP Interface temperature status
	4	12	U12	LHKP1PHP0XLIT +Y VCHP 0 XLHP Interface temperature raw
0x02E	0	4	U12	LHKP1PHP1XLITST +Y VCHP 1 XLHP Interface temperature status
	4	12	U12	LHKP1PHP1XLIT +Y VCHP 1 XLHP Interface temperature raw
0x030	0	4	U12	LHKP1PHP2XLITST; LHKSTATUSBITS +Y VCHP 2 XLHP Interface temperature status
	4	12	U12	LHKP1PHP2XLIT +Y VCHP 2 XLHP Interface temperature raw
0x032	0	4	U12	LHKP1PHP3XLITST; LHKSTATUSBITS +Y VCHP 3 XLHP Interface temperature status
	4	12	U12	LHKP1PHP3XLIT +Y VCHP 3 XLHP Interface temperature raw
0x034	0	4	U12	LHKP1PHP4XLITST; LHKSTATUSBITS +Y VCHP 4 XLHP Interface temperature status
	4	12	U12	LHKP1PHP4XLIT +Y VCHP 4 XLHP Interface temperature raw
0x036	0	4	U12	LHKP1PHP5XLITST; LHKSTATUSBITS +Y VCHP 5 XLHP Interface temperature status
	4	12	U12	LHKP1PHP5XLIT +Y VCHP 5 XLHP Interface temperature raw
0x038	0	4	U12	LHKP1MHP0XLITST; LHKSTATUSBITS -Y VCHP 0 XLHP Interface temperature status
	4	12	U12	LHKP1MHP0XLIT -Y VCHP 0 XLHP Interface temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x03A	0	4	U12	LHKP1MHP1XLITST
				-Y VCHP 1 XLHP Interface temperature status
	4	12	U12	LHKP1MHP1XLIT
				-Y VCHP 1 XLHP Interface temperature raw
0x03C	0	4	U12	LHKP1MHP2XLITST
				-Y VCHP 2 XLHP Interface temperature status
	4	12	U12	LHKP1MHP2XLIT
				-Y VCHP 2 XLHP Interface temperature raw
0x03E	0	4	U12	LHKP1MHP3XLITST
				-Y VCHP 3 XLHP Interface temperature status
	4	12	U12	LHKP1MHP3XLIT
				-Y VCHP 3 XLHP Interface temperature raw
0x040	0	4	U12	LHKP1MHP4XLITST; LHKSTATUSBITS
				-Y VCHP 4 XLHP Interface temperature status
	4	12	U12	LHKP1MHP4XLIT
				-Y VCHP 4 XLHP Interface temperature raw
0x042	0	4	U12	LHKP1MHP5XLITST; LHKSTATUSBITS
				-Y VCHP 5 XLHP Interface temperature status
	4	12	U12	LHKP1MHP5XLIT
				-Y VCHP 5 XLHP Interface temperature raw
0x044	0	4	U12	LHKP1PHP0RVHTST; LHKSTATUSBITS
				+Y VCHP 0 reservoir heater temperature status
	4	12	U12	LHKP1PHP0RVHT
				+Y VCHP 0 reservoir heater temperature raw
0x046	0	4	U12	LHKP1PHP1RVHTST; LHKSTATUSBITS
				+Y VCHP 1 reservoir heater temperature status
	4	12	U12	LHKP1PHP1RVHT
				+Y VCHP 1 reservoir heater temperature raw
0x048	0	4	U12	LHKP1PHP2RVHTST; LHKSTATUSBITS
				+Y VCHP 2 reservoir heater temperature status
	4	12	U12	LHKP1PHP2RVHT
				+Y VCHP 2 reservoir heater temperature raw
0x04A	0	4	U12	LHKP1PHP3RVHTST
				+Y VCHP 3 reservoir heater temperature status
	4	12	U12	LHKP1PHP3RVHT
				+Y VCHP 3 reservoir heater temperature raw
0x04C	0	4	U12	LHKP1PHP4RVHTST
				+Y VCHP 4 reservoir heater temperature status
	4	12	U12	LHKP1PHP4RVHT
				+Y VCHP 4 reservoir heater temperature raw
0x04E	0	4	U12	LHKP1PHP5RVHTST
				+Y VCHP 5 reservoir heater temperature status
	4	12	U12	LHKP1PHP5RVHT
				+Y VCHP 5 reservoir heater temperature raw
0x050	0	4	U12	LHKP1MHP0RVHTST; LHKSTATUSBITS
				-Y VCHP 0 reservoir heater temperature status
	4	12	U12	LHKP1MHP0RVHT
				-Y VCHP 0 reservoir heater temperature raw
0x052	0	4	U12	LHKP1MHP1RVHTST; LHKSTATUSBITS
				-Y VCHP 1 reservoir heater temperature status
	4	12	U12	LHKP1MHP1RVHT
				-Y VCHP 1 reservoir heater temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x054	0	4	U12	LHKP1MHP2RVHTST; LHKSTATUSBITS -Y VCHP 2 reservoir heater temperature status
	4	12	U12	LHKP1MHP2RVHT -Y VCHP 2 reservoir heater temperature raw
0x056	0	4	U12	LHKP1MHP3RVHTST; LHKSTATUSBITS -Y VCHP 3 reservoir heater temperature status
	4	12	U12	LHKP1MHP3RVHT -Y VCHP 3 reservoir heater temperature raw
0x058	0	4	U12	LHKP1MHP4RVHTST; LHKSTATUSBITS -Y VCHP 4 reservoir heater temperature status
	4	12	U12	LHKP1MHP4RVHT -Y VCHP 4 reservoir heater temperature raw
0x05A	0	4	U12	LHKP1MHP5RVHTST -Y VCHP 5 reservoir heater temperature status
	4	12	U12	LHKP1MHP5RVHT -Y VCHP 5 reservoir heater temperature raw
0x05C	0	8	U1	LHKSPARE08 Spare 8 bits
0x05D	0	8	U1	LHKSPARE08 Spare 8 bits
0x05E	0	8	U1	LHKSPARE08 Spare 8 bits
0x05F	0	8	U1	LHKSPARE08 Spare 8 bits
0x060	0	8	U1	LHKSPARE08 Spare 8 bits
0x061	0	8	U1	LHKSPARE08 Spare 8 bits
0x062	0	8	U1	LHKSPARE08 Spare 8 bits
0x063	0	8	U1	LHKSPARE08 Spare 8 bits
0x064	0	8	U1	LHKSPARE08 Spare 8 bits
0x065	0	8	U1	LHKSPARE08 Spare 8 bits
0x066	0	8	U1	LHKSPARE08 Spare 8 bits
0x067	0	8	U1	LHKSPARE08 Spare 8 bits
0x068	0	8	U1	LHKSPARE08 Spare 8 bits
0x069	0	8	U1	LHKSPARE08 Spare 8 bits
0x06A	0	8	U1	LHKSPARE08 Spare 8 bits
0x06B	0	8	U1	LHKSPARE08 Spare 8 bits
0x06C	0	8	U1	LHKSPARE08 Spare 8 bits
0x06D	0	8	U1	LHKSPARE08 Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.21 `PduEnv7` (549/0x225)

Description:

"PDU Environmental Packet 7" Telemetry Packet

PDU Packet 7

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKP1GRID0TST; LHKSTATUSBITS
				Grid 0 temperature status
	4	12	U12	LHKP1GRID0T
				Grid 0 temperature raw
0x016	0	4	U12	LHKP1GRID1TST; LHKSTATUSBITS
				Grid 1 temperature status
	4	12	U12	LHKP1GRID1T
				Grid 1 temperature raw
0x018	0	4	U12	LHKP1GRID2TST; LHKSTATUSBITS
				Grid 2 temperature status
	4	12	U12	LHKP1GRID2T
				Grid 2 temperature raw
0x01A	0	4	U12	LHKP1GRID3TST
				Grid 3 temperature status
	4	12	U12	LHKP1GRID3T
				Grid 3 temperature raw
0x01C	0	4	U12	LHKP1GRID4TST

Offset	S	L	Type	ITOS name, attribute(s), and description
				Grid 4 temperature status
	4	12	U12	LHKP1GRID4T
				Grid 4 temperature raw
0x01E	0	4	U12	LHKP1GRID5TST
				Grid 5 temperature status
	4	12	U12	LHKP1GRID5T
				Grid 5 temperature raw
0x020	0	4	U12	LHKP1GRID6TST; LHKSTATUSBITS
				Grid 6 temperature status
	4	12	U12	LHKP1GRID6T
				Grid 6 temperature raw
0x022	0	4	U12	LHKP1GRID7TST; LHKSTATUSBITS
				Grid 7 temperature status
	4	12	U12	LHKP1GRID7T
				Grid 7 temperature raw
0x024	0	4	U12	LHKP1GRID8TST; LHKSTATUSBITS
				Grid 8 temperature status
	4	12	U12	LHKP1GRID8T
				Grid 8 temperature raw
0x026	0	4	U12	LHKP1GRID9TST; LHKSTATUSBITS
				Grid 9 temperature status
	4	12	U12	LHKP1GRID9T
				Grid 9 temperature raw
0x028	0	4	U12	LHKP1GRID10TST; LHKSTATUSBITS
				Grid 10 temperature status
	4	12	U12	LHKP1GRID10T
				Grid 10 temperature raw
0x02A	0	4	U12	LHKP1GRID11TST
				Grid 11 temperature status
	4	12	U12	LHKP1GRID11T
				Grid 11 temperature raw
0x02C	0	4	U12	?
				?
	4	12	U12	LHKP1ACDSHT0
				ACD shell temperature 0 raw
0x02E	0	4	U12	LHKP1ACDSHT0ST
				ACD shell temperature 0 status
	4	12	U12	LHKP1ACDSHT1
				ACD shell temperature 1 raw
0x030	0	4	U12	LHKP1ACDPRT0ST; LHKSTATUSBITS
				ACD PMT rail temperature 0 status
	4	12	U12	LHKP1ACDPRT0
				ACD PMT rail temperature 0 raw
0x032	0	4	U12	LHKP1ACDPRT1ST; LHKSTATUSBITS
				ACD PMT rail temperature 1 status
	4	12	U12	LHKP1ACDPRT1
				ACD PMT rail temperature 1 raw
0x034	0	4	U12	LHKP1ACDPRT2ST; LHKSTATUSBITS
				ACD PMT rail temperature 2 status
	4	12	U12	LHKP1ACDPRT2
				ACD PMT rail temperature 2 raw
0x036	0	4	U12	LHKP1ACDPRT3ST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				ACD PMT rail temperature 3 status
	4	12	U12	LHKP1ACDPRT3
				ACD PMT rail temperature 3 raw
0x038	0	4	U12	LHKP1ACDBGT0ST; LHKSTATUSBITS
				ACD BEA grid temperature 0 status
	4	12	U12	LHKP1ACDBGT0
				ACD BEA grid temperature 0 raw
0x03A	0	4	U12	LHKP1ACDBGT1ST
				ACD BEA grid temperature 1 status
	4	12	U12	LHKP1ACDBGT1
				ACD BEA grid temperature 1 raw
0x03C	0	4	U12	LHKP1RADAFHT0ST
				Radiator 0 antifreeze heater temperature status
	4	12	U12	LHKP1RADAFHT0
				Radiator 0 antifreeze heater temperature raw
0x03E	0	4	U12	LHKP1RADAFHT1ST
				Radiator 1 antifreeze heater temperature status
	4	12	U12	LHKP1RADAFHT1
				Radiator 1 antifreeze heater temperature raw
0x040	0	4	U12	LHKP1GRAD0IFTST; LHKSTATUSBITS
				Grid radiator 0 interface temperature status
	4	12	U12	LHKP1GRAD0IFT
				Grid radiator 0 interface temperature raw
0x042	0	4	U12	LHKP1GRAD1IFTST; LHKSTATUSBITS
				Grid radiator 1 interface temperature status
	4	12	U12	LHKP1GRAD1IFT
				Grid radiator 1 interface temperature raw
0x044	0	4	U12	LHKP1GRAD2IFTST; LHKSTATUSBITS
				Grid radiator 2 interface temperature status
	4	12	U12	LHKP1GRAD2IFT
				Grid radiator 2 interface temperature raw
0x046	0	4	U12	LHKP1GRAD3IFTST; LHKSTATUSBITS
				Grid radiator 3 interface temperature status
	4	12	U12	LHKP1GRAD3IFT
				Grid radiator 3 interface temperature raw
0x048	0	4	U12	LHKP1RAD0TST; LHKSTATUSBITS
				Radiator 0 temperature status
	4	12	U12	LHKP1RAD0T
				Radiator 0 temperature raw
0x04A	0	4	U12	LHKP1RAD1TST
				Radiator 1 temperature status
	4	12	U12	LHKP1RAD1T
				Radiator 1 temperature raw
0x04C	0	4	U12	LHKP1RAD2TST
				Radiator 2 temperature status
	4	12	U12	LHKP1RAD2T
				Radiator 2 temperature raw
0x04E	0	4	U12	LHKP1RAD3TST
				Radiator 3 temperature status
	4	12	U12	LHKP1RAD3T
				Radiator 3 temperature raw
0x050	0	4	U12	LHKP1RAD4TST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				Radiator 4 temperature status
	4	12	U12	LHKP1RAD4T
				Radiator 4 temperature raw
0x052	0	4	U12	LHKP1RAD5TST; LHKSTATUSBITS
				Radiator 5 temperature status
	4	12	U12	LHKP1RAD5T
				Radiator 5 temperature raw
0x054	0	4	U12	LHKP1RAD6TST; LHKSTATUSBITS
				Radiator 6 temperature status
	4	12	U12	LHKP1RAD6T
				Radiator 6 temperature raw
0x056	0	4	U12	LHKP1RAD7TST; LHKSTATUSBITS
				Radiator 7 temperature status
	4	12	U12	LHKP1RAD7T
				Radiator 7 temperature raw
0x058	0	4	U12	LHKP1RAD8TST; LHKSTATUSBITS
				Radiator 8 temperature status
	4	12	U12	LHKP1RAD8T
				Radiator 8 temperature raw
0x05A	0	4	U12	LHKP1RAD9TST
				Radiator 9 temperature status
	4	12	U12	LHKP1RAD9T
				Radiator 9 temperature raw
0x05C	0	4	U12	LHKP1RAD10TST
				Radiator 10 temperature status
	4	12	U12	LHKP1RAD10T
				Radiator 10 temperature raw
0x05E	0	4	U12	LHKP1RAD11TST
				Radiator 11 temperature status
	4	12	U12	LHKP1RAD11T
				Radiator 11 temperature raw
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.22 `AemEnv0` (550/0x226)

Description:

"AEM Environmental Monitor Packet 0" Telemetry Packet

AEM Packet 0

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	4	U1	LHKSPARE04
				Spare 4 bits
	4	1	U1	LHKAEMFR11PWRST
				AEM Free 11 Power State
	5	1	U1	LHKAEMFR10PWRST
				AEM Free 10 Power State
	6	1	U1	LHKAEMFR9PWRST
				AEM Free 9 Power State
	7	1	U1	LHKAEMFR8PWRST
				AEM Free 8 Power State
	8	1	U1	LHKAEMFR7PWRST
				AEM Free 7 Power State
	9	1	U1	LHKAEMFR6PWRST
				AEM Free 6 Power State

Offset	S	L	Type	ITOS name, attribute(s), and description
	10	1	U1	LHKAEMFR5PWRST
				AEM Free 5 Power State
	11	1	U1	LHKAEMFR4PWRST
				AEM Free 4 Power State
	12	1	U1	LHKAEMFR3PWRST
				AEM Free 3 Power State
	13	1	U1	LHKAEMFR2PWRST
				AEM Free 2 Power State
	14	1	U1	LHKAEMFR1PWRST
				AEM Free 1 Power State
	15	1	U1	LHKAEMFR0PWRST
				AEM Free 0 Power State
0x014	0	4	U12	LHKAEMFR0VDST; LHKSTATUSBITS
				AEM free board 0 VDD status
	4	12	U12	LHKAEMFR0VD
				AEM free board 0 VDD raw
0x016	0	4	U12	LHKAEMFR0TST; LHKSTATUSBITS
				AEM free board 0 temperature status
	4	12	U12	LHKAEMFR0T
				AEM free board 0 temperature raw
0x018	0	4	U12	LHKAEMFR0V1ST; LHKSTATUSBITS
				AEM free board 0 HV1 status
	4	12	U12	LHKAEMFR0V1
				AEM free board 0 HV1 raw
0x01A	0	4	U12	LHKAEMFR0V2ST
				AEM free board 0 HV2 status
	4	12	U12	LHKAEMFR0V2
				AEM free board 0 HV2 raw
0x01C	0	4	U12	LHKAEMFR1VDST
				AEM free board 1 VDD status
	4	12	U12	LHKAEMFR1VD
				AEM free board 1 VDD raw
0x01E	0	4	U12	LHKAEMFR1TST
				AEM free board 1 temperature status
	4	12	U12	LHKAEMFR1T
				AEM free board 1 temperature raw
0x020	0	4	U12	LHKAEMFR1V1ST; LHKSTATUSBITS
				AEM free board 1 HV1 status
	4	12	U12	LHKAEMFR1V1
				AEM free board 1 HV1 raw
0x022	0	4	U12	LHKAEMFR1V2ST; LHKSTATUSBITS
				AEM free board 1 HV2 status
	4	12	U12	LHKAEMFR1V2
				AEM free board 1 HV2 raw
0x024	0	4	U12	LHKAEMFR2VDST; LHKSTATUSBITS
				AEM free board 2 VDD status
	4	12	U12	LHKAEMFR2VD
				AEM free board 2 VDD raw
0x026	0	4	U12	LHKAEMFR2TST; LHKSTATUSBITS
				AEM free board 2 temperature status
	4	12	U12	LHKAEMFR2T
				AEM free board 2 temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x028	0	4	U12	LHKAEMFR2V1ST; LHKSTATUSBITS
				AEM free board 2 HV1 status
	4	12	U12	LHKAEMFR2V1
				AEM free board 2 HV1 raw
0x02A	0	4	U12	LHKAEMFR2V2ST
				AEM free board 2 HV2 status
	4	12	U12	LHKAEMFR2V2
				AEM free board 2 HV2 raw
0x02C	0	4	U12	LHKAEMFR3VDST
				AEM free board 3 VDD status
	4	12	U12	LHKAEMFR3VD
				AEM free board 3 VDD raw
0x02E	0	4	U12	LHKAEMFR3TST
				AEM free board 3 temperature status
	4	12	U12	LHKAEMFR3T
				AEM free board 3 temperature raw
0x030	0	4	U12	LHKAEMFR3V1ST; LHKSTATUSBITS
				AEM free board 3 HV1 status
	4	12	U12	LHKAEMFR3V1
				AEM free board 3 HV1 raw
0x032	0	4	U12	LHKAEMFR3V2ST; LHKSTATUSBITS
				AEM free board 3 HV2 status
	4	12	U12	LHKAEMFR3V2
				AEM free board 3 HV2 raw
0x034	0	4	U12	LHKAEMFR4VDST; LHKSTATUSBITS
				AEM free board 4 VDD status
	4	12	U12	LHKAEMFR4VD
				AEM free board 4 VDD raw
0x036	0	4	U12	LHKAEMFR4TST; LHKSTATUSBITS
				AEM free board 4 temperature status
	4	12	U12	LHKAEMFR4T
				AEM free board 4 temperature raw
0x038	0	4	U12	LHKAEMFR4V1ST; LHKSTATUSBITS
				AEM free board 4 HV1 status
	4	12	U12	LHKAEMFR4V1
				AEM free board 4 HV1 raw
0x03A	0	4	U12	LHKAEMFR4V2ST
				AEM free board 4 HV2 status
	4	12	U12	LHKAEMFR4V2
				AEM free board 4 HV2 raw
0x03C	0	4	U12	LHKAEMFR5VDST
				AEM free board 5 VDD status
	4	12	U12	LHKAEMFR5VD
				AEM free board 5 VDD raw
0x03E	0	4	U12	LHKAEMFR5TST
				AEM free board 5 temperature status
	4	12	U12	LHKAEMFR5T
				AEM free board 5 temperature raw
0x040	0	4	U12	LHKAEMFR5V1ST; LHKSTATUSBITS
				AEM free board 5 HV1 status
	4	12	U12	LHKAEMFR5V1
				AEM free board 5 HV1 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x042	0	4	U12	LHKAEMFR5V2ST; LHKSTATUSBITS
				AEM free board 5 HV2 status
	4	12	U12	LHKAEMFR5V2
				AEM free board 5 HV2 raw
0x044	0	4	U12	LHKAEMFR6VDST; LHKSTATUSBITS
				AEM free board 6 VDD status
	4	12	U12	LHKAEMFR6VD
				AEM free board 6 VDD raw
0x046	0	4	U12	LHKAEMFR6TST; LHKSTATUSBITS
				AEM free board 6 temperature status
	4	12	U12	LHKAEMFR6T
				AEM free board 6 temperature raw
0x048	0	4	U12	LHKAEMFR6V1ST; LHKSTATUSBITS
				AEM free board 6 HV1 status
	4	12	U12	LHKAEMFR6V1
				AEM free board 6 HV1 raw
0x04A	0	4	U12	LHKAEMFR6V2ST
				AEM free board 6 HV2 status
	4	12	U12	LHKAEMFR6V2
				AEM free board 6 HV2 raw
0x04C	0	4	U12	LHKAEMFR7VDST
				AEM free board 7 VDD status
	4	12	U12	LHKAEMFR7VD
				AEM free board 7 VDD raw
0x04E	0	4	U12	LHKAEMFR7TST
				AEM free board 7 temperature status
	4	12	U12	LHKAEMFR7T
				AEM free board 7 temperature raw
0x050	0	4	U12	LHKAEMFR7V1ST; LHKSTATUSBITS
				AEM free board 7 HV1 status
	4	12	U12	LHKAEMFR7V1
				AEM free board 7 HV1 raw
0x052	0	4	U12	LHKAEMFR7V2ST; LHKSTATUSBITS
				AEM free board 7 HV2 status
	4	12	U12	LHKAEMFR7V2
				AEM free board 7 HV2 raw
0x054	0	4	U12	LHKAEMFR8VDST; LHKSTATUSBITS
				AEM free board 8 VDD status
	4	12	U12	LHKAEMFR8VD
				AEM free board 8 VDD raw
0x056	0	4	U12	LHKAEMFR8TST; LHKSTATUSBITS
				AEM free board 8 temperature status
	4	12	U12	LHKAEMFR8T
				AEM free board 8 temperature raw
0x058	0	4	U12	LHKAEMFR8V1ST; LHKSTATUSBITS
				AEM free board 8 HV1 status
	4	12	U12	LHKAEMFR8V1
				AEM free board 8 HV1 raw
0x05A	0	4	U12	LHKAEMFR8V2ST
				AEM free board 8 HV2 status
	4	12	U12	LHKAEMFR8V2
				AEM free board 8 HV2 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x05C	0	4	U12	LHKAEMFR9VDST
				AEM free board 9 VDD status
	4	12	U12	LHKAEMFR9VD
				AEM free board 9 VDD raw
0x05E	0	4	U12	LHKAEMFR9TST
				AEM free board 9 temperature status
	4	12	U12	LHKAEMFR9T
				AEM free board 9 temperature raw
0x060	0	4	U12	LHKAEMFR9V1ST; LHKSTATUSBITS
				AEM free board 9 HV1 status
	4	12	U12	LHKAEMFR9V1
				AEM free board 9 HV1 raw
0x062	0	4	U12	LHKAEMFR9V2ST; LHKSTATUSBITS
				AEM free board 9 HV2 status
	4	12	U12	LHKAEMFR9V2
				AEM free board 9 HV2 raw
0x064	0	4	U12	LHKAEMFR10VDST; LHKSTATUSBITS
				AEM free board 10 VDD status
	4	12	U12	LHKAEMFR10VD
				AEM free board 10 VDD raw
0x066	0	4	U12	LHKAEMFR10TST; LHKSTATUSBITS
				AEM free board 10 temperature status
	4	12	U12	LHKAEMFR10T
				AEM free board 10 temperature raw
0x068	0	4	U12	LHKAEMFR10V1ST; LHKSTATUSBITS
				AEM free board 10 HV1 status
	4	12	U12	LHKAEMFR10V1
				AEM free board 10 HV1 raw
0x06A	0	4	U12	LHKAEMFR10V2ST
				AEM free board 10 HV2 status
	4	12	U12	LHKAEMFR10V2
				AEM free board 10 HV2 raw
0x06C	0	4	U12	LHKAEMFR11VDST
				AEM free board 11 VDD status
	4	12	U12	LHKAEMFR11VD
				AEM free board 11 VDD raw
0x06E	0	4	U12	LHKAEMFR11TST
				AEM free board 11 temperature status
	4	12	U12	LHKAEMFR11T
				AEM free board 11 temperature raw
0x070	0	4	U12	LHKAEMFR11V1ST; LHKSTATUSBITS
				AEM free board 11 HV1 status
	4	12	U12	LHKAEMFR11V1
				AEM free board 11 HV1 raw
0x072	0	4	U12	LHKAEMFR11V2ST; LHKSTATUSBITS
				AEM free board 11 HV2 status
	4	12	U12	LHKAEMFR11V2
				AEM free board 11 HV2 raw

10.3.23 `Lrs0` (551/0x227)

Description:

"Low-rate Science Packet" Telemetry Packet

Contains TEM dead-time counters and GEM livetime counter

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16 Spare 16 bit field
0x010	0	16	U12	LHKSPARE16 Spare 16 bit field
0x012	0	16	U12	LHKSPARE16 Spare 16 bit field
0x014	0	32	U1234	LHKGLRSSEC GEM livetime read timestamp seconds
0x018	0	32	U1234	LHKGLRSSUB GEM livetime read timestamp subseconds
0x01C	0	32	U1234	LHKGLRSLIVE GEM Low-rate Science Livetime
0x020	0	32	U1234	LHKGLRSPRESC GEM Low-rate Science Prescaled
0x024	0	32	U1234	LHKGLRSDISC GEM Low-rate Science Discarded
0x028	0	32	U1234	LHKGLRSSENT GEM Low-rate Science Sent
0x02C	0	32	U1234	LHKTLRSSEC TEM deadtime read timestamp seconds
0x030	0	32	U1234	LHKTLRSSUB TEM deadtime read timestamp subseconds
0x034	0	24	U1234	LHKT0TEMLRSDT TEM0 LRS Deadtime Counter
0x038	0	24	U1234	LHKT1TEMLRSDT TEM1 LRS Deadtime Counter
0x03C	0	24	U1234	LHKT2TEMLRSDT TEM2 LRS Deadtime Counter
0x040	0	24	U1234	LHKT3TEMLRSDT TEM3 LRS Deadtime Counter
0x044	0	24	U1234	LHKT4TEMLRSDT TEM4 LRS Deadtime Counter
0x048	0	24	U1234	LHKT5TEMLRSDT TEM5 LRS Deadtime Counter
0x04C	0	24	U1234	LHKT6TEMLRSDT TEM6 LRS Deadtime Counter
0x050	0	24	U1234	LHKT7TEMLRSDT TEM7 LRS Deadtime Counter
0x054	0	24	U1234	LHKT8TEMLRSDT TEM8 LRS Deadtime Counter
0x058	0	24	U1234	LHKT9TEMLRSDT TEM9 LRS Deadtime Counter
0x05C	0	24	U1234	LHKTATEMLRSDT

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMA LRS Deadtime Counter
0x060	0	24	U1234	LHKTBTEMLRSDT
				TEMB LRS Deadtime Counter
0x064	0	24	U1234	LHKTCTEMLRSDT
				TEMC LRS Deadtime Counter
0x068	0	24	U1234	LHKTDTEMLRSDT
				TEMD LRS Deadtime Counter
0x06C	0	24	U1234	LHKTETEMLRSDT
				TEME LRS Deadtime Counter
0x070	0	24	U1234	LHKTFTEMLRSDT
				TEMF LRS Deadtime Counter

10.3.24 `CmdCnt0` (552/0x228)

Description:

"Command Statistics Packet 0" Telemetry Packet

Contains task level command statistics.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16
				?
0x010	0	16	U12	LHKSPARE16
				?
0x012	0	16	U12	LHKSPARE16
				?
0x014	0	32	U1234	LHKTSK0CMDSEC
				SIU task 0 command counter seconds
0x018	0	32	U1234	LHKTSK0CMDSUB
				SIU task 0 command counter subseconds
0x01C	0	32	U1234	LHKTSK0CMDSENT
				SIU task 0 command sent counter
0x020	0	16	U12	LHKTSK0CMDDISP
				SIU task 0 command dispatch counter
0x022	0	16	U12	LHKTSK0CMDEXEF
				SIU task 0 command execution failed counter
0x024	0	32	U1234	LHKTSK1CMDSEC
				SIU task 1 command counter seconds
0x028	0	32	U1234	LHKTSK1CMDSUB
				SIU task 1 command counter subseconds
0x02C	0	32	U1234	LHKTSK1CMDSENT
				SIU task 1 command sent counter
0x030	0	16	U12	LHKTSK1CMDDISP
				SIU task 1 command dispatch counter
0x032	0	16	U12	LHKTSK1CMDEXEF
				SIU task 1 command execution failed counter
0x034	0	32	U1234	LHKTSK2CMDSEC
				SIU task 2 command counter seconds
0x038	0	32	U1234	LHKTSK2CMDSUB
				SIU task 2 command counter subseconds

Offset	S	L	Type	ITOS name, attribute(s), and description
0x03C	0	32	U1234	LHKTSK2CMDSENT SIU task 2 command sent counter
0x040	0	16	U12	LHKTSK2CMDDISP SIU task 2 command dispatch counter
0x042	0	16	U12	LHKTSK2CMDEXEF SIU task 2 command execution failed counter
0x044	0	32	U1234	LHKTSK3CMDSEC SIU task 3 command counter seconds
0x048	0	32	U1234	LHKTSK3CMDSUB SIU task 3 command counter subseconds
0x04C	0	32	U1234	LHKTSK3CMDSENT SIU task 3 command sent counter
0x050	0	16	U12	LHKTSK3CMDDISP SIU task 3 command dispatch counter
0x052	0	16	U12	LHKTSK3CMDEXEF SIU task 3 command execution failed counter
0x054	0	32	U1234	LHKTSK4CMDSEC SIU task 4 command counter seconds
0x058	0	32	U1234	LHKTSK4CMDSUB SIU task 4 command counter subseconds
0x05C	0	32	U1234	LHKTSK4CMDSENT SIU task 4 command sent counter
0x060	0	16	U12	LHKTSK4CMDDISP SIU task 4 command dispatch counter
0x062	0	16	U12	LHKTSK4CMDEXEF SIU task 4 command execution failed counter
0x064	0	32	U1234	LHKTSK5CMDSEC SIU task 5 command counter seconds
0x068	0	32	U1234	LHKTSK5CMDSUB SIU task 5 command counter subseconds
0x06C	0	32	U1234	LHKTSK5CMDSENT SIU task 5 command sent counter
0x070	0	16	U12	LHKTSK5CMDDISP SIU task 5 command dispatch counter
0x072	0	16	U12	LHKTSK5CMDEXEF SIU task 5 command execution failed counter

10.3.25 `CmdCnt1` (553/0x229)

Description:

"Command Statistics Packet 1" Telemetry Packet

Contains task level command statistics

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16 ?
0x010	0	16	U12	LHKSPARE16 ?
0x012	0	16	U12	LHKSPARE16

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x014	0	32	U1234	LHKTSK6CMDSEC
				SIU task 6 command counter seconds
0x018	0	32	U1234	LHKTSK6CMDSUB
				SIU task 6 command counter subseconds
0x01C	0	32	U1234	LHKTSK6CMDSENT
				SIU task 6 command sent counter
0x020	0	16	U12	LHKTSK6CMDDISP
				SIU task 6 command dispatch counter
0x022	0	16	U12	LHKTSK6CMDEXEF
				SIU task 6 command execution failed counter
0x024	0	32	U1234	LHKTSK7CMDSEC
				SIU task 7 command counter seconds
0x028	0	32	U1234	LHKTSK7CMDSUB
				SIU task 7 command counter subseconds
0x02C	0	32	U1234	LHKTSK7CMDSENT
				SIU task 7 command sent counter
0x030	0	16	U12	LHKTSK7CMDDISP
				SIU task 7 command dispatch counter
0x032	0	16	U12	LHKTSK7CMDEXEF
				SIU task 7 command execution failed counter
0x034	0	32	U1234	LHKTSK8CMDSEC
				SIU task 8 command counter seconds
0x038	0	32	U1234	LHKTSK8CMDSUB
				SIU task 8 command counter subseconds
0x03C	0	32	U1234	LHKTSK8CMDSENT
				SIU task 8 command sent counter
0x040	0	16	U12	LHKTSK8CMDDISP
				SIU task 8 command dispatch counter
0x042	0	16	U12	LHKTSK8CMDEXEF
				SIU task 8 command execution failed counter
0x044	0	32	U1234	LHKTSK9CMDSEC
				SIU task 9 command counter seconds
0x048	0	32	U1234	LHKTSK9CMDSUB
				SIU task 9 command counter subseconds
0x04C	0	32	U1234	LHKTSK9CMDSENT
				SIU task 9 command sent counter
0x050	0	16	U12	LHKTSK9CMDDISP
				SIU task 9 command dispatch counter
0x052	0	16	U12	LHKTSK9CMDEXEF
				SIU task 9 command execution failed counter
0x054	0	32	U1234	LHKTSK10CMDSEC
				SIU task 10 command counter seconds
0x058	0	32	U1234	LHKTSK10CMDSUB
				SIU task 10 command counter subseconds
0x05C	0	32	U1234	LHKTSK10CMDSENT
				SIU task 10 command sent counter
0x060	0	16	U12	LHKTSK10CMDDISP
				SIU task 10 command dispatch counter
0x062	0	16	U12	LHKTSK10CMDEXEF
				SIU task 10 command execution failed counter
0x064	0	32	U1234	LHKTSK11CMDSEC

Offset	S	L	Type	ITOS name, attribute(s), and description
				SIU task 11 command counter seconds
0x068	0	32	U1234	LHKTSK11CMDSUB
				SIU task 11 command counter subseconds
0x06C	0	32	U1234	LHKTSK11CMDSENT
				SIU task 11 command sent counter
0x070	0	16	U12	LHKTSK11CMDDISP
				SIU task 11 command dispatch counter
0x072	0	16	U12	LHKTSK11CMDEXEF
				SIU task 11 command execution failed counter

10.3.26 `FileStats` (554/0x22A)

Description:

"File System Statistics Packet" Telemetry Packet

Contains FILE statistics for each CPU.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16
				?
0x010	0	16	U12	LHKSPARE16
				?
0x012	0	16	U12	LHKSPARE16
				?
0x014	0	32	U1234	LHKSFILSTATE
				SIU File System State
0x018	0	32	U1234	LHKSFILCURSIZE
				SIU File Current Size
0x01C	0	32	U1234	LHKSFILPKTCNT
				SIU File Packet Count
0x020	0	32	U1234	LHKSFILERRCODE
				SIU File Error Code
0x024	0	32	U1234	LHKSFILERRCNT
				SIU File Error Count
0x028	0	32	U1234	LHKSFILCOMID
				SIU File Commit ID
0x02C	0	32	U1234	LHKE0FILSTATE
				EPU 0 File System State
0x030	0	32	U1234	LHKE0FILCURSIZE
				EPU 0 File Current Size
0x034	0	32	U1234	LHKE0FILPKTCNT
				EPU 0 File Packet Count
0x038	0	32	U1234	LHKE0FILERRCODE
				EPU 0 File Error Code
0x03C	0	32	U1234	LHKE0FILERRCNT
				EPU 0 File Error Count
0x040	0	32	U1234	LHKE0FILCOMID
				EPU 0 File Commit ID
0x044	0	32	U1234	LHKE1FILSTATE
				EPU 1 File System State

Offset	S	L	Type	ITOS name, attribute(s), and description
0x048	0	32	U1234	LHKE1FILCURSIZE EPU 1 File Current Size
0x04C	0	32	U1234	LHKE1FILPKTCNT EPU 1 File Packet Count
0x050	0	32	U1234	LHKE1FILERRCODE EPU 1 File Error Code
0x054	0	32	U1234	LHKE1FILERRCNT EPU 1 File Error Count
0x058	0	32	U1234	LHKE1FILCOMID EPU 1 File Commit ID
0x05C	0	32	U1234	LHKE2FILSTATE EPU 2 File System State
0x060	0	32	U1234	LHKE2FILCURSIZE EPU 2 File Current Size
0x064	0	32	U1234	LHKE2FILPKTCNT EPU 2 File Packet Count
0x068	0	32	U1234	LHKE2FILERRCODE EPU 2 File Error Code
0x06C	0	32	U1234	LHKE2FILERRCNT EPU 2 File Error Count
0x070	0	32	U1234	LHKE2FILCOMID EPU 2 File Commit ID

10.3.27 `CpuMetr` (555/0x22B)

Description:

"CPU Metrics/RT Statistics Packet" Telemetry Packet

Contains CPU metrics for all LAT CPUs. Contains the 1553 RT driver statistics.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16 ?
0x010	0	16	U12	LHKSPARE16 ?
0x012	0	16	U12	LHKSPARE16 ?
0x014	0	32	U1234	LHKRTERRCNT A count of the number of remote terminal errors
0x018	0	32	U1234	LHKRTINTRCNT A count of the number of remote terminal device interrupts
0x01C	0	32	U1234	LHKRTCRXPKTCNT A count of the number of CmdRx packets received by the remote terminal
0x020	0	32	U1234	LHKRTCRXBYTCNT A count of the number of CmdRx bytes received by the remote terminal
0x024	0	32	U1234	LHKRTCTXPKTCNT A count of the number of CmdTx packets sent by the remote terminal
0x028	0	32	U1234	LHKRTCTXBYTCNT A count of the number of CmdTx bytes sent by the remote terminal
0x02C	0	32	U1234	LHKRTHKPKTCNT

Offset	S	L	Type	ITOS name, attribute(s), and description
				A count of the number of HKP packets sent by the remote terminal
0x030	0	32	U1234	LHKRTHKBYTCNT
				A count of the number of HKP bytes sent by the remote terminal
0x034	0	32	U1234	LHKRTTLMPKTCNT
				A count of the number of Telem packets sent by the remote terminal (not HKP)
0x038	0	32	U1234	LHKRTTLMBYTCNT
				A count of the number of Telem bytes sent by the remote terminal (not HKP)
0x03C	0	16	U12	LHKSIUCPUJTEMP
				SIU CPU junction temperature
0x03E	0	16	U12	LHKEPU0CPUJTEMP
				EPU0 CPU junction temperature
0x040	0	16	U12	LHKEPU1CPUJTEMP
				EPU1 CPU junction temperature
0x042	0	16	U12	LHKEPU2CPUJTEMP
				EPU2 CPU junction temperature
0x044	0	16	U12	LHKSPARE16
				?
0x046	0	16	U12	LHKSPARE16
				?
0x048	0	16	U12	LHKSPARE16
				?
0x04A	0	16	U12	LHKSPARE16
				?
0x04C	0	16	U12	LHKSPARE16
				?
0x04E	0	16	U12	LHKSPARE16
				?
0x050	0	16	U12	LHKSPARE16
				?
0x052	0	16	U12	LHKSPARE16
				?
0x054	0	16	U12	LHKSPARE16
				?
0x056	0	16	U12	LHKSPARE16
				?
0x058	0	16	U12	LHKSPARE16
				?
0x05A	0	16	U12	LHKSPARE16
				?
0x05C	0	16	U12	LHKSPARE16
				?
0x05E	0	16	U12	LHKSPARE16
				?
0x060	0	16	U12	LHKSPARE16
				?
0x062	0	16	U12	LHKSPARE16
				?
0x064	0	16	U12	LHKSPARE16
				?
0x066	0	16	U12	LHKSPARE16
				?
0x068	0	16	U12	LHKSPARE16

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x06A	0	16	U12	LHKSPARE16
				?
0x06C	0	16	U12	LHKSPARE16
				?
0x06E	0	16	U12	LHKSPARE16
				?
0x070	0	16	U12	LHKSPARE16
				?
0x072	0	16	U12	LHKSPARE16
				?

10.3.28 `MemStats0` (556/0x22C)

Description:

"Memory Load/Dump Statistics" Telemetry Packet

Contains the statistics for memory loads and dumps on the SIU and EPU0.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16
				Spare 16 bit field
0x010	0	16	U12	LHKSPARE16
				Spare 16 bit field
0x012	0	16	U12	LHKSPARE16
				Spare 16 bit field
0x014	0	32	U1234	LHKSMEMLDSTAT
				SIU Status of most recent load action
0x018	0	32	U1234	LHKSMEMLDACT
				SIU Memory load active flag
0x01C	0	32	U1234	LHKSMEMLDSTART
				SIU Starting memory load address
0x020	0	32	U1234	LHKSMEMLDBYTES
				SIU Memory load total bytes
0x024	0	32	U1234	LHKSMEMLDOFST
				SIU Memory load offset
0x028	0	32	U1234	LHKSMEMDMPSTAT
				SIU Memory dump status
0x02C	0	32	U1234	LHKSMEMDMPACT
				SIU Memory dump active
0x030	0	32	U1234	LHKSMEMDMPSTRT
				SIU Memory dump start address
0x034	0	32	U1234	LHKSMEMDMPBYT
				SIU Memory dump bytes
0x038	0	32	U1234	LHKSMEMDMPADDR
				SIU Memory dump address
0x03C	0	32	U1234	LHKSMEMDMPFCDE
				SIU Memory dump function code
0x040	0	32	U1234	LHKSMEM0MPTID
				SIU Memory dump transaction ID

Offset	S	L	Type	ITOS name, attribute(s), and description
0x044	0	32	U1234	LHKE0MEMLDSTAT EPU0 Status of most recent load action
0x048	0	32	U1234	LHKE0MEMLDACT EPU0 Memory load active flag
0x04C	0	32	U1234	LHKE0MEMLDSTART EPU0 Starting memory load address
0x050	0	32	U1234	LHKE0MEMLDBYTES EPU0 Memory load total bytes
0x054	0	32	U1234	LHKE0MEMLDOFST EPU0 Memory load offset
0x058	0	32	U1234	LHKE0MEMDMPSTAT EPU0 Memory dump status
0x05C	0	32	U1234	LHKE0MEMDMPACT EPU0 Memory dump active
0x060	0	32	U1234	LHKE0MEMDMPSTRT EPU0 Memory dump start address
0x064	0	32	U1234	LHKE0MEMDMPBYT EPU0 Memory dump bytes
0x068	0	32	U1234	LHKE0MEMDMPADDR EPU0 Memory dump address
0x06C	0	32	U1234	LHKE0MEMDMPFCDE EPU0 Memory dump function code
0x070	0	32	U1234	LHKE0MEMDMPTID EPU0 Memory dump transaction ID

10.3.29 `MemStats1` (557/0x22D)

Description:

"Memory Load/Dump Statistics" Telemetry Packet

Contains the statistics for memory loads and dumps on the EPU1 and EPU2.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16 Spare 16 bit field
0x010	0	16	U12	LHKSPARE16 Spare 16 bit field
0x012	0	16	U12	LHKSPARE16 Spare 16 bit field
0x014	0	32	U1234	LHKE1MEMLDSTAT EPU1 Status of most recent load action
0x018	0	32	U1234	LHKE1MEMLDACT EPU1 Memory load active flag
0x01C	0	32	U1234	LHKE1MEMLDSTART EPU1 Starting memory load address
0x020	0	32	U1234	LHKE1MEMLDBYTES EPU1 Memory load total bytes
0x024	0	32	U1234	LHKE1MEMLDOFST EPU1 Memory load offset
0x028	0	32	U1234	LHKE1MEMDMPSTAT

Offset	S	L	Type	ITOS name, attribute(s), and description
				EPU1 Memory dump status
0x02C	0	32	U1234	LHKE1MEMDMPACT
				EPU1 Memory dump active
0x030	0	32	U1234	LHKE1MEMDMPSTRT
				EPU1 Memory dump start address
0x034	0	32	U1234	LHKE1MEMDMPBYT
				EPU1 Memory dump bytes
0x038	0	32	U1234	LHKE1MEMDMPADDR
				EPU1 Memory dump address
0x03C	0	32	U1234	LHKE1MEMDMPFCDE
				EPU1 Memory dump function code
0x040	0	32	U1234	LHKE1MEMDMPTID
				EPU1 Memory dump transaction ID
0x044	0	32	U1234	LHKE2MEMLDSTAT
				EPU2 Status of most recent load action
0x048	0	32	U1234	LHKE2MEMLDACT
				EPU2 Memory load active flag
0x04C	0	32	U1234	LHKE2MEMLDSTART
				EPU2 Starting memory load address
0x050	0	32	U1234	LHKE2MEMLDBYTES
				EPU2 Memory load total bytes
0x054	0	32	U1234	LHKE2MEMLDOFST
				EPU2 Memory load offset
0x058	0	32	U1234	LHKE2MEMDMPSTAT
				EPU2 Memory dump status
0x05C	0	32	U1234	LHKE2MEMDMPACT
				EPU2 Memory dump active
0x060	0	32	U1234	LHKE2MEMDMPSTRT
				EPU2 Memory dump start address
0x064	0	32	U1234	LHKE2MEMDMPBYT
				EPU2 Memory dump bytes
0x068	0	32	U1234	LHKE2MEMDMPADDR
				EPU2 Memory dump address
0x06C	0	32	U1234	LHKE2MEMDMPFCDE
				EPU2 Memory dump function code
0x070	0	32	U1234	LHKE2MEMDMPTID
				EPU2 Memory dump transaction ID

10.3.30 `DiagTemEnvPwr0` (624/0x270)

Description:

"Diagnostic TEM Power Packet 0" Telemetry Packet

Contains power specific ADC values for TEMs 0, 1, and 2.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKDT0TKR25VDST; LHKSTATUSBITS TEM0 TKR 2.5V digital status
	4	12	U12	LHKDT0TKR25VD TEM0 TKR 2.5V digital raw
0x016	0	4	U12	LHKDT0TKR25IDST; LHKSTATUSBITS TEM0 TKR 2.5I digital status
	4	12	U12	LHKDT0TKR25ID TEM0 TKR 2.5I digital raw
0x018	0	4	U12	LHKDT0TKR15VAAST; LHKSTATUSBITS TEM0 TKR 1.5V analog A status
	4	12	U12	LHKDT0TKR15VAA TEM0 TKR 1.5V analog A raw
0x01A	0	4	U12	LHKDT0TKR15IAAST TEM0 TKR 1.5I analog A status
	4	12	U12	LHKDT0TKR15IAA TEM0 TKR 1.5I analog A raw
0x01C	0	4	U12	LHKDT0TKR25VABST TEM0 TKR 2.5V analog B status
	4	12	U12	LHKDT0TKR25VAB TEM0 TKR 2.5V analog B raw
0x01E	0	4	U12	LHKDT0TKR25IABST TEM0 TKR 2.5I analog B status
	4	12	U12	LHKDT0TKR25IAB TEM0 TKR 2.5I analog B raw
0x020	0	4	U12	LHKDT0TKRBIASVST; LHKSTATUSBITS TEM0 TKR Bias V status
	4	12	U12	LHKDT0TKRBIASV TEM0 TKR Bias V raw
0x022	0	4	U12	LHKDT0TKRBIASIST; LHKSTATUSBITS TEM0 TKR Bias I status
	4	12	U12	LHKDT0TKRBIASI TEM0 TKR Bias I raw
0x024	0	4	U12	LHKDT0CAL33VDST; LHKSTATUSBITS TEM0 CAL 3.3V digital status
	4	12	U12	LHKDT0CAL33VD TEM0 CAL 3.3V digital raw
0x026	0	4	U12	LHKDT0CAL33IDST; LHKSTATUSBITS TEM0 CAL 3.3I digital status
	4	12	U12	LHKDT0CAL33ID TEM0 CAL 3.3I digital raw
0x028	0	4	U12	LHKDT0CAL33VAST; LHKSTATUSBITS TEM0 CAL 3.3V analog status
	4	12	U12	LHKDT0CAL33VA TEM0 CAL 3.3V analog raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x02A	0	4	U12	LHKDT0CAL33IAST
				TEM0 CAL 3.3I analog status
	4	12	U12	LHKDT0CAL33IA
				TEM0 CAL 3.3I analog raw
0x02C	0	4	U12	LHKDT0CALBIASVST
				TEM0 CAL Bias V status
	4	12	U12	LHKDT0CALBIASV
				TEM0 CAL Bias V raw
0x02E	0	4	U12	LHKDT0CALBIASIST
				TEM0 CAL Bias I status
	4	12	U12	LHKDT0CALBIASI
				TEM0 CAL Bias I raw
0x030	0	4	U12	LHKDT0TEM33VST; LHKSTATUSBITS
				TEM0 TEM 3.3V status
	4	12	U12	LHKDT0TEM33V
				TEM0 TEM 3.3V raw
0x032	0	4	U12	LHKDT0TEM33IST; LHKSTATUSBITS
				TEM0 3.3I digital status
	4	12	U12	LHKDT0TEM33I
				TEM0 3.3I digital raw
0x034	0	4	U12	LHKDT1TKR25VDST; LHKSTATUSBITS
				TEM1 TKR 2.5V digital status
	4	12	U12	LHKDT1TKR25VD
				TEM1 TKR 2.5V digital raw
0x036	0	4	U12	LHKDT1TKR25IDST; LHKSTATUSBITS
				TEM1 TKR 2.5I digital status
	4	12	U12	LHKDT1TKR25ID
				TEM1 TKR 2.5I digital raw
0x038	0	4	U12	LHKDT1TKR15VAAST; LHKSTATUSBITS
				TEM1 TKR 1.5V analog A status
	4	12	U12	LHKDT1TKR15VAA
				TEM1 TKR 1.5V analog A raw
0x03A	0	4	U12	LHKDT1TKR15IAAST
				TEM1 TKR 1.5I analog A status
	4	12	U12	LHKDT1TKR15IAA
				TEM1 TKR 1.5I analog A raw
0x03C	0	4	U12	LHKDT1TKR25VABST
				TEM1 TKR 2.5V analog B status
	4	12	U12	LHKDT1TKR25VAB
				TEM1 TKR 2.5V analog B raw
0x03E	0	4	U12	LHKDT1TKR25IABST
				TEM1 TKR 2.5I analog B status
	4	12	U12	LHKDT1TKR25IAB
				TEM1 TKR 2.5I analog B raw
0x040	0	4	U12	LHKDT1TKRBIASVST; LHKSTATUSBITS
				TEM1 TKR Bias V status
	4	12	U12	LHKDT1TKRBIASV
				TEM1 TKR Bias V raw
0x042	0	4	U12	LHKDT1TKRBIASIST; LHKSTATUSBITS
				TEM1 TKR Bias I status
	4	12	U12	LHKDT1TKRBIASI
				TEM1 TKR Bias I raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x044	0	4	U12	LHKDT1CAL33VDST; LHKSTATUSBITS TEM1 CAL 3.3V digital status
	4	12	U12	LHKDT1CAL33VD TEM1 CAL 3.3V digital raw
0x046	0	4	U12	LHKDT1CAL33IDST; LHKSTATUSBITS TEM1 CAL 3.3I digital status
	4	12	U12	LHKDT1CAL33ID TEM1 CAL 3.3I digital raw
0x048	0	4	U12	LHKDT1CAL33VAST; LHKSTATUSBITS TEM1 CAL 3.3V analog status
	4	12	U12	LHKDT1CAL33VA TEM1 CAL 3.3V analog raw
0x04A	0	4	U12	LHKDT1CAL33IAST TEM1 CAL 3.3I analog status
	4	12	U12	LHKDT1CAL33IA TEM1 CAL 3.3I analog raw
0x04C	0	4	U12	LHKDT1CALBIASVST TEM1 CAL Bias V status
	4	12	U12	LHKDT1CALBIASV TEM1 CAL Bias V raw
0x04E	0	4	U12	LHKDT1CALBIASIST TEM1 CAL Bias I status
	4	12	U12	LHKDT1CALBIASI TEM1 CAL Bias I raw
0x050	0	4	U12	LHKDT1TEM33VST; LHKSTATUSBITS TEM1 TEM 3.3V digital status
	4	12	U12	LHKDT1TEM33V TEM1 TEM 3.3V digital raw
0x052	0	4	U12	LHKDT1TEM33IST; LHKSTATUSBITS TEM1 TEM 3.3I digital status
	4	12	U12	LHKDT1TEM33I TEM1 TEM 3.3I digital raw
0x054	0	4	U12	LHKDT2TKR25VDST; LHKSTATUSBITS TEM2 TKR 2.5V digital status
	4	12	U12	LHKDT2TKR25VD TEM2 TKR 2.5V digital raw
0x056	0	4	U12	LHKDT2TKR25IDST; LHKSTATUSBITS TEM2 TKR 2.5I digital status
	4	12	U12	LHKDT2TKR25ID TEM2 TKR 2.5I digital raw
0x058	0	4	U12	LHKDT2TKR15VAAST; LHKSTATUSBITS TEM2 TKR 1.5V analog A status
	4	12	U12	LHKDT2TKR15VAA TEM2 TKR 1.5V analog A raw
0x05A	0	4	U12	LHKDT2TKR15IAAST TEM2 TKR 1.5I analog A status
	4	12	U12	LHKDT2TKR15IAA TEM2 TKR 1.5I analog A raw
0x05C	0	4	U12	LHKDT2TKR25VABST TEM2 TKR 2.5V analog B status
	4	12	U12	LHKDT2TKR25VAB TEM2 TKR 2.5V analog B raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x05E	0	4	U12	LHKDT2TKR25IABST
				TEM2 TKR 2.5I analog B status
	4	12	U12	LHKDT2TKR25IAB
				TEM2 TKR 2.5I analog B raw
0x060	0	4	U12	LHKDT2TKRBIASVST; LHKSTATUSBITS
				TEM2 TKR Bias V status
	4	12	U12	LHKDT2TKRBIASV
				TEM2 TKR Bias V raw
0x062	0	4	U12	LHKDT2TKRBIASIST; LHKSTATUSBITS
				TEM2 TKR Bias I status
	4	12	U12	LHKDT2TKRBIASI
				TEM2 TKR Bias I raw
0x064	0	4	U12	LHKDT2CAL33VDST; LHKSTATUSBITS
				TEM2 CAL 3.3V digital status
	4	12	U12	LHKDT2CAL33VD
				TEM2 CAL 3.3V digital raw
0x066	0	4	U12	LHKDT2CAL33IDST; LHKSTATUSBITS
				TEM2 CAL 3.3I digital status
	4	12	U12	LHKDT2CAL33ID
				TEM2 CAL 3.3I digital raw
0x068	0	4	U12	LHKDT2CAL33VAST; LHKSTATUSBITS
				TEM2 CAL 3.3V analog status
	4	12	U12	LHKDT2CAL33VA
				TEM2 CAL 3.3V analog raw
0x06A	0	4	U12	LHKDT2CAL33IAST
				TEM2 CAL 3.3I analog status
	4	12	U12	LHKDT2CAL33IA
				TEM2 CAL 3.3I analog raw
0x06C	0	4	U12	LHKDT2CALBIASVST
				TEM2 CAL Bias V status
	4	12	U12	LHKDT2CALBIASV
				TEM2 CAL Bias V raw
0x06E	0	4	U12	LHKDT2CALBIASIST
				TEM2 CAL Bias I status
	4	12	U12	LHKDT2CALBIASI
				TEM2 CAL Bias I raw
0x070	0	4	U12	LHKDT2TEM33VST; LHKSTATUSBITS
				TEM2 TEM 3.3V digital status
	4	12	U12	LHKDT2TEM33V
				TEM2 TEM 3.3V digital raw
0x072	0	4	U12	LHKDT2TEM33IST; LHKSTATUSBITS
				TEM2 TEM 3.3I digital status
	4	12	U12	LHKDT2TEM33I
				TEM2 TEM 3.3I digital raw

10.3.31 `DiagTemEnvPwr1` (625/0x271)

Description:

"Diagnostic TEM Power Packet 1" Telemetry Packet

Contains power specific ADC values for TEMs 3,4, and 5.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDT3TKR25VDST; LHKSTATUSBITS
				TEM3 TKR 2.5V digital status
	4	12	U12	LHKDT3TKR25VD
				TEM3 TKR 2.5V digital raw
0x016	0	4	U12	LHKDT3TKR25IDST; LHKSTATUSBITS
				TEM3 TKR 2.5I digital status
	4	12	U12	LHKDT3TKR25ID
				TEM3 TKR 2.5I digital raw
0x018	0	4	U12	LHKDT3TKR15VAAST; LHKSTATUSBITS
				TEM3 TKR 1.5V analog A status
	4	12	U12	LHKDT3TKR15VAA
				TEM3 TKR 1.5V analog A raw
0x01A	0	4	U12	LHKDT3TKR15IAAST
				TEM3 TKR 1.5I analog A status
	4	12	U12	LHKDT3TKR15IAA
				TEM3 TKR 1.5I analog A raw
0x01C	0	4	U12	LHKDT3TKR25VABST
				TEM3 TKR 2.5V analog B status
	4	12	U12	LHKDT3TKR25VAB
				TEM3 TKR 2.5V analog B raw
0x01E	0	4	U12	LHKDT3TKR25IABST
				TEM3 TKR 2.5I analog B status
	4	12	U12	LHKDT3TKR25IAB
				TEM3 TKR 2.5I analog B raw
0x020	0	4	U12	LHKDT3TKRBIASVST; LHKSTATUSBITS
				TEM3 TKR Bias V status
	4	12	U12	LHKDT3TKRBIASV
				TEM3 TKR Bias V raw
0x022	0	4	U12	LHKDT3TKRBIASIST; LHKSTATUSBITS
				TEM3 TKR Bias I status
	4	12	U12	LHKDT3TKRBIASI
				TEM3 TKR Bias I raw
0x024	0	4	U12	LHKDT3CAL33VDST; LHKSTATUSBITS
				TEM3 CAL 3.3V digital status
	4	12	U12	LHKDT3CAL33VD
				TEM3 CAL 3.3V digital raw
0x026	0	4	U12	LHKDT3CAL33IDST; LHKSTATUSBITS
				TEM3 CAL 3.3I digital status
	4	12	U12	LHKDT3CAL33ID

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM3 CAL 3.3I digital raw
0x028	0	4	U12	LHKDT3CAL33VAST; LHKSTATUSBITS
				TEM3 CAL 3.3V analog status
	4	12	U12	LHKDT3CAL33VA
				TEM3 CAL 3.3V analog raw
0x02A	0	4	U12	LHKDT3CAL33IAST
				TEM3 CAL 3.3I analog status
	4	12	U12	LHKDT3CAL33IA
				TEM3 CAL 3.3I analog raw
0x02C	0	4	U12	LHKDT3CALBIASVST
				TEM3 CAL Bias V status
	4	12	U12	LHKDT3CALBIASV
				TEM3 CAL Bias V raw
0x02E	0	4	U12	LHKDT3CALBIASIST
				TEM3 CAL Bias I status
	4	12	U12	LHKDT3CALBIASI
				TEM3 CAL Bias I raw
0x030	0	4	U12	LHKDT3TEM33VST; LHKSTATUSBITS
				TEM3 TEM 3.3V status
	4	12	U12	LHKDT3TEM33V
				TEM3 TEM 3.3V raw
0x032	0	4	U12	LHKDT3TEM33IST; LHKSTATUSBITS
				TEM3 3.3I digital status
	4	12	U12	LHKDT3TEM33I
				TEM3 3.3I digital raw
0x034	0	4	U12	LHKDT4TKR25VDST; LHKSTATUSBITS
				TEM4 TKR 2.5V digital status
	4	12	U12	LHKDT4TKR25VD
				TEM4 TKR 2.5V digital raw
0x036	0	4	U12	LHKDT4TKR25IDST; LHKSTATUSBITS
				TEM4 TKR 2.5I digital status
	4	12	U12	LHKDT4TKR25ID
				TEM4 TKR 2.5I digital raw
0x038	0	4	U12	LHKDT4TKR15VAAST; LHKSTATUSBITS
				TEM4 TKR 1.5V analog A status
	4	12	U12	LHKDT4TKR15VAA
				TEM4 TKR 1.5V analog A raw
0x03A	0	4	U12	LHKDT4TKR15IAAST
				TEM4 TKR 1.5I analog A status
	4	12	U12	LHKDT4TKR15IAA
				TEM4 TKR 1.5I analog A raw
0x03C	0	4	U12	LHKDT4TKR25VABST
				TEM4 TKR 2.5V analog B status
	4	12	U12	LHKDT4TKR25VAB
				TEM4 TKR 2.5V analog B raw
0x03E	0	4	U12	LHKDT4TKR25IABST
				TEM4 TKR 2.5I analog B status
	4	12	U12	LHKDT4TKR25IAB
				TEM4 TKR 2.5I analog B raw
0x040	0	4	U12	LHKDT4TKRBIASVST; LHKSTATUSBITS
				TEM4 TKR Bias V status
	4	12	U12	LHKDT4TKRBIASV

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM4 TKR Bias V raw
0x042	0	4	U12	LHKDT4TKRBIASIST; LHKSTATUSBITS
				TEM4 TKR Bias I status
	4	12	U12	LHKDT4TKRBIASI
				TEM4 TKR Bias I raw
0x044	0	4	U12	LHKDT4CAL33VDST; LHKSTATUSBITS
				TEM4 CAL 3.3V digital status
	4	12	U12	LHKDT4CAL33VD
				TEM4 CAL 3.3V digital raw
0x046	0	4	U12	LHKDT4CAL33IDST; LHKSTATUSBITS
				TEM4 CAL 3.3I digital status
	4	12	U12	LHKDT4CAL33ID
				TEM4 CAL 3.3I digital raw
0x048	0	4	U12	LHKDT4CAL33VAST; LHKSTATUSBITS
				TEM4 CAL 3.3V analog status
	4	12	U12	LHKDT4CAL33VA
				TEM4 CAL 3.3V analog raw
0x04A	0	4	U12	LHKDT4CAL33IAST
				TEM4 CAL 3.3I analog status
	4	12	U12	LHKDT4CAL33IA
				TEM4 CAL 3.3I analog raw
0x04C	0	4	U12	LHKDT4CALBIASVST
				TEM4 CAL Bias V status
	4	12	U12	LHKDT4CALBIASV
				TEM4 CAL Bias V raw
0x04E	0	4	U12	LHKDT4CALBIASIST
				TEM4 CAL Bias I status
	4	12	U12	LHKDT4CALBIASI
				TEM4 CAL Bias I raw
0x050	0	4	U12	LHKDT4TEM33VST; LHKSTATUSBITS
				TEM4 TEM 3.3V digital status
	4	12	U12	LHKDT4TEM33V
				TEM4 TEM 3.3V digital raw
0x052	0	4	U12	LHKDT4TEM33IST; LHKSTATUSBITS
				TEM4 TEM 3.3I digital status
	4	12	U12	LHKDT4TEM33I
				TEM4 TEM 3.3I digital raw
0x054	0	4	U12	LHKDT5TKR25VDST; LHKSTATUSBITS
				TEM5 TKR 2.5V digital status
	4	12	U12	LHKDT5TKR25VD
				TEM5 TKR 2.5V digital raw
0x056	0	4	U12	LHKDT5TKR25IDST; LHKSTATUSBITS
				TEM5 TKR 2.5I digital status
	4	12	U12	LHKDT5TKR25ID
				TEM5 TKR 2.5I digital raw
0x058	0	4	U12	LHKDT5TKR15VAAST; LHKSTATUSBITS
				TEM5 TKR 1.5V analog A status
	4	12	U12	LHKDT5TKR15VAA
				TEM5 TKR 1.5V analog A raw
0x05A	0	4	U12	LHKDT5TKR15IAAST
				TEM5 TKR 1.5I analog A status
	4	12	U12	LHKDT5TKR15IAA

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM5 TKR 1.5I analog A raw
0x05C	0	4	U12	LHKDT5TKR25VABST
				TEM5 TKR 2.5V analog B status
	4	12	U12	LHKDT5TKR25VAB
				TEM5 TKR 2.5V analog B raw
0x05E	0	4	U12	LHKDT5TKR25IABST
				TEM5 TKR 2.5I analog B status
	4	12	U12	LHKDT5TKR25IAB
				TEM5 TKR 2.5I analog B raw
0x060	0	4	U12	LHKDT5TKRBIASVST; LHKSTATUSBITS
				TEM5 TKR Bias V status
	4	12	U12	LHKDT5TKRBIASV
				TEM5 TKR Bias V raw
0x062	0	4	U12	LHKDT5TKRBIASIST; LHKSTATUSBITS
				TEM5 TKR Bias I status
	4	12	U12	LHKDT5TKRBIASI
				TEM5 TKR Bias I raw
0x064	0	4	U12	LHKDT5CAL33VDST; LHKSTATUSBITS
				TEM5 CAL 3.3V digital status
	4	12	U12	LHKDT5CAL33VD
				TEM5 CAL 3.3V digital raw
0x066	0	4	U12	LHKDT5CAL33IDST; LHKSTATUSBITS
				TEM5 CAL 3.3I digital status
	4	12	U12	LHKDT5CAL33ID
				TEM5 CAL 3.3I digital raw
0x068	0	4	U12	LHKDT5CAL33VAST; LHKSTATUSBITS
				TEM5 CAL 3.3V analog status
	4	12	U12	LHKDT5CAL33VA
				TEM5 CAL 3.3V analog raw
0x06A	0	4	U12	LHKDT5CAL33IAST
				TEM5 CAL 3.3I analog status
	4	12	U12	LHKDT5CAL33IA
				TEM5 CAL 3.3I analog raw
0x06C	0	4	U12	LHKDT5CALBIASVST
				TEM5 CAL Bias V status
	4	12	U12	LHKDT5CALBIASV
				TEM5 CAL Bias V raw
0x06E	0	4	U12	LHKDT5CALBIASIST
				TEM5 CAL Bias I status
	4	12	U12	LHKDT5CALBIASI
				TEM5 CAL Bias I raw
0x070	0	4	U12	LHKDT5TEM33VST; LHKSTATUSBITS
				TEM5 TEM 3.3V digital status
	4	12	U12	LHKDT5TEM33V
				TEM5 TEM 3.3V digital raw
0x072	0	4	U12	LHKDT5TEM33IST; LHKSTATUSBITS
				TEM5 TEM 3.3I digital status
	4	12	U12	LHKDT5TEM33I
				TEM5 TEM 3.3I digital raw

10.3.32 `DiagTemEnvPwr2` (626/0x272)

Description:

"Diagnostic TEM Power Packet 2" Telemetry Packet

Contains power specific ADC values for TEMs 6, 7, and 8.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKDT6TKR25VDST; LHKSTATUSBITS TEM6 TKR 2.5V digital status
	4	12	U12	LHKDT6TKR25VD TEM6 TKR 2.5V digital raw
0x016	0	4	U12	LHKDT6TKR25IDST; LHKSTATUSBITS TEM6 TKR 2.5I digital status
	4	12	U12	LHKDT6TKR25ID TEM6 TKR 2.5I digital raw
0x018	0	4	U12	LHKDT6TKR15VAAST; LHKSTATUSBITS TEM6 TKR 1.5V analog A status
	4	12	U12	LHKDT6TKR15VAA TEM6 TKR 1.5V analog A raw
0x01A	0	4	U12	LHKDT6TKR15IAAST TEM6 TKR 1.5I analog A status
	4	12	U12	LHKDT6TKR15IAA TEM6 TKR 1.5I analog A raw
0x01C	0	4	U12	LHKDT6TKR25VABST TEM6 TKR 2.5V analog B status
	4	12	U12	LHKDT6TKR25VAB TEM6 TKR 2.5V analog B raw
0x01E	0	4	U12	LHKDT6TKR25IABST TEM6 TKR 2.5I analog B status
	4	12	U12	LHKDT6TKR25IAB TEM6 TKR 2.5I analog B raw
0x020	0	4	U12	LHKDT6TKRBIASVST; LHKSTATUSBITS TEM6 TKR Bias V status
	4	12	U12	LHKDT6TKRBIASV TEM6 TKR Bias V raw
0x022	0	4	U12	LHKDT6TKRBIASIST; LHKSTATUSBITS TEM6 TKR Bias I status
	4	12	U12	LHKDT6TKRBIASI

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM6 TKR Bias I raw
0x024	0	4	U12	LHKDT6CAL33VDST; LHKSTATUSBITS
				TEM6 CAL 3.3V digital status
	4	12	U12	LHKDT6CAL33VD
				TEM6 CAL 3.3V digital raw
0x026	0	4	U12	LHKDT6CAL33IDST; LHKSTATUSBITS
				TEM6 CAL 3.3I digital status
	4	12	U12	LHKDT6CAL33ID
				TEM6 CAL 3.3I digital raw
0x028	0	4	U12	LHKDT6CAL33VAST; LHKSTATUSBITS
				TEM6 CAL 3.3V analog status
	4	12	U12	LHKDT6CAL33VA
				TEM6 CAL 3.3V analog raw
0x02A	0	4	U12	LHKDT6CAL33IAST
				TEM6 CAL 3.3I analog status
	4	12	U12	LHKDT6CAL33IA
				TEM6 CAL 3.3I analog raw
0x02C	0	4	U12	LHKDT6CALBIASVST
				TEM6 CAL Bias V status
	4	12	U12	LHKDT6CALBIASV
				TEM6 CAL Bias V raw
0x02E	0	4	U12	LHKDT6CALBIASIST
				TEM6 CAL Bias I status
	4	12	U12	LHKDT6CALBIASI
				TEM6 CAL Bias I raw
0x030	0	4	U12	LHKDT6TEM33VST; LHKSTATUSBITS
				TEM6 TEM 3.3V status
	4	12	U12	LHKDT6TEM33V
				TEM6 TEM 3.3V raw
0x032	0	4	U12	LHKDT6TEM33IST; LHKSTATUSBITS
				TEM6 3.3I digital status
	4	12	U12	LHKDT6TEM33I
				TEM6 3.3I digital raw
0x034	0	4	U12	LHKDT7TKR25VDST; LHKSTATUSBITS
				TEM7 TKR 2.5V digital status
	4	12	U12	LHKDT7TKR25VD
				TEM7 TKR 2.5V digital raw
0x036	0	4	U12	LHKDT7TKR25IDST; LHKSTATUSBITS
				TEM7 TKR 2.5I digital status
	4	12	U12	LHKDT7TKR25ID
				TEM7 TKR 2.5I digital raw
0x038	0	4	U12	LHKDT7TKR15VAAST; LHKSTATUSBITS
				TEM7 TKR 1.5V analog A status
	4	12	U12	LHKDT7TKR15VAA
				TEM7 TKR 1.5V analog A raw
0x03A	0	4	U12	LHKDT7TKR15IAAST
				TEM7 TKR 1.5I analog A status
	4	12	U12	LHKDT7TKR15IAA
				TEM7 TKR 1.5I analog A raw
0x03C	0	4	U12	LHKDT7TKR25VABST
				TEM7 TKR 2.5V analog B status
	4	12	U12	LHKDT7TKR25VAB

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM7 TKR 2.5V analog B raw
0x03E	0	4	U12	LHKDT7TKR25IABST
				TEM7 TKR 2.5I analog B status
	4	12	U12	LHKDT7TKR25IAB
				TEM7 TKR 2.5I analog B raw
0x040	0	4	U12	LHKDT7TKRBIASVST; LHKSTATUSBITS
				TEM7 TKR Bias V status
	4	12	U12	LHKDT7TKRBIASV
				TEM7 TKR Bias V raw
0x042	0	4	U12	LHKDT7TKRBIASIST; LHKSTATUSBITS
				TEM7 TKR Bias I status
	4	12	U12	LHKDT7TKRBIASI
				TEM7 TKR Bias I raw
0x044	0	4	U12	LHKDT7CAL33VDST; LHKSTATUSBITS
				TEM7 CAL 3.3V digital status
	4	12	U12	LHKDT7CAL33VD
				TEM7 CAL 3.3V digital raw
0x046	0	4	U12	LHKDT7CAL33IDST; LHKSTATUSBITS
				TEM7 CAL 3.3I digital status
	4	12	U12	LHKDT7CAL33ID
				TEM7 CAL 3.3I digital raw
0x048	0	4	U12	LHKDT7CAL33VAST; LHKSTATUSBITS
				TEM7 CAL 3.3V analog status
	4	12	U12	LHKDT7CAL33VA
				TEM7 CAL 3.3V analog raw
0x04A	0	4	U12	LHKDT7CAL33IAST
				TEM7 CAL 3.3I analog status
	4	12	U12	LHKDT7CAL33IA
				TEM7 CAL 3.3I analog raw
0x04C	0	4	U12	LHKDT7CALBIASVST
				TEM7 CAL Bias V status
	4	12	U12	LHKDT7CALBIASV
				TEM7 CAL Bias V raw
0x04E	0	4	U12	LHKDT7CALBIASIST
				TEM7 CAL Bias I status
	4	12	U12	LHKDT7CALBIASI
				TEM7 CAL Bias I raw
0x050	0	4	U12	LHKDT7TEM33VST; LHKSTATUSBITS
				TEM7 TEM 3.3V digital status
	4	12	U12	LHKDT7TEM33V
				TEM7 TEM 3.3V digital raw
0x052	0	4	U12	LHKDT7TEM33IST; LHKSTATUSBITS
				TEM7 TEM 3.3I digital status
	4	12	U12	LHKDT7TEM33I
				TEM7 TEM 3.3I digital raw
0x054	0	4	U12	LHKDT8TKR25VDST; LHKSTATUSBITS
				TEM8 TKR 2.5V digital status
	4	12	U12	LHKDT8TKR25VD
				TEM8 TKR 2.5V digital raw
0x056	0	4	U12	LHKDT8TKR25IDST; LHKSTATUSBITS
				TEM8 TKR 2.5I digital status
	4	12	U12	LHKDT8TKR25ID

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM8 TKR 2.5I digital raw
0x058	0	4	U12	LHKDT8TKR15VAAST; LHKSTATUSBITS
				TEM8 TKR 1.5V analog A status
	4	12	U12	LHKDT8TKR15VAA
				TEM8 TKR 1.5V analog A raw
0x05A	0	4	U12	LHKDT8TKR15IAAST
				TEM8 TKR 1.5I analog A status
	4	12	U12	LHKDT8TKR15IAA
				TEM8 TKR 1.5I analog A raw
0x05C	0	4	U12	LHKDT8TKR25VABST
				TEM8 TKR 2.5V analog B status
	4	12	U12	LHKDT8TKR25VAB
				TEM8 TKR 2.5V analog B raw
0x05E	0	4	U12	LHKDT8TKR25IABST
				TEM8 TKR 2.5I analog B status
	4	12	U12	LHKDT8TKR25IAB
				TEM8 TKR 2.5I analog B raw
0x060	0	4	U12	LHKDT8TKRBIASVST; LHKSTATUSBITS
				TEM8 TKR Bias V status
	4	12	U12	LHKDT8TKRBIASV
				TEM8 TKR Bias V raw
0x062	0	4	U12	LHKDT8TKRBIASIST; LHKSTATUSBITS
				TEM8 TKR Bias I status
	4	12	U12	LHKDT8TKRBIASI
				TEM8 TKR Bias I raw
0x064	0	4	U12	LHKDT8CAL33VDST; LHKSTATUSBITS
				TEM8 CAL 3.3V digital status
	4	12	U12	LHKDT8CAL33VD
				TEM8 CAL 3.3V digital raw
0x066	0	4	U12	LHKDT8CAL33IDST; LHKSTATUSBITS
				TEM8 CAL 3.3I digital status
	4	12	U12	LHKDT8CAL33ID
				TEM8 CAL 3.3I digital raw
0x068	0	4	U12	LHKDT8CAL33VAST; LHKSTATUSBITS
				TEM8 CAL 3.3V analog status
	4	12	U12	LHKDT8CAL33VA
				TEM8 CAL 3.3V analog raw
0x06A	0	4	U12	LHKDT8CAL33IAST
				TEM8 CAL 3.3I analog status
	4	12	U12	LHKDT8CAL33IA
				TEM8 CAL 3.3I analog raw
0x06C	0	4	U12	LHKDT8CALBIASVST
				TEM8 CAL Bias V status
	4	12	U12	LHKDT8CALBIASV
				TEM8 CAL Bias V raw
0x06E	0	4	U12	LHKDT8CALBIASIST
				TEM8 CAL Bias I status
	4	12	U12	LHKDT8CALBIASI
				TEM8 CAL Bias I raw
0x070	0	4	U12	LHKDT8TEM33VST; LHKSTATUSBITS
				TEM8 TEM 3.3V digital status
	4	12	U12	LHKDT8TEM33V

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM8 TEM 3.3V digital raw
0x072	0	4	U12	LHKDT8TEM33IST; LHKSTATUSBITS
				TEM8 TEM 3.3I digital status
	4	12	U12	LHKDT8TEM33I
				TEM8 TEM 3.3I digital raw

10.3.33 `DiagTemEnvPwr3` (627/0x273)

Description:

"Diagnostic TEM Power Packet 3" Telemetry Packet

Contains power specific ADC values for TEMs 9, 10, and 11.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDT9TKR25VDST; LHKSTATUSBITS
				TEM9 TKR 2.5V digital status
	4	12	U12	LHKDT9TKR25VD
				TEM9 TKR 2.5V digital raw
0x016	0	4	U12	LHKDT9TKR25IDST; LHKSTATUSBITS
				TEM9 TKR 2.5I digital status
	4	12	U12	LHKDT9TKR25ID
				TEM9 TKR 2.5I digital raw
0x018	0	4	U12	LHKDT9TKR15VAAST; LHKSTATUSBITS
				TEM9 TKR 1.5V analog A status
	4	12	U12	LHKDT9TKR15VAA
				TEM9 TKR 1.5V analog A raw
0x01A	0	4	U12	LHKDT9TKR15IAAST
				TEM9 TKR 1.5I analog A status
	4	12	U12	LHKDT9TKR15IAA
				TEM9 TKR 1.5I analog A raw
0x01C	0	4	U12	LHKDT9TKR25VABST
				TEM9 TKR 2.5V analog B status
	4	12	U12	LHKDT9TKR25VAB
				TEM9 TKR 2.5V analog B raw
0x01E	0	4	U12	LHKDT9TKR25IABST
				TEM9 TKR 2.5I analog B status
	4	12	U12	LHKDT9TKR25IAB
				TEM9 TKR 2.5I analog B raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x020	0	4	U12	LHKDT9TKRBIASVST; LHKSTATUSBITS TEM9 TKR Bias V status
	4	12	U12	LHKDT9TKRBIASV TEM9 TKR Bias V raw
0x022	0	4	U12	LHKDT9TKRBIASIST; LHKSTATUSBITS TEM9 TKR Bias I status
	4	12	U12	LHKDT9TKRBIASI TEM9 TKR Bias I raw
0x024	0	4	U12	LHKDT9CAL33VDST; LHKSTATUSBITS TEM9 CAL 3.3V digital status
	4	12	U12	LHKDT9CAL33VD TEM9 CAL 3.3V digital raw
0x026	0	4	U12	LHKDT9CAL33IDST; LHKSTATUSBITS TEM9 CAL 3.3I digital status
	4	12	U12	LHKDT9CAL33ID TEM9 CAL 3.3I digital raw
0x028	0	4	U12	LHKDT9CAL33VAST; LHKSTATUSBITS TEM9 CAL 3.3V analog status
	4	12	U12	LHKDT9CAL33VA TEM9 CAL 3.3V analog raw
0x02A	0	4	U12	LHKDT9CAL33IAST TEM9 CAL 3.3I analog status
	4	12	U12	LHKDT9CAL33IA TEM9 CAL 3.3I analog raw
0x02C	0	4	U12	LHKDT9CALBIASVST TEM9 CAL Bias V status
	4	12	U12	LHKDT9CALBIASV TEM9 CAL Bias V raw
0x02E	0	4	U12	LHKDT9CALBIASIST TEM9 CAL Bias I status
	4	12	U12	LHKDT9CALBIASI TEM9 CAL Bias I raw
0x030	0	4	U12	LHKDT9TEM33VST; LHKSTATUSBITS TEM9 TEM 3.3V status
	4	12	U12	LHKDT9TEM33V TEM9 TEM 3.3V raw
0x032	0	4	U12	LHKDT9TEM33IST; LHKSTATUSBITS TEM9 3.3I digital status
	4	12	U12	LHKDT9TEM33I TEM9 3.3I digital raw
0x034	0	4	U12	LHKDTATKR25VDST; LHKSTATUSBITS TEMA TKR 2.5V digital status
	4	12	U12	LHKDTATKR25VD TEMA TKR 2.5V digital raw
0x036	0	4	U12	LHKDTATKR25IDST; LHKSTATUSBITS TEMA TKR 2.5I digital status
	4	12	U12	LHKDTATKR25ID TEMA TKR 2.5I digital raw
0x038	0	4	U12	LHKDTATKR15VAAST; LHKSTATUSBITS TEMA TKR 1.5V analog A status
	4	12	U12	LHKDTATKR15VAA TEMA TKR 1.5V analog A raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x03A	0	4	U12	LHKDTATKR15IAAST
				TEMA TKR 1.5I analog A status
	4	12	U12	LHKDTATKR15IAA
				TEMA TKR 1.5I analog A raw
0x03C	0	4	U12	LHKDTATKR25VABST
				TEMA TKR 2.5V analog B status
	4	12	U12	LHKDTATKR25VAB
				TEMA TKR 2.5V analog B raw
0x03E	0	4	U12	LHKDTATKR25IABST
				TEMA TKR 2.5I analog B status
	4	12	U12	LHKDTATKR25IAB
				TEMA TKR 2.5I analog B raw
0x040	0	4	U12	LHKDTATKRBIASVST; LHKSTATUSBITS
				TEMA TKR Bias V status
	4	12	U12	LHKDTATKRBIASV
				TEMA TKR Bias V raw
0x042	0	4	U12	LHKDTATKRBIASIST; LHKSTATUSBITS
				TEMA TKR Bias I status
	4	12	U12	LHKDTATKRBIASI
				TEMA TKR Bias I raw
0x044	0	4	U12	LHKDTACAL33VDST; LHKSTATUSBITS
				TEMA CAL 3.3V digital status
	4	12	U12	LHKDTACAL33VD
				TEMA CAL 3.3V digital raw
0x046	0	4	U12	LHKDTACAL33IDST; LHKSTATUSBITS
				TEMA CAL 3.3I digital status
	4	12	U12	LHKDTACAL33ID
				TEMA CAL 3.3I digital raw
0x048	0	4	U12	LHKDTACAL33VAST; LHKSTATUSBITS
				TEMA CAL 3.3V analog status
	4	12	U12	LHKDTACAL33VA
				TEMA CAL 3.3V analog raw
0x04A	0	4	U12	LHKDTACAL33IAST
				TEMA CAL 3.3I analog status
	4	12	U12	LHKDTACAL33IA
				TEMA CAL 3.3I analog raw
0x04C	0	4	U12	LHKDTACALBIASVST
				TEMA CAL Bias V status
	4	12	U12	LHKDTACALBIASV
				TEMA CAL Bias V raw
0x04E	0	4	U12	LHKDTACALBIASIST
				TEMA CAL Bias I status
	4	12	U12	LHKDTACALBIASI
				TEMA CAL Bias I raw
0x050	0	4	U12	LHKDTATEM33VST; LHKSTATUSBITS
				TEMA TEM 3.3V digital status
	4	12	U12	LHKDTATEM33V
				TEMA TEM 3.3V digital raw
0x052	0	4	U12	LHKDTATEM33IST; LHKSTATUSBITS
				TEMA TEM 3.3I digital status
	4	12	U12	LHKDTATEM33I
				TEMA TEM 3.3I digital raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x054	0	4	U12	LHKDTBTKR25VDST; LHKSTATUSBITS TEMB TKR 2.5V digital status
	4	12	U12	LHKDTBTKR25VD TEMB TKR 2.5V digital raw
0x056	0	4	U12	LHKDTBTKR25IDST; LHKSTATUSBITS TEMB TKR 2.5I digital status
	4	12	U12	LHKDTBTKR25ID TEMB TKR 2.5I digital raw
0x058	0	4	U12	LHKDTBTKR15VAAST; LHKSTATUSBITS TEMB TKR 1.5V analog A status
	4	12	U12	LHKDTBTKR15VAA TEMB TKR 1.5V analog A raw
0x05A	0	4	U12	LHKDTBTKR15IAAST TEMB TKR 1.5I analog A status
	4	12	U12	LHKDTBTKR15IAA TEMB TKR 1.5I analog A raw
0x05C	0	4	U12	LHKDTBTKR25VABST TEMB TKR 2.5V analog B status
	4	12	U12	LHKDTBTKR25VAB TEMB TKR 2.5V analog B raw
0x05E	0	4	U12	LHKDTBTKR25IABST TEMB TKR 2.5I analog B status
	4	12	U12	LHKDTBTKR25IAB TEMB TKR 2.5I analog B raw
0x060	0	4	U12	LHKDTBTKRBIASVST; LHKSTATUSBITS TEMB TKR Bias V status
	4	12	U12	LHKDTBTKRBIASV TEMB TKR Bias V raw
0x062	0	4	U12	LHKDTBTKRBIASIST; LHKSTATUSBITS TEMB TKR Bias I status
	4	12	U12	LHKDTBTKRBIASI TEMB TKR Bias I raw
0x064	0	4	U12	LHKDTBCAL33VDST; LHKSTATUSBITS TEMB CAL 3.3V digital status
	4	12	U12	LHKDTBCAL33VD TEMB CAL 3.3V digital raw
0x066	0	4	U12	LHKDTBCAL33IDST; LHKSTATUSBITS TEMB CAL 3.3I digital status
	4	12	U12	LHKDTBCAL33ID TEMB CAL 3.3I digital raw
0x068	0	4	U12	LHKDTBCAL33VAST; LHKSTATUSBITS TEMB CAL 3.3V analog status
	4	12	U12	LHKDTBCAL33VA TEMB CAL 3.3V analog raw
0x06A	0	4	U12	LHKDTBCAL33IAST TEMB CAL 3.3I analog status
	4	12	U12	LHKDTBCAL33IA TEMB CAL 3.3I analog raw
0x06C	0	4	U12	LHKDTBCALBIASVST TEMB CAL Bias V status
	4	12	U12	LHKDTBCALBIASV TEMB CAL Bias V raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x06E	0	4	U12	LHKDTBCALBIASIST
				TEMB CAL Bias I status
	4	12	U12	LHKDTBCALBIASI
				TEMB CAL Bias I raw
0x070	0	4	U12	LHKDTBTEM33VST; LHKSTATUSBITS
				TEMB TEM 3.3V digital status
	4	12	U12	LHKDTBTEM33V
				TEMB TEM 3.3V digital raw
0x072	0	4	U12	LHKDTBTEM33IST; LHKSTATUSBITS
				TEMB TEM 3.3I digital status
	4	12	U12	LHKDTBTEM33I
				TEMB TEM 3.3I digital raw

10.3.34 `DiagTemEnvPwr4` (628/0x274)

Description:

"Diagnostic TEM Power Packet 4" Telemetry Packet

Contains power specific ADC values for TEMs 12, 13, and 14.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDTCTKR25VDST; LHKSTATUSBITS
				TEMC TKR 2.5V digital status
	4	12	U12	LHKDTCTKR25VD
				TEMC TKR 2.5V digital raw
0x016	0	4	U12	LHKDTCTKR25IDST; LHKSTATUSBITS
				TEMC TKR 2.5I digital status
	4	12	U12	LHKDTCTKR25ID
				TEMC TKR 2.5I digital raw
0x018	0	4	U12	LHKDTCTKR15VAAST; LHKSTATUSBITS
				TEMC TKR 1.5V analog A status
	4	12	U12	LHKDTCTKR15VAA
				TEMC TKR 1.5V analog A raw
0x01A	0	4	U12	LHKDTCTKR15IAAST
				TEMC TKR 1.5I analog A status
	4	12	U12	LHKDTCTKR15IAA
				TEMC TKR 1.5I analog A raw
0x01C	0	4	U12	LHKDTCTKR25VABST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMC TKR 2.5V analog B status
	4	12	U12	LHKDTCTKR25VAB
				TEMC TKR 2.5V analog B raw
0x01E	0	4	U12	LHKDTCTKR25IABST
				TEMC TKR 2.5I analog B status
	4	12	U12	LHKDTCTKR25IAB
				TEMC TKR 2.5I analog B raw
0x020	0	4	U12	LHKDTCTKRBIASVST; LHKSTATUSBITS
				TEMC TKR Bias V status
	4	12	U12	LHKDTCTKRBIASV
				TEMC TKR Bias V raw
0x022	0	4	U12	LHKDTCTKRBIASIST; LHKSTATUSBITS
				TEMC TKR Bias I status
	4	12	U12	LHKDTCTKRBIASI
				TEMC TKR Bias I raw
0x024	0	4	U12	LHKDTCCAL33VDST; LHKSTATUSBITS
				TEMC CAL 3.3V digital status
	4	12	U12	LHKDTCCAL33VD
				TEMC CAL 3.3V digital raw
0x026	0	4	U12	LHKDTCCAL33IDST; LHKSTATUSBITS
				TEMC CAL 3.3I digital status
	4	12	U12	LHKDTCCAL33ID
				TEMC CAL 3.3I digital raw
0x028	0	4	U12	LHKDTCCAL33VAST; LHKSTATUSBITS
				TEMC CAL 3.3V analog status
	4	12	U12	LHKDTCCAL33VA
				TEMC CAL 3.3V analog raw
0x02A	0	4	U12	LHKDTCCAL33IAST
				TEMC CAL 3.3I analog status
	4	12	U12	LHKDTCCAL33IA
				TEMC CAL 3.3I analog raw
0x02C	0	4	U12	LHKDTCCALBIASVST
				TEMC CAL Bias V status
	4	12	U12	LHKDTCCALBIASV
				TEMC CAL Bias V raw
0x02E	0	4	U12	LHKDTCCALBIASIST
				TEMC CAL Bias I status
	4	12	U12	LHKDTCCALBIASI
				TEMC CAL Bias I raw
0x030	0	4	U12	LHKDTCTEM33VST; LHKSTATUSBITS
				TEMC TEM 3.3V status
	4	12	U12	LHKDTCTEM33V
				TEMC TEM 3.3V raw
0x032	0	4	U12	LHKDTCTEM33IST; LHKSTATUSBITS
				TEMC 3.3I digital status
	4	12	U12	LHKDTCTEM33I
				TEMC 3.3I digital raw
0x034	0	4	U12	LHKDTDTKR25VDST; LHKSTATUSBITS
				TEMD TKR 2.5V digital status
	4	12	U12	LHKDTDTKR25VD
				TEMD TKR 2.5V digital raw
0x036	0	4	U12	LHKDTDTKR25IDST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMD TKR 2.5I digital status
	4	12	U12	LHKDTDTKR25ID
				TEMD TKR 2.5I digital raw
0x038	0	4	U12	LHKDTDTKR15VAAST; LHKSTATUSBITS
				TEMD TKR 1.5V analog A status
	4	12	U12	LHKDTDTKR15VAA
				TEMD TKR 1.5V analog A raw
0x03A	0	4	U12	LHKDTDTKR15IAAST
				TEMD TKR 1.5I analog A status
	4	12	U12	LHKDTDTKR15IAA
				TEMD TKR 1.5I analog A raw
0x03C	0	4	U12	LHKDTDTKR25VABST
				TEMD TKR 2.5V analog B status
	4	12	U12	LHKDTDTKR25VAB
				TEMD TKR 2.5V analog B raw
0x03E	0	4	U12	LHKDTDTKR25IABST
				TEMD TKR 2.5I analog B status
	4	12	U12	LHKDTDTKR25IAB
				TEMD TKR 2.5I analog B raw
0x040	0	4	U12	LHKDTDTKRBIASVST; LHKSTATUSBITS
				TEMD TKR Bias V status
	4	12	U12	LHKDTDTKRBIASV
				TEMD TKR Bias V raw
0x042	0	4	U12	LHKDTDTKRBIASIST; LHKSTATUSBITS
				TEMD TKR Bias I status
	4	12	U12	LHKDTDTKRBIASI
				TEMD TKR Bias I raw
0x044	0	4	U12	LHKDTDCAL33VDST; LHKSTATUSBITS
				TEMD CAL 3.3V digital status
	4	12	U12	LHKDTDCAL33VD
				TEMD CAL 3.3V digital raw
0x046	0	4	U12	LHKDTDCAL33IDST; LHKSTATUSBITS
				TEMD CAL 3.3I digital status
	4	12	U12	LHKDTDCAL33ID
				TEMD CAL 3.3I digital raw
0x048	0	4	U12	LHKDTDCAL33VAST; LHKSTATUSBITS
				TEMD CAL 3.3V analog status
	4	12	U12	LHKDTDCAL33VA
				TEMD CAL 3.3V analog raw
0x04A	0	4	U12	LHKDTDCAL33IAST
				TEMD CAL 3.3I analog status
	4	12	U12	LHKDTDCAL33IA
				TEMD CAL 3.3I analog raw
0x04C	0	4	U12	LHKDTDCALBIASVST
				TEMD CAL Bias V status
	4	12	U12	LHKDTDCALBIASV
				TEMD CAL Bias V raw
0x04E	0	4	U12	LHKDTDCALBIASIST
				TEMD CAL Bias I status
	4	12	U12	LHKDTDCALBIASI
				TEMD CAL Bias I raw
0x050	0	4	U12	LHKDTDTEM33VST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMD TEM 3.3V digital status
	4	12	U12	LHKDTDTEM33V
				TEMD TEM 3.3V digital raw
0x052	0	4	U12	LHKDTDTEM33IST; LHKSTATUSBITS
				TEMD TEM 3.3I digital status
	4	12	U12	LHKDTDTEM33I
				TEMD TEM 3.3I digital raw
0x054	0	4	U12	LHKDTETKR25VDST; LHKSTATUSBITS
				TEME TKR 2.5V digital status
	4	12	U12	LHKDTETKR25VD
				TEME TKR 2.5V digital raw
0x056	0	4	U12	LHKDTETKR25IDST; LHKSTATUSBITS
				TEME TKR 2.5I digital status
	4	12	U12	LHKDTETKR25ID
				TEME TKR 2.5I digital raw
0x058	0	4	U12	LHKDTETKR15VAAST; LHKSTATUSBITS
				TEME TKR 1.5V analog A status
	4	12	U12	LHKDTETKR15VAA
				TEME TKR 1.5V analog A raw
0x05A	0	4	U12	LHKDTETKR15IAAST
				TEME TKR 1.5I analog A status
	4	12	U12	LHKDTETKR15IAA
				TEME TKR 1.5I analog A raw
0x05C	0	4	U12	LHKDTETKR25VABST
				TEME TKR 2.5V analog B status
	4	12	U12	LHKDTETKR25VAB
				TEME TKR 2.5V analog B raw
0x05E	0	4	U12	LHKDTETKR25IABST
				TEME TKR 2.5I analog B status
	4	12	U12	LHKDTETKR25IAB
				TEME TKR 2.5I analog B raw
0x060	0	4	U12	LHKDTETKRBIASVST; LHKSTATUSBITS
				TEME TKR Bias V status
	4	12	U12	LHKDTETKRBIASV
				TEME TKR Bias V raw
0x062	0	4	U12	LHKDTETKRBIASIST; LHKSTATUSBITS
				TEME TKR Bias I status
	4	12	U12	LHKDTETKRBIASI
				TEME TKR Bias I raw
0x064	0	4	U12	LHKDTECAL33VDST; LHKSTATUSBITS
				TEME CAL 3.3V digital status
	4	12	U12	LHKDTECAL33VD
				TEME CAL 3.3V digital raw
0x066	0	4	U12	LHKDTECAL33IDST; LHKSTATUSBITS
				TEME CAL 3.3I digital status
	4	12	U12	LHKDTECAL33ID
				TEME CAL 3.3I digital raw
0x068	0	4	U12	LHKDTECAL33VAST; LHKSTATUSBITS
				TEME CAL 3.3V analog status
	4	12	U12	LHKDTECAL33VA
				TEME CAL 3.3V analog raw
0x06A	0	4	U12	LHKDTECAL33IAST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEME CAL 3.3I analog status
	4	12	U12	LHKDTECAL33IA
				TEME CAL 3.3I analog raw
0x06C	0	4	U12	LHKDTECALBIASVST
				TEME CAL Bias V status
	4	12	U12	LHKDTECALBIASV
				TEME CAL Bias V raw
0x06E	0	4	U12	LHKDTECALBIASIST
				TEME CAL Bias I status
	4	12	U12	LHKDTECALBIASI
				TEME CAL Bias I raw
0x070	0	4	U12	LHKDTETEM33VST; LHKSTATUSBITS
				TEME TEM 3.3V digital status
	4	12	U12	LHKDTETEM33V
				TEME TEM 3.3V digital raw
0x072	0	4	U12	LHKDTETEM33IST; LHKSTATUSBITS
				TEME TEM 3.3I digital status
	4	12	U12	LHKDTETEM33I
				TEME TEM 3.3I digital raw

10.3.35 `DiagTemEnvPwr5` (629/0x275)

Description:

"Diagnostic TEM Power Packet 5" Telemetry Packet

Contains powr specific ADC values for TEM 15.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDTFTKR25VDST; LHKSTATUSBITS
				TEMF TKR 2.5V digital status
	4	12	U12	LHKDTFTKR25VD
				TEMF TKR 2.5V digital raw
0x016	0	4	U12	LHKDTFTKR25IDST; LHKSTATUSBITS
				TEMF TKR 2.5I digital status
	4	12	U12	LHKDTFTKR25ID
				TEMF TKR 2.5I digital raw
0x018	0	4	U12	LHKDTFTKR15VAAST; LHKSTATUSBITS
				TEMF TKR 1.5V analog A status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDTFTKR15VAA TEMF TKR 1.5V analog A raw
0x01A	0	4	U12	LHKDTFTKR15IAAST TEMF TKR 1.5I analog A status
	4	12	U12	LHKDTFTKR15IAA TEMF TKR 1.5I analog A raw
0x01C	0	4	U12	LHKDTFTKR25VABST TEMF TKR 2.5V analog B status
	4	12	U12	LHKDTFTKR25VAB TEMF TKR 2.5V analog B raw
0x01E	0	4	U12	LHKDTFTKR25IABST TEMF TKR 2.5I analog B status
	4	12	U12	LHKDTFTKR25IAB TEMF TKR 2.5I analog B raw
0x020	0	4	U12	LHKDTFTKRBIASVST; LHKSTATUSBITS TEMF TKR Bias V status
	4	12	U12	LHKDTFTKRBIASV TEMF TKR Bias V raw
0x022	0	4	U12	LHKDTFTKRBIASIST; LHKSTATUSBITS TEMF TKR Bias I status
	4	12	U12	LHKDTFTKRBIASI TEMF TKR Bias I raw
0x024	0	4	U12	LHKDTFCAL33VDST; LHKSTATUSBITS TEMF CAL 3.3V digital status
	4	12	U12	LHKDTFCAL33VD TEMF CAL 3.3V digital raw
0x026	0	4	U12	LHKDTFCAL33IDST; LHKSTATUSBITS TEMF CAL 3.3I digital status
	4	12	U12	LHKDTFCAL33ID TEMF CAL 3.3I digital raw
0x028	0	4	U12	LHKDTFCAL33VAST; LHKSTATUSBITS TEMF CAL 3.3V analog status
	4	12	U12	LHKDTFCAL33VA TEMF CAL 3.3V analog raw
0x02A	0	4	U12	LHKDTFCAL33IAST TEMF CAL 3.3I analog status
	4	12	U12	LHKDTFCAL33IA TEMF CAL 3.3I analog raw
0x02C	0	4	U12	LHKDTFCALBIASVST TEMF CAL Bias V status
	4	12	U12	LHKDTFCALBIASV TEMF CAL Bias V raw
0x02E	0	4	U12	LHKDTFCALBIASIST TEMF CAL Bias I status
	4	12	U12	LHKDTFCALBIASI TEMF CAL Bias I raw
0x030	0	4	U12	LHKDTFTEM33VST; LHKSTATUSBITS TEMF TEM 3.3V status
	4	12	U12	LHKDTFTEM33V TEMF TEM 3.3V raw
0x032	0	4	U12	LHKDTFTEM33IST; LHKSTATUSBITS TEMF 3.3I digital status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDTFTEM33I TEMF 3.3I digital raw
0x034	0	16	U12	LHKSPARE16 ?
0x036	0	16	U12	LHKSPARE16 ?
0x038	0	16	U12	LHKSPARE16 ?
0x03A	0	16	U12	LHKSPARE16 ?
0x03C	0	16	U12	LHKSPARE16 ?
0x03E	0	16	U12	LHKSPARE16 ?
0x040	0	16	U12	LHKSPARE16 ?
0x042	0	16	U12	LHKSPARE16 ?
0x044	0	16	U12	LHKSPARE16 ?
0x046	0	16	U12	LHKSPARE16 ?
0x048	0	16	U12	LHKSPARE16 ?
0x04A	0	16	U12	LHKSPARE16 ?
0x04C	0	16	U12	LHKSPARE16 ?
0x04E	0	16	U12	LHKSPARE16 ?
0x050	0	16	U12	LHKSPARE16 ?
0x052	0	16	U12	LHKSPARE16 ?
0x054	0	16	U12	LHKSPARE16 ?
0x056	0	16	U12	LHKSPARE16 ?
0x058	0	16	U12	LHKSPARE16 ?
0x05A	0	16	U12	LHKSPARE16 ?
0x05C	0	16	U12	LHKSPARE16 ?
0x05E	0	16	U12	LHKSPARE16 ?
0x060	0	16	U12	LHKSPARE16 ?
0x062	0	16	U12	LHKSPARE16 ?
0x064	0	16	U12	LHKSPARE16 ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x066	0	16	U12	LHKSPARE16 ?
0x068	0	16	U12	LHKSPARE16 ?
0x06A	0	16	U12	LHKSPARE16 ?
0x06C	0	16	U12	LHKSPARE16 ?
0x06E	0	16	U12	LHKSPARE16 ?
0x070	0	16	U12	LHKSPARE16 ?
0x072	0	16	U12	LHKSPARE16 ?

10.3.36 `DiagTemEnvTemp0` (630/0x276)

Description:

"Diagnostic TEM Temperature Packet 0" Telemetry Packet

Contains temperature specific ADC values for TEMs 0 and 1.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKDT0CALAF0T0ST; LHKSTATUSBITS TEM0 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT0CALAF0T0 TEM0 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKDT0CALAF0T1ST; LHKSTATUSBITS TEM0 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT0CALAF0T1 TEM0 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKDT0CALAF1T0ST; LHKSTATUSBITS TEM0 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT0CALAF1T0 TEM0 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKDT0CALAF1T1ST TEM0 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT0CALAF1T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM0 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKDT0CALAF2T0ST
				TEM0 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT0CALAF2T0
				TEM0 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKDT0CALAF2T1ST
				TEM0 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT0CALAF2T1
				TEM0 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKDT0CALAF3T0ST; LHKSTATUSBITS
				TEM0 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT0CALAF3T0
				TEM0 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKDT0CALAF3T1ST; LHKSTATUSBITS
				TEM0 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT0CALAF3T1
				TEM0 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKDT0TKRC0T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT0TKRC0T0
				TEM0 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKDT0TKRC0T1ST; LHKSTATUSBITS
				TEM0 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT0TKRC0T1
				TEM0 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKDT0TKRC1T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT0TKRC1T0
				TEM0 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKDT0TKRC1T1ST
				TEM0 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT0TKRC1T1
				TEM0 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKDT0TKRC2T0ST
				TEM0 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT0TKRC2T0
				TEM0 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKDT0TKRC2T1ST
				TEM0 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT0TKRC2T1
				TEM0 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKDT0TKRC3T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT0TKRC3T0
				TEM0 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKDT0TKRC3T1ST; LHKSTATUSBITS
				TEM0 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT0TKRC3T1
				TEM0 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKDT0TKRC4T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT0TKRC4T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM0 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKDT0TKRC4T1ST; LHKSTATUSBITS
				TEM0 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT0TKRC4T1
				TEM0 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKDT0TKRC5T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT0TKRC5T0
				TEM0 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKDT0TKRC5T1ST
				TEM0 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT0TKRC5T1
				TEM0 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKDT0TKRC6T0ST
				TEM0 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT0TKRC6T0
				TEM0 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKDT0TKRC6T1ST
				TEM0 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT0TKRC6T1
				TEM0 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKDT0TKRC7T0ST; LHKSTATUSBITS
				TEM0 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT0TKRC7T0
				TEM0 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKDT0TKRC7T1ST; LHKSTATUSBITS
				TEM0 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT0TKRC7T1
				TEM0 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKDT1CALAF0T0ST; LHKSTATUSBITS
				TEM1 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT1CALAF0T0
				TEM1 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKDT1CALAF0T1ST; LHKSTATUSBITS
				TEM1 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT1CALAF0T1
				TEM1 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKDT1CALAF1T0ST; LHKSTATUSBITS
				TEM1 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT1CALAF1T0
				TEM1 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKDT1CALAF1T1ST
				TEM1 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT1CALAF1T1
				TEM1 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKDT1CALAF2T0ST
				TEM1 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT1CALAF2T0
				TEM1 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKDT1CALAF2T1ST
				TEM1 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT1CALAF2T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM1 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKDT1CALAF3T0ST; LHKSTATUSBITS
				TEM1 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT1CALAF3T0
				TEM1 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKDT1CALAF3T1ST; LHKSTATUSBITS
				TEM1 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT1CALAF3T1
				TEM1 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKDT1TKRC0T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT1TKRC0T0
				TEM1 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKDT1TKRC0T1ST; LHKSTATUSBITS
				TEM1 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT1TKRC0T1
				TEM1 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKDT1TKRC1T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT1TKRC1T0
				TEM1 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKDT1TKRC1T1ST
				TEM1 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT1TKRC1T1
				TEM1 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKDT1TKRC2T0ST
				TEM1 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT1TKRC2T0
				TEM1 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKDT1TKRC2T1ST
				TEM1 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT1TKRC2T1
				TEM1 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKDT1TKRC3T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT1TKRC3T0
				TEM1 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKDT1TKRC3T1ST; LHKSTATUSBITS
				TEM1 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT1TKRC3T1
				TEM1 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKDT1TKRC4T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT1TKRC4T0
				TEM1 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKDT1TKRC4T1ST; LHKSTATUSBITS
				TEM1 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT1TKRC4T1
				TEM1 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKDT1TKRC5T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT1TKRC5T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM1 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKDT1TKRC5T1ST
				TEM1 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT1TKRC5T1
				TEM1 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKDT1TKRC6T0ST
				TEM1 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT1TKRC6T0
				TEM1 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKDT1TKRC6T1ST
				TEM1 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT1TKRC6T1
				TEM1 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKDT1TKRC7T0ST; LHKSTATUSBITS
				TEM1 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT1TKRC7T0
				TEM1 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKDT1TKRC7T1ST; LHKSTATUSBITS
				TEM1 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT1TKRC7T1
				TEM1 TKR Cable 7 Temp 1 raw

10.3.37 `DiagTemEnvTemp1` (631/0x277)

Description:

"Diagnostic TEM Temperature Packet 1" Telemetry Packet

Contains temperature specific ADC values for TEMs 2 and 3.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDT2CALAF0T0ST; LHKSTATUSBITS
				TEM2 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT2CALAF0T0
				TEM2 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKDT2CALAF0T1ST; LHKSTATUSBITS
				TEM2 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT2CALAF0T1
				TEM2 CAL AFEE0 Temp 1 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x018	0	4	U12	LHKDT2CALAF1T0ST; LHKSTATUSBITS
				TEM2 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT2CALAF1T0
				TEM2 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKDT2CALAF1T1ST
				TEM2 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT2CALAF1T1
				TEM2 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKDT2CALAF2T0ST
				TEM2 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT2CALAF2T0
				TEM2 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKDT2CALAF2T1ST
				TEM2 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT2CALAF2T1
				TEM2 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKDT2CALAF3T0ST; LHKSTATUSBITS
				TEM2 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT2CALAF3T0
				TEM2 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKDT2CALAF3T1ST; LHKSTATUSBITS
				TEM2 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT2CALAF3T1
				TEM2 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKDT2TKRC0T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT2TKRC0T0
				TEM2 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKDT2TKRC0T1ST; LHKSTATUSBITS
				TEM2 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT2TKRC0T1
				TEM2 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKDT2TKRC1T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT2TKRC1T0
				TEM2 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKDT2TKRC1T1ST
				TEM2 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT2TKRC1T1
				TEM2 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKDT2TKRC2T0ST
				TEM2 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT2TKRC2T0
				TEM2 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKDT2TKRC2T1ST
				TEM2 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT2TKRC2T1
				TEM2 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKDT2TKRC3T0ST; LHKSTATUSBITS
				TEM2 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT2TKRC3T0
				TEM2 TKR Cable 3 Temp 0 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x032	0	4	U12	LHKDT2TKRC3T1ST; LHKSTATUSBITS TEM2 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT2TKRC3T1 TEM2 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKDT2TKRC4T0ST; LHKSTATUSBITS TEM2 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT2TKRC4T0 TEM2 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKDT2TKRC4T1ST; LHKSTATUSBITS TEM2 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT2TKRC4T1 TEM2 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKDT2TKRC5T0ST; LHKSTATUSBITS TEM2 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT2TKRC5T0 TEM2 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKDT2TKRC5T1ST TEM2 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT2TKRC5T1 TEM2 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKDT2TKRC6T0ST TEM2 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT2TKRC6T0 TEM2 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKDT2TKRC6T1ST TEM2 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT2TKRC6T1 TEM2 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKDT2TKRC7T0ST; LHKSTATUSBITS TEM2 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT2TKRC7T0 TEM2 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKDT2TKRC7T1ST; LHKSTATUSBITS TEM2 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT2TKRC7T1 TEM2 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKDT3CALAF0T0ST; LHKSTATUSBITS TEM3 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT3CALAF0T0 TEM3 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKDT3CALAF0T1ST; LHKSTATUSBITS TEM3 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT3CALAF0T1 TEM3 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKDT3CALAF1T0ST; LHKSTATUSBITS TEM3 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT3CALAF1T0 TEM3 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKDT3CALAF1T1ST TEM3 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT3CALAF1T1 TEM3 CAL AFEE1 Temp 1 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x04C	0	4	U12	LHKDT3CALAF2T0ST
				TEM3 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT3CALAF2T0
				TEM3 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKDT3CALAF2T1ST
				TEM3 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT3CALAF2T1
				TEM3 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKDT3CALAF3T0ST; LHKSTATUSBITS
				TEM3 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT3CALAF3T0
				TEM3 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKDT3CALAF3T1ST; LHKSTATUSBITS
				TEM3 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT3CALAF3T1
				TEM3 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKDT3TKRC0T0ST; LHKSTATUSBITS
				TEM3 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT3TKRC0T0
				TEM3 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKDT3TKRC0T1ST; LHKSTATUSBITS
				TEM3 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT3TKRC0T1
				TEM3 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKDT3TKRC1T0ST; LHKSTATUSBITS
				TEM3 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT3TKRC1T0
				TEM3 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKDT3TKRC1T1ST
				TEM3 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT3TKRC1T1
				TEM3 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKDT3TKRC2T0ST
				TEM3 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT3TKRC2T0
				TEM3 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKDT3TKRC2T1ST
				TEM3 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT3TKRC2T1
				TEM3 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKDT3TKRC3T0ST; LHKSTATUSBITS
				TEM3 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT3TKRC3T0
				TEM3 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKDT3TKRC3T1ST; LHKSTATUSBITS
				TEM3 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT3TKRC3T1
				TEM3 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKDT3TKRC4T0ST; LHKSTATUSBITS
				TEM3 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT3TKRC4T0
				TEM3 TKR Cable 4 Temp 0 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x066	0	4	U12	LHKDT3TKRC4T1ST; LHKSTATUSBITS TEM3 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT3TKRC4T1 TEM3 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKDT3TKRC5T0ST; LHKSTATUSBITS TEM3 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT3TKRC5T0 TEM3 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKDT3TKRC5T1ST TEM3 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT3TKRC5T1 TEM3 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKDT3TKRC6T0ST TEM3 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT3TKRC6T0 TEM3 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKDT3TKRC6T1ST TEM3 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT3TKRC6T1 TEM3 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKDT3TKRC7T0ST; LHKSTATUSBITS TEM3 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT3TKRC7T0 TEM3 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKDT3TKRC7T1ST; LHKSTATUSBITS TEM3 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT3TKRC7T1 TEM3 TKR Cable 7 Temp 1 raw

10.3.38 `DiagTemEnvTemp2` (632/0x278)

Description:

"Diagnostic TEM Temperature Packet 2" Telemetry Packet

Contains temperature specific ADC values for TEMs 4 and 5.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKDT4CALAF0T0ST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM4 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT4CALAF0T0
				TEM4 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKDT4CALAF0T1ST; LHKSTATUSBITS
				TEM4 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT4CALAF0T1
				TEM4 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKDT4CALAF1T0ST; LHKSTATUSBITS
				TEM4 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT4CALAF1T0
				TEM4 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKDT4CALAF1T1ST
				TEM4 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT4CALAF1T1
				TEM4 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKDT4CALAF2T0ST
				TEM4 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT4CALAF2T0
				TEM4 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKDT4CALAF2T1ST
				TEM4 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT4CALAF2T1
				TEM4 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKDT4CALAF3T0ST; LHKSTATUSBITS
				TEM4 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT4CALAF3T0
				TEM4 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKDT4CALAF3T1ST; LHKSTATUSBITS
				TEM4 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT4CALAF3T1
				TEM4 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKDT4TKRC0T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT4TKRC0T0
				TEM4 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKDT4TKRC0T1ST; LHKSTATUSBITS
				TEM4 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT4TKRC0T1
				TEM4 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKDT4TKRC1T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT4TKRC1T0
				TEM4 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKDT4TKRC1T1ST
				TEM4 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT4TKRC1T1
				TEM4 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKDT4TKRC2T0ST
				TEM4 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT4TKRC2T0
				TEM4 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKDT4TKRC2T1ST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM4 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT4TKRC2T1
				TEM4 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKDT4TKRC3T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT4TKRC3T0
				TEM4 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKDT4TKRC3T1ST; LHKSTATUSBITS
				TEM4 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT4TKRC3T1
				TEM4 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKDT4TKRC4T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT4TKRC4T0
				TEM4 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKDT4TKRC4T1ST; LHKSTATUSBITS
				TEM4 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT4TKRC4T1
				TEM4 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKDT4TKRC5T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT4TKRC5T0
				TEM4 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKDT4TKRC5T1ST
				TEM4 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT4TKRC5T1
				TEM4 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKDT4TKRC6T0ST
				TEM4 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT4TKRC6T0
				TEM4 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKDT4TKRC6T1ST
				TEM4 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT4TKRC6T1
				TEM4 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKDT4TKRC7T0ST; LHKSTATUSBITS
				TEM4 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT4TKRC7T0
				TEM4 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKDT4TKRC7T1ST; LHKSTATUSBITS
				TEM4 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT4TKRC7T1
				TEM4 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKDT5CALAF0T0ST; LHKSTATUSBITS
				TEM5 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT5CALAF0T0
				TEM5 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKDT5CALAF0T1ST; LHKSTATUSBITS
				TEM5 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT5CALAF0T1
				TEM5 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKDT5CALAF1T0ST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM5 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT5CALAF1T0
				TEM5 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKDT5CALAF1T1ST
				TEM5 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT5CALAF1T1
				TEM5 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKDT5CALAF2T0ST
				TEM5 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT5CALAF2T0
				TEM5 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKDT5CALAF2T1ST
				TEM5 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT5CALAF2T1
				TEM5 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKDT5CALAF3T0ST; LHKSTATUSBITS
				TEM5 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT5CALAF3T0
				TEM5 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKDT5CALAF3T1ST; LHKSTATUSBITS
				TEM5 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT5CALAF3T1
				TEM5 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKDT5TKRC0T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT5TKRC0T0
				TEM5 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKDT5TKRC0T1ST; LHKSTATUSBITS
				TEM5 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT5TKRC0T1
				TEM5 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKDT5TKRC1T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT5TKRC1T0
				TEM5 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKDT5TKRC1T1ST
				TEM5 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT5TKRC1T1
				TEM5 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKDT5TKRC2T0ST
				TEM5 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT5TKRC2T0
				TEM5 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKDT5TKRC2T1ST
				TEM5 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT5TKRC2T1
				TEM5 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKDT5TKRC3T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT5TKRC3T0
				TEM5 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKDT5TKRC3T1ST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM5 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT5TKRC3T1
				TEM5 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKDT5TKRC4T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT5TKRC4T0
				TEM5 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKDT5TKRC4T1ST; LHKSTATUSBITS
				TEM5 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT5TKRC4T1
				TEM5 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKDT5TKRC5T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT5TKRC5T0
				TEM5 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKDT5TKRC5T1ST
				TEM5 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT5TKRC5T1
				TEM5 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKDT5TKRC6T0ST
				TEM5 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT5TKRC6T0
				TEM5 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKDT5TKRC6T1ST
				TEM5 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT5TKRC6T1
				TEM5 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKDT5TKRC7T0ST; LHKSTATUSBITS
				TEM5 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT5TKRC7T0
				TEM5 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKDT5TKRC7T1ST; LHKSTATUSBITS
				TEM5 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT5TKRC7T1
				TEM5 TKR Cable 7 Temp 1 raw

10.3.39 `DiagTemEnvTemp3` (633/0x279)

Description:

"Diagnostic TEM Temperature Packet 3" Telemetry Packet

Contains temperature specific ADC values for TEMs 6 and 7.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKDT6CALAF0T0ST; LHKSTATUSBITS TEM6 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT6CALAF0T0 TEM6 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKDT6CALAF0T1ST; LHKSTATUSBITS TEM6 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT6CALAF0T1 TEM6 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKDT6CALAF1T0ST; LHKSTATUSBITS TEM6 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT6CALAF1T0 TEM6 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKDT6CALAF1T1ST TEM6 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT6CALAF1T1 TEM6 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKDT6CALAF2T0ST TEM6 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT6CALAF2T0 TEM6 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKDT6CALAF2T1ST TEM6 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT6CALAF2T1 TEM6 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKDT6CALAF3T0ST; LHKSTATUSBITS TEM6 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT6CALAF3T0 TEM6 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKDT6CALAF3T1ST; LHKSTATUSBITS TEM6 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT6CALAF3T1 TEM6 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKDT6TKRC0T0ST; LHKSTATUSBITS TEM6 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT6TKRC0T0 TEM6 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKDT6TKRC0T1ST; LHKSTATUSBITS TEM6 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT6TKRC0T1 TEM6 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKDT6TKRC1T0ST; LHKSTATUSBITS TEM6 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT6TKRC1T0 TEM6 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKDT6TKRC1T1ST TEM6 TKR Cable 1 Temp 1 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDT6TKRC1T1 TEM6 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKDT6TKRC2T0ST TEM6 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT6TKRC2T0 TEM6 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKDT6TKRC2T1ST TEM6 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT6TKRC2T1 TEM6 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKDT6TKRC3T0ST; LHKSTATUSBITS TEM6 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT6TKRC3T0 TEM6 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKDT6TKRC3T1ST; LHKSTATUSBITS TEM6 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT6TKRC3T1 TEM6 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKDT6TKRC4T0ST; LHKSTATUSBITS TEM6 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT6TKRC4T0 TEM6 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKDT6TKRC4T1ST; LHKSTATUSBITS TEM6 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT6TKRC4T1 TEM6 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKDT6TKRC5T0ST; LHKSTATUSBITS TEM6 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT6TKRC5T0 TEM6 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKDT6TKRC5T1ST TEM6 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT6TKRC5T1 TEM6 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKDT6TKRC6T0ST TEM6 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT6TKRC6T0 TEM6 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKDT6TKRC6T1ST TEM6 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT6TKRC6T1 TEM6 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKDT6TKRC7T0ST; LHKSTATUSBITS TEM6 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT6TKRC7T0 TEM6 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKDT6TKRC7T1ST; LHKSTATUSBITS TEM6 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT6TKRC7T1 TEM6 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKDT7CALAF0T0ST; LHKSTATUSBITS TEM7 CAL AFEE0 Temp 0 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDT7CALAF0T0 TEM7 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKDT7CALAF0T1ST; LHKSTATUSBITS TEM7 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT7CALAF0T1 TEM7 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKDT7CALAF1T0ST; LHKSTATUSBITS TEM7 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT7CALAF1T0 TEM7 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKDT7CALAF1T1ST TEM7 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT7CALAF1T1 TEM7 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKDT7CALAF2T0ST TEM7 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT7CALAF2T0 TEM7 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKDT7CALAF2T1ST TEM7 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT7CALAF2T1 TEM7 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKDT7CALAF3T0ST; LHKSTATUSBITS TEM7 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT7CALAF3T0 TEM7 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKDT7CALAF3T1ST; LHKSTATUSBITS TEM7 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT7CALAF3T1 TEM7 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKDT7TKRC0T0ST; LHKSTATUSBITS TEM7 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT7TKRC0T0 TEM7 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKDT7TKRC0T1ST; LHKSTATUSBITS TEM7 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT7TKRC0T1 TEM7 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKDT7TKRC1T0ST; LHKSTATUSBITS TEM7 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT7TKRC1T0 TEM7 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKDT7TKRC1T1ST TEM7 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT7TKRC1T1 TEM7 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKDT7TKRC2T0ST TEM7 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT7TKRC2T0 TEM7 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKDT7TKRC2T1ST TEM7 TKR Cable 2 Temp 1 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDT7TKRC2T1 TEM7 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKDT7TKRC3T0ST; LHKSTATUSBITS TEM7 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT7TKRC3T0 TEM7 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKDT7TKRC3T1ST; LHKSTATUSBITS TEM7 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT7TKRC3T1 TEM7 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKDT7TKRC4T0ST; LHKSTATUSBITS TEM7 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT7TKRC4T0 TEM7 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKDT7TKRC4T1ST; LHKSTATUSBITS TEM7 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT7TKRC4T1 TEM7 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKDT7TKRC5T0ST; LHKSTATUSBITS TEM7 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT7TKRC5T0 TEM7 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKDT7TKRC5T1ST TEM7 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT7TKRC5T1 TEM7 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKDT7TKRC6T0ST TEM7 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT7TKRC6T0 TEM7 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKDT7TKRC6T1ST TEM7 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT7TKRC6T1 TEM7 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKDT7TKRC7T0ST; LHKSTATUSBITS TEM7 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT7TKRC7T0 TEM7 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKDT7TKRC7T1ST; LHKSTATUSBITS TEM7 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT7TKRC7T1 TEM7 TKR Cable 7 Temp 1 raw

10.3.40 `DiagTemEnvTemp4` (634/0x27A)

Description:

"Diagnostic TEM Temperature Packet 4" Telemetry Packet

Contains temperature specific ADC values for TEMs 8 and 9.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDT8CALAF0T0ST; LHKSTATUSBITS
				TEM8 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT8CALAF0T0
				TEM8 CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKDT8CALAF0T1ST; LHKSTATUSBITS
				TEM8 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT8CALAF0T1
				TEM8 CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKDT8CALAF1T0ST; LHKSTATUSBITS
				TEM8 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT8CALAF1T0
				TEM8 CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKDT8CALAF1T1ST
				TEM8 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT8CALAF1T1
				TEM8 CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKDT8CALAF2T0ST
				TEM8 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT8CALAF2T0
				TEM8 CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKDT8CALAF2T1ST
				TEM8 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT8CALAF2T1
				TEM8 CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKDT8CALAF3T0ST; LHKSTATUSBITS
				TEM8 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT8CALAF3T0
				TEM8 CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKDT8CALAF3T1ST; LHKSTATUSBITS
				TEM8 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT8CALAF3T1
				TEM8 CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKDT8TKRC0T0ST; LHKSTATUSBITS
				TEM8 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT8TKRC0T0
				TEM8 TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKDT8TKRC0T1ST; LHKSTATUSBITS
				TEM8 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT8TKRC0T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM8 TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKDT8TKRC1T0ST; LHKSTATUSBITS
				TEM8 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT8TKRC1T0
				TEM8 TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKDT8TKRC1T1ST
				TEM8 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT8TKRC1T1
				TEM8 TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKDT8TKRC2T0ST
				TEM8 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT8TKRC2T0
				TEM8 TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKDT8TKRC2T1ST
				TEM8 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT8TKRC2T1
				TEM8 TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKDT8TKRC3T0ST; LHKSTATUSBITS
				TEM8 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT8TKRC3T0
				TEM8 TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKDT8TKRC3T1ST; LHKSTATUSBITS
				TEM8 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT8TKRC3T1
				TEM8 TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKDT8TKRC4T0ST; LHKSTATUSBITS
				TEM8 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT8TKRC4T0
				TEM8 TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKDT8TKRC4T1ST; LHKSTATUSBITS
				TEM8 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT8TKRC4T1
				TEM8 TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKDT8TKRC5T0ST; LHKSTATUSBITS
				TEM8 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT8TKRC5T0
				TEM8 TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKDT8TKRC5T1ST
				TEM8 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT8TKRC5T1
				TEM8 TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKDT8TKRC6T0ST
				TEM8 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT8TKRC6T0
				TEM8 TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKDT8TKRC6T1ST
				TEM8 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT8TKRC6T1
				TEM8 TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKDT8TKRC7T0ST; LHKSTATUSBITS
				TEM8 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT8TKRC7T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM8 TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKDT8TKRC7T1ST; LHKSTATUSBITS
				TEM8 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT8TKRC7T1
				TEM8 TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKDT9CALAF0T0ST; LHKSTATUSBITS
				TEM9 CAL AFEE0 Temp 0 status
	4	12	U12	LHKDT9CALAF0T0
				TEM9 CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKDT9CALAF0T1ST; LHKSTATUSBITS
				TEM9 CAL AFEE0 Temp 1 status
	4	12	U12	LHKDT9CALAF0T1
				TEM9 CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKDT9CALAF1T0ST; LHKSTATUSBITS
				TEM9 CAL AFEE1 Temp 0 status
	4	12	U12	LHKDT9CALAF1T0
				TEM9 CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKDT9CALAF1T1ST
				TEM9 CAL AFEE1 Temp 1 status
	4	12	U12	LHKDT9CALAF1T1
				TEM9 CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKDT9CALAF2T0ST
				TEM9 CAL AFEE2 Temp 0 status
	4	12	U12	LHKDT9CALAF2T0
				TEM9 CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKDT9CALAF2T1ST
				TEM9 CAL AFEE2 Temp 1 status
	4	12	U12	LHKDT9CALAF2T1
				TEM9 CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKDT9CALAF3T0ST; LHKSTATUSBITS
				TEM9 CAL AFEE3 Temp 0 status
	4	12	U12	LHKDT9CALAF3T0
				TEM9 CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKDT9CALAF3T1ST; LHKSTATUSBITS
				TEM9 CAL AFEE3 Temp 1 status
	4	12	U12	LHKDT9CALAF3T1
				TEM9 CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKDT9TKRC0T0ST; LHKSTATUSBITS
				TEM9 TKR Cable 0 Tem 0 status
	4	12	U12	LHKDT9TKRC0T0
				TEM9 TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKDT9TKRC0T1ST; LHKSTATUSBITS
				TEM9 TKR Cable 0 Temp 1 status
	4	12	U12	LHKDT9TKRC0T1
				TEM9 TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKDT9TKRC1T0ST; LHKSTATUSBITS
				TEM9 TKR Cable 1 Temp 0 status
	4	12	U12	LHKDT9TKRC1T0
				TEM9 TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKDT9TKRC1T1ST
				TEM9 TKR Cable 1 Temp 1 status
	4	12	U12	LHKDT9TKRC1T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEM9 TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKDT9TKRC2T0ST
				TEM9 TKR Cable 2 Temp 0 status
	4	12	U12	LHKDT9TKRC2T0
				TEM9 TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKDT9TKRC2T1ST
				TEM9 TKR Cable 2 Temp 1 status
	4	12	U12	LHKDT9TKRC2T1
				TEM9 TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKDT9TKRC3T0ST; LHKSTATUSBITS
				TEM9 TKR Cable 3 Temp 0 status
	4	12	U12	LHKDT9TKRC3T0
				TEM9 TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKDT9TKRC3T1ST; LHKSTATUSBITS
				TEM9 TKR Cable 3 Temp 1 status
	4	12	U12	LHKDT9TKRC3T1
				TEM9 TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKDT9TKRC4T0ST; LHKSTATUSBITS
				TEM9 TKR Cable 4 Tem 0 status
	4	12	U12	LHKDT9TKRC4T0
				TEM9 TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKDT9TKRC4T1ST; LHKSTATUSBITS
				TEM9 TKR Cable 4 Temp 1 status
	4	12	U12	LHKDT9TKRC4T1
				TEM9 TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKDT9TKRC5T0ST; LHKSTATUSBITS
				TEM9 TKR Cable 5 Temp 0 status
	4	12	U12	LHKDT9TKRC5T0
				TEM9 TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKDT9TKRC5T1ST
				TEM9 TKR Cable 5 Temp 1 status
	4	12	U12	LHKDT9TKRC5T1
				TEM9 TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKDT9TKRC6T0ST
				TEM9 TKR Cable 6 Temp 0 status
	4	12	U12	LHKDT9TKRC6T0
				TEM9 TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKDT9TKRC6T1ST
				TEM9 TKR Cable 6 Temp 1 status
	4	12	U12	LHKDT9TKRC6T1
				TEM9 TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKDT9TKRC7T0ST; LHKSTATUSBITS
				TEM9 TKR Cable 7 Temp 0 status
	4	12	U12	LHKDT9TKRC7T0
				TEM9 TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKDT9TKRC7T1ST; LHKSTATUSBITS
				TEM9 TKR Cable 7 Temp 1 status
	4	12	U12	LHKDT9TKRC7T1
				TEM9 TKR Cable 7 Temp 1 raw

10.3.41 `DiagTemEnvTemp5` (635/0x27B)

Description:

"Diagnostic TEM Temperature Packet 5" Telemetry Packet

Contains temperature specific ADC values for TEMs A and B.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDTACALAF0T0ST; LHKSTATUSBITS
				TEMA CAL AFEE0 Temp 0 status
	4	12	U12	LHKDTACALAF0T0
				TEMA CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKDTACALAF0T1ST; LHKSTATUSBITS
				TEMA CAL AFEE0 Temp 1 status
	4	12	U12	LHKDTACALAF0T1
				TEMA CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKDTACALAF1T0ST; LHKSTATUSBITS
				TEMA CAL AFEE1 Temp 0 status
	4	12	U12	LHKDTACALAF1T0
				TEMA CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKDTACALAF1T1ST
				TEMA CAL AFEE1 Temp 1 status
	4	12	U12	LHKDTACALAF1T1
				TEMA CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKDTACALAF2T0ST
				TEMA CAL AFEE2 Temp 0 status
	4	12	U12	LHKDTACALAF2T0
				TEMA CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKDTACALAF2T1ST
				TEMA CAL AFEE2 Temp 1 status
	4	12	U12	LHKDTACALAF2T1
				TEMA CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKDTACALAF3T0ST; LHKSTATUSBITS
				TEMA CAL AFEE3 Temp 0 status
	4	12	U12	LHKDTACALAF3T0
				TEMA CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKDTACALAF3T1ST; LHKSTATUSBITS
				TEMA CAL AFEE3 Temp 1 status
	4	12	U12	LHKDTACALAF3T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMA CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKDTATKRC0T0ST; LHKSTATUSBITS
				TEMA TKR Cable 0 Tem 0 status
	4	12	U12	LHKDTATKRC0T0
				TEMA TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKDTATKRC0T1ST; LHKSTATUSBITS
				TEMA TKR Cable 0 Temp 1 status
	4	12	U12	LHKDTATKRC0T1
				TEMA TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKDTATKRC1T0ST; LHKSTATUSBITS
				TEMA TKR Cable 1 Temp 0 status
	4	12	U12	LHKDTATKRC1T0
				TEMA TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKDTATKRC1T1ST
				TEMA TKR Cable 1 Temp 1 status
	4	12	U12	LHKDTATKRC1T1
				TEMA TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKDTATKRC2T0ST
				TEMA TKR Cable 2 Temp 0 status
	4	12	U12	LHKDTATKRC2T0
				TEMA TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKDTATKRC2T1ST
				TEMA TKR Cable 2 Temp 1 status
	4	12	U12	LHKDTATKRC2T1
				TEMA TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKDTATKRC3T0ST; LHKSTATUSBITS
				TEMA TKR Cable 3 Temp 0 status
	4	12	U12	LHKDTATKRC3T0
				TEMA TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKDTATKRC3T1ST; LHKSTATUSBITS
				TEMA TKR Cable 3 Temp 1 status
	4	12	U12	LHKDTATKRC3T1
				TEMA TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKDTATKRC4T0ST; LHKSTATUSBITS
				TEMA TKR Cable 4 Tem 0 status
	4	12	U12	LHKDTATKRC4T0
				TEMA TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKDTATKRC4T1ST; LHKSTATUSBITS
				TEMA TKR Cable 4 Temp 1 status
	4	12	U12	LHKDTATKRC4T1
				TEMA TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKDTATKRC5T0ST; LHKSTATUSBITS
				TEMA TKR Cable 5 Temp 0 status
	4	12	U12	LHKDTATKRC5T0
				TEMA TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKDTATKRC5T1ST
				TEMA TKR Cable 5 Temp 1 status
	4	12	U12	LHKDTATKRC5T1
				TEMA TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKDTATKRC6T0ST
				TEMA TKR Cable 6 Temp 0 status
	4	12	U12	LHKDTATKRC6T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMA TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKDTATKRC6T1ST
				TEMA TKR Cable 6 Temp 1 status
	4	12	U12	LHKDTATKRC6T1
				TEMA TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKDTATKRC7T0ST; LHKSTATUSBITS
				TEMA TKR Cable 7 Temp 0 status
	4	12	U12	LHKDTATKRC7T0
				TEMA TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKDTATKRC7T1ST; LHKSTATUSBITS
				TEMA TKR Cable 7 Temp 1 status
	4	12	U12	LHKDTATKRC7T1
				TEMA TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKDTBCALAF0T0ST; LHKSTATUSBITS
				TEMB CAL AFEE0 Temp 0 status
	4	12	U12	LHKDTBCALAF0T0
				TEMB CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKDTBCALAF0T1ST; LHKSTATUSBITS
				TEMB CAL AFEE0 Temp 1 status
	4	12	U12	LHKDTBCALAF0T1
				TEMB CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKDTBCALAF1T0ST; LHKSTATUSBITS
				TEMB CAL AFEE1 Temp 0 status
	4	12	U12	LHKDTBCALAF1T0
				TEMB CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKDTBCALAF1T1ST
				TEMB CAL AFEE1 Temp 1 status
	4	12	U12	LHKDTBCALAF1T1
				TEMB CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKDTBCALAF2T0ST
				TEMB CAL AFEE2 Temp 0 status
	4	12	U12	LHKDTBCALAF2T0
				TEMB CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKDTBCALAF2T1ST
				TEMB CAL AFEE2 Temp 1 status
	4	12	U12	LHKDTBCALAF2T1
				TEMB CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKDTBCALAF3T0ST; LHKSTATUSBITS
				TEMB CAL AFEE3 Temp 0 status
	4	12	U12	LHKDTBCALAF3T0
				TEMB CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKDTBCALAF3T1ST; LHKSTATUSBITS
				TEMB CAL AFEE3 Temp 1 status
	4	12	U12	LHKDTBCALAF3T1
				TEMB CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKDTBTKRC0T0ST; LHKSTATUSBITS
				TEMB TKR Cable 0 Tem 0 status
	4	12	U12	LHKDTBTKRC0T0
				TEMB TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKDTBTKRC0T1ST; LHKSTATUSBITS
				TEMB TKR Cable 0 Temp 1 status
	4	12	U12	LHKDTBTKRC0T1

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMB TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKDTBTKRC1T0ST; LHKSTATUSBITS
				TEMB TKR Cable 1 Temp 0 status
	4	12	U12	LHKDTBTKRC1T0
				TEMB TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKDTBTKRC1T1ST
				TEMB TKR Cable 1 Temp 1 status
	4	12	U12	LHKDTBTKRC1T1
				TEMB TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKDTBTKRC2T0ST
				TEMB TKR Cable 2 Temp 0 status
	4	12	U12	LHKDTBTKRC2T0
				TEMB TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKDTBTKRC2T1ST
				TEMB TKR Cable 2 Temp 1 status
	4	12	U12	LHKDTBTKRC2T1
				TEMB TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKDTBTKRC3T0ST; LHKSTATUSBITS
				TEMB TKR Cable 3 Temp 0 status
	4	12	U12	LHKDTBTKRC3T0
				TEMB TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKDTBTKRC3T1ST; LHKSTATUSBITS
				TEMB TKR Cable 3 Temp 1 status
	4	12	U12	LHKDTBTKRC3T1
				TEMB TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKDTBTKRC4T0ST; LHKSTATUSBITS
				TEMB TKR Cable 4 Tem 0 status
	4	12	U12	LHKDTBTKRC4T0
				TEMB TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKDTBTKRC4T1ST; LHKSTATUSBITS
				TEMB TKR Cable 4 Temp 1 status
	4	12	U12	LHKDTBTKRC4T1
				TEMB TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKDTBTKRC5T0ST; LHKSTATUSBITS
				TEMB TKR Cable 5 Temp 0 status
	4	12	U12	LHKDTBTKRC5T0
				TEMB TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKDTBTKRC5T1ST
				TEMB TKR Cable 5 Temp 1 status
	4	12	U12	LHKDTBTKRC5T1
				TEMB TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKDTBTKRC6T0ST
				TEMB TKR Cable 6 Temp 0 status
	4	12	U12	LHKDTBTKRC6T0
				TEMB TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKDTBTKRC6T1ST
				TEMB TKR Cable 6 Temp 1 status
	4	12	U12	LHKDTBTKRC6T1
				TEMB TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKDTBTKRC7T0ST; LHKSTATUSBITS
				TEMB TKR Cable 7 Temp 0 status
	4	12	U12	LHKDTBTKRC7T0

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMB TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKDTBTKRC7T1ST; LHKSTATUSBITS
				TEMB TKR Cable 7 Temp 1 status
	4	12	U12	LHKDTBTKRC7T1
				TEMB TKR Cable 7 Temp 1 raw

10.3.42 DiagTemEnvTemp6 (636/0x27C)

Description:

"Diagnostic TEM Temperature Packet 6" Telemetry Packet

Contains temperature specific ADC values for TEMs C and D.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDTCCALAF0T0ST; LHKSTATUSBITS
				TEMC CAL AFEE0 Temp 0 status
	4	12	U12	LHKDTCCALAF0T0
				TEMC CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKDTCCALAF0T1ST; LHKSTATUSBITS
				TEMC CAL AFEE0 Temp 1 status
	4	12	U12	LHKDTCCALAF0T1
				TEMC CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKDTCCALAF1T0ST; LHKSTATUSBITS
				TEMC CAL AFEE1 Temp 0 status
	4	12	U12	LHKDTCCALAF1T0
				TEMC CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKDTCCALAF1T1ST
				TEMC CAL AFEE1 Temp 1 status
	4	12	U12	LHKDTCCALAF1T1
				TEMC CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKDTCCALAF2T0ST
				TEMC CAL AFEE2 Temp 0 status
	4	12	U12	LHKDTCCALAF2T0
				TEMC CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKDTCCALAF2T1ST
				TEMC CAL AFEE2 Temp 1 status
	4	12	U12	LHKDTCCALAF2T1
				TEMC CAL AFEE2 Temp 1 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x020	0	4	U12	LHKDTCCALAF3T0ST; LHKSTATUSBITS TEMC CAL AFEE3 Temp 0 status
	4	12	U12	LHKDTCCALAF3T0 TEMC CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKDTCCALAF3T1ST; LHKSTATUSBITS TEMC CAL AFEE3 Temp 1 status
	4	12	U12	LHKDTCCALAF3T1 TEMC CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKDTCTKRC0T0ST; LHKSTATUSBITS TEMC TKR Cable 0 Tem 0 status
	4	12	U12	LHKDTCTKRC0T0 TEMC TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKDTCTKRC0T1ST; LHKSTATUSBITS TEMC TKR Cable 0 Temp 1 status
	4	12	U12	LHKDTCTKRC0T1 TEMC TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKDTCTKRC1T0ST; LHKSTATUSBITS TEMC TKR Cable 1 Temp 0 status
	4	12	U12	LHKDTCTKRC1T0 TEMC TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKDTCTKRC1T1ST TEMC TKR Cable 1 Temp 1 status
	4	12	U12	LHKDTCTKRC1T1 TEMC TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKDTCTKRC2T0ST TEMC TKR Cable 2 Temp 0 status
	4	12	U12	LHKDTCTKRC2T0 TEMC TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKDTCTKRC2T1ST TEMC TKR Cable 2 Temp 1 status
	4	12	U12	LHKDTCTKRC2T1 TEMC TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKDTCTKRC3T0ST; LHKSTATUSBITS TEMC TKR Cable 3 Temp 0 status
	4	12	U12	LHKDTCTKRC3T0 TEMC TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKDTCTKRC3T1ST; LHKSTATUSBITS TEMC TKR Cable 3 Temp 1 status
	4	12	U12	LHKDTCTKRC3T1 TEMC TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKDTCTKRC4T0ST; LHKSTATUSBITS TEMC TKR Cable 4 Tem 0 status
	4	12	U12	LHKDTCTKRC4T0 TEMC TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKDTCTKRC4T1ST; LHKSTATUSBITS TEMC TKR Cable 4 Temp 1 status
	4	12	U12	LHKDTCTKRC4T1 TEMC TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKDTCTKRC5T0ST; LHKSTATUSBITS TEMC TKR Cable 5 Temp 0 status
	4	12	U12	LHKDTCTKRC5T0 TEMC TKR Cable 5 Temp 0 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x03A	0	4	U12	LHKDTCTKRC5T1ST TEMC TKR Cable 5 Temp 1 status
	4	12	U12	LHKDTCTKRC5T1 TEMC TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKDTCTKRC6T0ST TEMC TKR Cable 6 Temp 0 status
	4	12	U12	LHKDTCTKRC6T0 TEMC TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKDTCTKRC6T1ST TEMC TKR Cable 6 Temp 1 status
	4	12	U12	LHKDTCTKRC6T1 TEMC TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKDTCTKRC7T0ST; LHKSTATUSBITS TEMC TKR Cable 7 Temp 0 status
	4	12	U12	LHKDTCTKRC7T0 TEMC TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKDTCTKRC7T1ST; LHKSTATUSBITS TEMC TKR Cable 7 Temp 1 status
	4	12	U12	LHKDTCTKRC7T1 TEMC TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKDTDCALAF0T0ST; LHKSTATUSBITS TEMD CAL AFEE0 Temp 0 status
	4	12	U12	LHKDTDCALAF0T0 TEMD CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKDTDCALAF0T1ST; LHKSTATUSBITS TEMD CAL AFEE0 Temp 1 status
	4	12	U12	LHKDTDCALAF0T1 TEMD CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKDTDCALAF1T0ST; LHKSTATUSBITS TEMD CAL AFEE1 Temp 0 status
	4	12	U12	LHKDTDCALAF1T0 TEMD CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKDTDCALAF1T1ST TEMD CAL AFEE1 Temp 1 status
	4	12	U12	LHKDTDCALAF1T1 TEMD CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKDTDCALAF2T0ST TEMD CAL AFEE2 Temp 0 status
	4	12	U12	LHKDTDCALAF2T0 TEMD CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKDTDCALAF2T1ST TEMD CAL AFEE2 Temp 1 status
	4	12	U12	LHKDTDCALAF2T1 TEMD CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKDTDCALAF3T0ST; LHKSTATUSBITS TEMD CAL AFEE3 Temp 0 status
	4	12	U12	LHKDTDCALAF3T0 TEMD CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKDTDCALAF3T1ST; LHKSTATUSBITS TEMD CAL AFEE3 Temp 1 status
	4	12	U12	LHKDTDCALAF3T1 TEMD CAL AFEE3 Temp 1 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x054	0	4	U12	LHKDTDTKRC0T0ST; LHKSTATUSBITS TEMD TKR Cable 0 Tem 0 status
	4	12	U12	LHKDTDTKRC0T0 TEMD TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKDTDTKRC0T1ST; LHKSTATUSBITS TEMD TKR Cable 0 Temp 1 status
	4	12	U12	LHKDTDTKRC0T1 TEMD TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKDTDTKRC1T0ST; LHKSTATUSBITS TEMD TKR Cable 1 Temp 0 status
	4	12	U12	LHKDTDTKRC1T0 TEMD TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKDTDTKRC1T1ST TEMD TKR Cable 1 Temp 1 status
	4	12	U12	LHKDTDTKRC1T1 TEMD TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKDTDTKRC2T0ST TEMD TKR Cable 2 Temp 0 status
	4	12	U12	LHKDTDTKRC2T0 TEMD TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKDTDTKRC2T1ST TEMD TKR Cable 2 Temp 1 status
	4	12	U12	LHKDTDTKRC2T1 TEMD TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKDTDTKRC3T0ST; LHKSTATUSBITS TEMD TKR Cable 3 Temp 0 status
	4	12	U12	LHKDTDTKRC3T0 TEMD TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKDTDTKRC3T1ST; LHKSTATUSBITS TEMD TKR Cable 3 Temp 1 status
	4	12	U12	LHKDTDTKRC3T1 TEMD TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKDTDTKRC4T0ST; LHKSTATUSBITS TEMD TKR Cable 4 Tem 0 status
	4	12	U12	LHKDTDTKRC4T0 TEMD TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKDTDTKRC4T1ST; LHKSTATUSBITS TEMD TKR Cable 4 Temp 1 status
	4	12	U12	LHKDTDTKRC4T1 TEMD TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKDTDTKRC5T0ST; LHKSTATUSBITS TEMD TKR Cable 5 Temp 0 status
	4	12	U12	LHKDTDTKRC5T0 TEMD TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKDTDTKRC5T1ST TEMD TKR Cable 5 Temp 1 status
	4	12	U12	LHKDTDTKRC5T1 TEMD TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKDTDTKRC6T0ST TEMD TKR Cable 6 Temp 0 status
	4	12	U12	LHKDTDTKRC6T0 TEMD TKR Cable 6 Temp 0 raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x06E	0	4	U12	LHKDTDTKRC6T1ST
				TEMD TKR Cable 6 Temp 1 status
	4	12	U12	LHKDTDTKRC6T1
				TEMD TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKDTDTKRC7T0ST; LHKSTATUSBITS
				TEMD TKR Cable 7 Temp 0 status
	4	12	U12	LHKDTDTKRC7T0
				TEMD TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKDTDTKRC7T1ST; LHKSTATUSBITS
				TEMD TKR Cable 7 Temp 1 status
	4	12	U12	LHKDTDTKRC7T1
				TEMD TKR Cable 7 Temp 1 raw

10.3.43 `DiagTemEnvTemp7` (637/0x27D)

Description:

"Diagnostic TEM Temperature Packet 7" Telemetry Packet

Contains temperature specific ADC values for TEMs E and F.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDTECALAF0T0ST; LHKSTATUSBITS
				TEME CAL AFEE0 Temp 0 status
	4	12	U12	LHKDTECALAF0T0
				TEME CAL AFEE0 Temp 0 raw
0x016	0	4	U12	LHKDTECALAF0T1ST; LHKSTATUSBITS
				TEME CAL AFEE0 Temp 1 status
	4	12	U12	LHKDTECALAF0T1
				TEME CAL AFEE0 Temp 1 raw
0x018	0	4	U12	LHKDTECALAF1T0ST; LHKSTATUSBITS
				TEME CAL AFEE1 Temp 0 status
	4	12	U12	LHKDTECALAF1T0
				TEME CAL AFEE1 Temp 0 raw
0x01A	0	4	U12	LHKDTECALAF1T1ST
				TEME CAL AFEE1 Temp 1 status
	4	12	U12	LHKDTECALAF1T1
				TEME CAL AFEE1 Temp 1 raw
0x01C	0	4	U12	LHKDTECALAF2T0ST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEME CAL AFEE2 Temp 0 status
	4	12	U12	LHKDTECALAF2T0
				TEME CAL AFEE2 Temp 0 raw
0x01E	0	4	U12	LHKDTECALAF2T1ST
				TEME CAL AFEE2 Temp 1 status
	4	12	U12	LHKDTECALAF2T1
				TEME CAL AFEE2 Temp 1 raw
0x020	0	4	U12	LHKDTECALAF3T0ST; LHKSTATUSBITS
				TEME CAL AFEE3 Temp 0 status
	4	12	U12	LHKDTECALAF3T0
				TEME CAL AFEE3 Temp 0 raw
0x022	0	4	U12	LHKDTECALAF3T1ST; LHKSTATUSBITS
				TEME CAL AFEE3 Temp 1 status
	4	12	U12	LHKDTECALAF3T1
				TEME CAL AFEE3 Temp 1 raw
0x024	0	4	U12	LHKDTETKRC0T0ST; LHKSTATUSBITS
				TEME TKR Cable 0 Tem 0 status
	4	12	U12	LHKDTETKRC0T0
				TEME TKR Cable 0 Temp 0 raw
0x026	0	4	U12	LHKDTETKRC0T1ST; LHKSTATUSBITS
				TEME TKR Cable 0 Temp 1 status
	4	12	U12	LHKDTETKRC0T1
				TEME TKR Cable 0 Temp 1 raw
0x028	0	4	U12	LHKDTETKRC1T0ST; LHKSTATUSBITS
				TEME TKR Cable 1 Temp 0 status
	4	12	U12	LHKDTETKRC1T0
				TEME TKR Cable 1 Temp 0 raw
0x02A	0	4	U12	LHKDTETKRC1T1ST
				TEME TKR Cable 1 Temp 1 status
	4	12	U12	LHKDTETKRC1T1
				TEME TKR Cable 1 Temp 1 raw
0x02C	0	4	U12	LHKDTETKRC2T0ST
				TEME TKR Cable 2 Temp 0 status
	4	12	U12	LHKDTETKRC2T0
				TEME TKR Cable 2 Temp 0 raw
0x02E	0	4	U12	LHKDTETKRC2T1ST
				TEME TKR Cable 2 Temp 1 status
	4	12	U12	LHKDTETKRC2T1
				TEME TKR Cable 2 Temp 1 raw
0x030	0	4	U12	LHKDTETKRC3T0ST; LHKSTATUSBITS
				TEME TKR Cable 3 Temp 0 status
	4	12	U12	LHKDTETKRC3T0
				TEME TKR Cable 3 Temp 0 raw
0x032	0	4	U12	LHKDTETKRC3T1ST; LHKSTATUSBITS
				TEME TKR Cable 3 Temp 1 status
	4	12	U12	LHKDTETKRC3T1
				TEME TKR Cable 3 Temp 1 raw
0x034	0	4	U12	LHKDTETKRC4T0ST; LHKSTATUSBITS
				TEME TKR Cable 4 Tem 0 status
	4	12	U12	LHKDTETKRC4T0
				TEME TKR Cable 4 Temp 0 raw
0x036	0	4	U12	LHKDTETKRC4T1ST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEME TKR Cable 4 Temp 1 status
	4	12	U12	LHKDTETKRC4T1
				TEME TKR Cable 4 Temp 1 raw
0x038	0	4	U12	LHKDTETKRC5T0ST; LHKSTATUSBITS
				TEME TKR Cable 5 Temp 0 status
	4	12	U12	LHKDTETKRC5T0
				TEME TKR Cable 5 Temp 0 raw
0x03A	0	4	U12	LHKDTETKRC5T1ST
				TEME TKR Cable 5 Temp 1 status
	4	12	U12	LHKDTETKRC5T1
				TEME TKR Cable 5 Temp 1 raw
0x03C	0	4	U12	LHKDTETKRC6T0ST
				TEME TKR Cable 6 Temp 0 status
	4	12	U12	LHKDTETKRC6T0
				TEME TKR Cable 6 Temp 0 raw
0x03E	0	4	U12	LHKDTETKRC6T1ST
				TEME TKR Cable 6 Temp 1 status
	4	12	U12	LHKDTETKRC6T1
				TEME TKR Cable 6 Temp 1 raw
0x040	0	4	U12	LHKDTETKRC7T0ST; LHKSTATUSBITS
				TEME TKR Cable 7 Temp 0 status
	4	12	U12	LHKDTETKRC7T0
				TEME TKR Cable 7 Temp 0 raw
0x042	0	4	U12	LHKDTETKRC7T1ST; LHKSTATUSBITS
				TEME TKR Cable 7 Temp 1 status
	4	12	U12	LHKDTETKRC7T1
				TEME TKR Cable 7 Temp 1 raw
0x044	0	4	U12	LHKDTFCALAF0T0ST; LHKSTATUSBITS
				TEMF CAL AFEE0 Temp 0 status
	4	12	U12	LHKDTFCALAF0T0
				TEMF CAL AFEE0 Temp 0 raw
0x046	0	4	U12	LHKDTFCALAF0T1ST; LHKSTATUSBITS
				TEMF CAL AFEE0 Temp 1 status
	4	12	U12	LHKDTFCALAF0T1
				TEMF CAL AFEE0 Temp 1 raw
0x048	0	4	U12	LHKDTFCALAF1T0ST; LHKSTATUSBITS
				TEMF CAL AFEE1 Temp 0 status
	4	12	U12	LHKDTFCALAF1T0
				TEMF CAL AFEE1 Temp 0 raw
0x04A	0	4	U12	LHKDTFCALAF1T1ST
				TEMF CAL AFEE1 Temp 1 status
	4	12	U12	LHKDTFCALAF1T1
				TEMF CAL AFEE1 Temp 1 raw
0x04C	0	4	U12	LHKDTFCALAF2T0ST
				TEMF CAL AFEE2 Temp 0 status
	4	12	U12	LHKDTFCALAF2T0
				TEMF CAL AFEE2 Temp 0 raw
0x04E	0	4	U12	LHKDTFCALAF2T1ST
				TEMF CAL AFEE2 Temp 1 status
	4	12	U12	LHKDTFCALAF2T1
				TEMF CAL AFEE2 Temp 1 raw
0x050	0	4	U12	LHKDTFCALAF3T0ST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMF CAL AFEE3 Temp 0 status
	4	12	U12	LHKDTFCALAF3T0
				TEMF CAL AFEE3 Temp 0 raw
0x052	0	4	U12	LHKDTFCALAF3T1ST; LHKSTATUSBITS
				TEMF CAL AFEE3 Temp 1 status
	4	12	U12	LHKDTFCALAF3T1
				TEMF CAL AFEE3 Temp 1 raw
0x054	0	4	U12	LHKDTFTKRC0T0ST; LHKSTATUSBITS
				TEMF TKR Cable 0 Tem 0 status
	4	12	U12	LHKDTFTKRC0T0
				TEMF TKR Cable 0 Temp 0 raw
0x056	0	4	U12	LHKDTFTKRC0T1ST; LHKSTATUSBITS
				TEMF TKR Cable 0 Temp 1 status
	4	12	U12	LHKDTFTKRC0T1
				TEMF TKR Cable 0 Temp 1 raw
0x058	0	4	U12	LHKDTFTKRC1T0ST; LHKSTATUSBITS
				TEMF TKR Cable 1 Temp 0 status
	4	12	U12	LHKDTFTKRC1T0
				TEMF TKR Cable 1 Temp 0 raw
0x05A	0	4	U12	LHKDTFTKRC1T1ST
				TEMF TKR Cable 1 Temp 1 status
	4	12	U12	LHKDTFTKRC1T1
				TEMF TKR Cable 1 Temp 1 raw
0x05C	0	4	U12	LHKDTFTKRC2T0ST
				TEMF TKR Cable 2 Temp 0 status
	4	12	U12	LHKDTFTKRC2T0
				TEMF TKR Cable 2 Temp 0 raw
0x05E	0	4	U12	LHKDTFTKRC2T1ST
				TEMF TKR Cable 2 Temp 1 status
	4	12	U12	LHKDTFTKRC2T1
				TEMF TKR Cable 2 Temp 1 raw
0x060	0	4	U12	LHKDTFTKRC3T0ST; LHKSTATUSBITS
				TEMF TKR Cable 3 Temp 0 status
	4	12	U12	LHKDTFTKRC3T0
				TEMF TKR Cable 3 Temp 0 raw
0x062	0	4	U12	LHKDTFTKRC3T1ST; LHKSTATUSBITS
				TEMF TKR Cable 3 Temp 1 status
	4	12	U12	LHKDTFTKRC3T1
				TEMF TKR Cable 3 Temp 1 raw
0x064	0	4	U12	LHKDTFTKRC4T0ST; LHKSTATUSBITS
				TEMF TKR Cable 4 Tem 0 status
	4	12	U12	LHKDTFTKRC4T0
				TEMF TKR Cable 4 Temp 0 raw
0x066	0	4	U12	LHKDTFTKRC4T1ST; LHKSTATUSBITS
				TEMF TKR Cable 4 Temp 1 status
	4	12	U12	LHKDTFTKRC4T1
				TEMF TKR Cable 4 Temp 1 raw
0x068	0	4	U12	LHKDTFTKRC5T0ST; LHKSTATUSBITS
				TEMF TKR Cable 5 Temp 0 status
	4	12	U12	LHKDTFTKRC5T0
				TEMF TKR Cable 5 Temp 0 raw
0x06A	0	4	U12	LHKDTFTKRC5T1ST

Offset	S	L	Type	ITOS name, attribute(s), and description
				TEMF TKR Cable 5 Temp 1 status
	4	12	U12	LHKDTFTKRC5T1
				TEMF TKR Cable 5 Temp 1 raw
0x06C	0	4	U12	LHKDTFTKRC6T0ST
				TEMF TKR Cable 6 Temp 0 status
	4	12	U12	LHKDTFTKRC6T0
				TEMF TKR Cable 6 Temp 0 raw
0x06E	0	4	U12	LHKDTFTKRC6T1ST
				TEMF TKR Cable 6 Temp 1 status
	4	12	U12	LHKDTFTKRC6T1
				TEMF TKR Cable 6 Temp 1 raw
0x070	0	4	U12	LHKDTFTKRC7T0ST; LHKSTATUSBITS
				TEMF TKR Cable 7 Temp 0 status
	4	12	U12	LHKDTFTKRC7T0
				TEMF TKR Cable 7 Temp 0 raw
0x072	0	4	U12	LHKDTFTKRC7T1ST; LHKSTATUSBITS
				TEMF TKR Cable 7 Temp 1 status
	4	12	U12	LHKDTFTKRC7T1
				TEMF TKR Cable 7 Temp 1 raw

10.3.44 `DiagPduEnv0` (638/0x27E)

Description:

"Diagnostic PDU Environmental Packet 0" Telemetry Packet

PDU Packet 0

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	1	U1	LHKDP0TEMFPM; LDPDUTEMPWRST
				PDU0 TEMF Power Mgt Switch
	1	1	U1	LHKDP0TEMEPM
				PDU0 TEME Power Mgt Switch
	2	1	U1	LHKDP0TEMDPM
				PDU0 TEMD Power Mgt Switch
	3	1	U1	LHKDP0TEMCPM
				PDU0 TEMC Power Mgt Switch
	4	1	U1	LHKDP0TEMBPM
				PDU0 TEMB Power Mgt Switch

Offset	S	L	Type	ITOS name, attribute(s), and description
	5	1	U1	LHKDP0TEMAPM PDU0 TEMA Power Mgt Switch
	6	1	U1	LHKDP0TEM9PM PDU0 TEM9 Power Mgt Switch
	7	1	U1	LHKDP0TEM8PM PDU0 TEM8 Power Mgt Switch
	8	1	U1	LHKDP0TEM7PM PDU0 TEM7 Power Mgt Switch
	9	1	U1	LHKDP0TEM6PM PDU0 TEM6 Power Mgt Switch
	10	1	U1	LHKDP0TEM5PM PDU0 TEM5 Power Mgt Switch
	11	1	U1	LHKDP0TEM4PM PDU0 TEM4 Power Mgt Switch
	12	1	U1	LHKDP0TEM3PM PDU0 TEM3 Power Mgt Switch
	13	1	U1	LHKDP0TEM2PM PDU0 TEM2 Power Mgt Switch
	14	1	U1	LHKDP0TEM1PM PDU0 TEM1 Power Mgt Switch
	15	1	U1	LHKDP0TEM0PM PDU0 TEM0 Power Mgt Switch
0x016	0	10	U12	LHKSPARE10 Spare 10 bits
	10	1	U1	LHKDP0EPU2CNVT PDU0 EPU2 Converter Switch
	11	1	U1	LHKDP0EPU1CNVT PDU0 EPU1 Converter Switch
	12	1	U1	LHKDP0EPU0CNVT PDU0 EPU0 Converter Switch
	13	1	U1	LHKDP0EPU2PM PDU0 EPU2 Power Mgt Switch
	14	1	U1	LHKDP0EPU1PM PDU0 EPU1 Power Mgt Switch
	15	1	U1	LHKDP0EPU0PM PDU0 EPU0 Power Mgt Switch
0x018	0	13	U12	LHKSPARE13 Spare 13 bits
	13	1	U1	LHKDP0ACDCNVT PDU0 ACD Converter Switch
	14	1	I1	LHKDP0ACDPSP PDU0 ACD Power Supply Switch
	15	1	I1	LHKDP0ACDPM PDU0 ACD Power Mgt Switch
0x01A	0	4	U12	LHKDP0TEM033VST PDU0 TEM0 3.3V digital status
	4	12	U12	LHKDP0TEM033V PDU0 TEM0 3.3V digital raw
0x01C	0	4	U12	LHKDP0TEM133VST PDU0 TEM1 3.3V digital status
	4	12	U12	LHKDP0TEM133V PDU0 TEM1 3.3V digital raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x01E	0	4	U12	LHKDP0TEM233VST PDU0 TEM2 3.3V digital status
	4	12	U12	LHKDP0TEM233V PDU0 TEM2 3.3V digital raw
0x020	0	4	U12	LHKDP0TEM333VST; LHKSTATUSBITS PDU0 TEM3 3.3V digital status
	4	12	U12	LHKDP0TEM333V PDU0 TEM3 3.3V digital raw
0x022	0	4	U12	LHKDP0TEM433VST; LHKSTATUSBITS PDU0 TEM4 3.3V digital status
	4	12	U12	LHKDP0TEM433V PDU0 TEM4 3.3V digital raw
0x024	0	4	U12	LHKDP0TEM533VST; LHKSTATUSBITS PDU0 TEM5 3.3V digital status
	4	12	U12	LHKDP0TEM533V PDU0 TEM5 3.3V digital raw
0x026	0	4	U12	LHKDP0TEM633VST; LHKSTATUSBITS PDU0 TEM6 3.3V digital status
	4	12	U12	LHKDP0TEM633V PDU0 TEM6 3.3V digital raw
0x028	0	4	U12	LHKDP0TEM733VST; LHKSTATUSBITS PDU0 TEM7 3.3V digital status
	4	12	U12	LHKDP0TEM733V PDU0 TEM7 3.3V digital raw
0x02A	0	4	U12	LHKDP0TEM833VST PDU0 TEM8 3.3V digital status
	4	12	U12	LHKDP0TEM833V PDU0 TEM8 3.3V digital raw
0x02C	0	4	U12	LHKDP0TEM933VST PDU0 TEM9 3.3V digital status
	4	12	U12	LHKDP0TEM933V PDU0 TEM9 3.3V digital raw
0x02E	0	4	U12	LHKDP0TEMA33VST PDU0 TEMA 3.3V digital status
	4	12	U12	LHKDP0TEMA33V PDU0 TEMA 3.3V digital raw
0x030	0	4	U12	LHKDP0TEMB33VST; LHKSTATUSBITS PDU0 TEMB 3.3V digital status
	4	12	U12	LHKDP0TEMB33V PDU0 TEMB 3.3V digital raw
0x032	0	4	U12	LHKDP0TEMC33VST; LHKSTATUSBITS PDU0 TEMC 3.3V digital status
	4	12	U12	LHKDP0TEMC33V PDU0 TEMC 3.3V digital raw
0x034	0	4	U12	LHKDP0TEMD33VST; LHKSTATUSBITS PDU0 TEMD 3.3V digital status
	4	12	U12	LHKDP0TEMD33V PDU0 TEMD 3.3V digital raw
0x036	0	4	U12	LHKDP0TEME33VST; LHKSTATUSBITS PDU0 TEME 3.3V digital status
	4	12	U12	LHKDP0TEME33V PDU0 TEME 3.3V digital raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x038	0	4	U12	LHKDP0TEMF33VST; LHKSTATUSBITS
				PDU0 TEMF 3.3V digital status
	4	12	U12	LHKDP0TEMF33V
				PDU0 TEMF 3.3V digital raw
0x03A	0	4	U12	LHKDP0TEM0PCTST
				PDU0 TEM0 PCB temperature status
	4	12	U12	LHKDP0TEM0PCT
				PDU0 TEM0 PCB temperature raw
0x03C	0	4	U12	LHKDP0TEM1PCTST
				PDU0 TEM1 PCB temperature status
	4	12	U12	LHKDP0TEM1PCT
				PDU0 TEM1 PCB temperature raw
0x03E	0	4	U12	LHKDP0TEM2PCTST
				PDU0 TEM2 PCB temperature status
	4	12	U12	LHKDP0TEM2PCT
				PDU0 TEM2 PCB temperature raw
0x040	0	4	U12	LHKDP0TEM3PCTST; LHKSTATUSBITS
				PDU0 TEM3 PCB temperature status
	4	12	U12	LHKDP0TEM3PCT
				PDU0 TEM3 PCB temperature raw
0x042	0	4	U12	LHKDP0TEM4PCTST; LHKSTATUSBITS
				PDU0 TEM4 PCB temperature status
	4	12	U12	LHKDP0TEM4PCT
				PDU0 TEM4 PCB temperature raw
0x044	0	4	U12	LHKDP0TEM5PCTST; LHKSTATUSBITS
				PDU0 TEM5 PCB temperature status
	4	12	U12	LHKDP0TEM5PCT
				PDU0 TEM5 PCB temperature raw
0x046	0	4	U12	LHKDP0TEM6PCTST; LHKSTATUSBITS
				PDU0 TEM6 PCB temperature status
	4	12	U12	LHKDP0TEM6PCT
				PDU0 TEM6 PCB temperature raw
0x048	0	4	U12	LHKDP0TEM7PCTST; LHKSTATUSBITS
				PDU0 TEM7 PCB temperature status
	4	12	U12	LHKDP0TEM7PCT
				PDU0 TEM7 PCB temperature raw
0x04A	0	4	U12	LHKDP0TEM8PCTST
				PDU0 TEM8 PCB temperature status
	4	12	U12	LHKDP0TEM8PCT
				PDU0 TEM8 PCB temperature raw
0x04C	0	4	U12	LHKDP0TEM9PCTST
				PDU0 TEM9 PCB temperature status
	4	12	U12	LHKDP0TEM9PCT
				PDU0 TEM9 PCB temperature raw
0x04E	0	4	U12	LHKDP0TEMAPCTST
				PDU0 TEMA PCB temperature status
	4	12	U12	LHKDP0TEMAPCT
				PDU0 TEMA PCB temperature raw
0x050	0	4	U12	LHKDP0TEMBPCTST; LHKSTATUSBITS
				PDU0 TEMB PCB temperature status
	4	12	U12	LHKDP0TEMBPCT
				PDU0 TEMB PCB temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x052	0	4	U12	LHKDP0TEMCPCTST; LHKSTATUSBITS
				PDU0 TEMC PCB temperature status
	4	12	U12	LHKDP0TEMCPCT
				PDU0 TEMC PCB temperature raw
0x054	0	4	U12	LHKDP0TEMDPCTST; LHKSTATUSBITS
				PDU0 TEMD PCB temperature status
	4	12	U12	LHKDP0TEMDPCT
				PDU0 TEMD PCB temperature raw
0x056	0	4	U12	LHKDP0TEMEPCTST; LHKSTATUSBITS
				PDU0 TEME PCB temperature status
	4	12	U12	LHKDP0TEMEPCT
				PDU0 TEME PCB temperature raw
0x058	0	4	U12	LHKDP0TEMFPCTST; LHKSTATUSBITS
				PDU0 TEMF PCB temperature status
	4	12	U12	LHKDP0TEMFPCT
				PDU0 TEMF PCB temperature raw
0x05A	0	4	U12	LHKDP0EPU033VST
				PDU EPU0 3.3V digital status
	4	12	U12	LHKDP0EPU033V
				PDU0 EPU0 3.3V digital raw
0x05C	0	4	U12	LHKDP0EPU133VST
				PDU0 EPU1 3.3V digital status
	4	12	U12	LHKDP0EPU133V
				PDU0 EPU1 3.3V digital raw
0x05E	0	4	U12	LHKDP0EPU233VST
				PDU0 EPU2 3.3V digital status
	4	12	U12	LHKDP0EPU233V
				PDU0 EPU2 3.3V digital raw
0x060	0	4	U12	LHKDP0EPU0TST; LHKSTATUSBITS
				PDU0 EPU0 temperature status
	4	12	U12	LHKDP0EPU0T
				PDU0 EPU0 temperature raw
0x062	0	4	U12	LHKDP0EPU1TST; LHKSTATUSBITS
				PDU0 EPU1 temperature status
	4	12	U12	LHKDP0EPU1T
				PDU0 EPU1 temperature raw
0x064	0	4	U12	LHKDP0EPU2TST; LHKSTATUSBITS
				PDU0 EPU2 temperature status
	4	12	U12	LHKDP0EPU2T
				PDU0 EPU2 temperature raw
0x066	0	4	U12	LHKDAFR33ISUMST
				AEM FREE Board 3.3 Current Sum Status
	4	12	U12	LHKDAFR33ISUM
				AEM FREE Board 3.3 Current Sum
0x068	0	4	U12	LHKDADABTEMPSTAT
				DAQ Board Temperature Status
	4	12	U12	LHKDADABTEMP
				DAQ Board Temperature
0x06A	0	4	U12	LHKDAFR28ISUMST
				AEM FREE Board 28V Current Sum Status
	4	12	U12	LHKDAFR28ISUM
				AEM FREE Board 28V Current Sum

Offset	S	L	Type	ITOS name, attribute(s), and description
0x06C	0	4	U12	LHKDADAB33VSTAT
				DAQ Board 3.3V Status
	4	12	U12	LHKDADAB33V
				DAQ Board 3.3V
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.45 `DiagPduEnv1` (639/0x27F)

Description:

"Diagnostic PDU Environmental Packet 1" Telemetry Packet

PDU Packet 1

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDP0TEM0PSTST; LHKSTATUSBITS
				PDU0 TEM0 power supply temperature status
	4	12	U12	LHKDP0TEM0PST
				PDU0 TEM0 power supply temperature raw
0x016	0	4	U12	LHKDP0TEM1PSTST; LHKSTATUSBITS
				PDU0 TEM1 power supply temperature status
	4	12	U12	LHKDP0TEM1PST
				PDU0 TEM1 power supply temperature raw
0x018	0	4	U12	LHKDP0TEM2PSTST; LHKSTATUSBITS
				PDU0 TEM2 power supply temperature status
	4	12	U12	LHKDP0TEM2PST
				PDU0 TEM2 power supply temperature raw
0x01A	0	4	U12	LHKDP0TEM3PSTST

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU0 TEM3 power supply temperature status
	4	12	U12	LHKDP0TEM3PST
				PDU0 TEM3 power supply temperature raw
0x01C	0	4	U12	LHKDP0TEM4PSTST
				PDU0 TEM4 power supply temperature status
	4	12	U12	LHKDP0TEM4PST
				PDU0 TEM4 power supply temperature raw
0x01E	0	4	U12	LHKDP0TEM5PSTST
				PDU0 TEM5 power supply temperature status
	4	12	U12	LHKDP0TEM5PST
				PDU0 TEM5 power supply temperature raw
0x020	0	4	U12	LHKDP0TEM6PSTST; LHKSTATUSBITS
				PDU0 TEM6 power supply temperature status
	4	12	U12	LHKDP0TEM6PST
				PDU0 TEM6 power supply temperature raw
0x022	0	4	U12	LHKDP0TEM7PSTST; LHKSTATUSBITS
				PDU0 TEM7 power supply temperature status
	4	12	U12	LHKDP0TEM7PST
				PDU0 TEM7 power supply temperature raw
0x024	0	4	U12	LHKDP0TEM8PSTST; LHKSTATUSBITS
				PDU0 TEM8 power supply temperature status
	4	12	U12	LHKDP0TEM8PST
				PDU0 TEM8 power supply temperature raw
0x026	0	4	U12	LHKDP0TEM9PSTST; LHKSTATUSBITS
				PDU0 TEM9 power supply temperature status
	4	12	U12	LHKDP0TEM9PST
				PDU0 TEM9 power supply temperature raw
0x028	0	4	U12	LHKDP0TEMAPSTST; LHKSTATUSBITS
				PDU0 TEMA power supply temperature status
	4	12	U12	LHKDP0TEMAPST
				PDU0 TEMA power supply temperature raw
0x02A	0	4	U12	LHKDP0TEMBPSTST
				PDU0 TEMB power supply temperature status
	4	12	U12	LHKDP0TEMBPST
				PDU0 TEMB power supply temperature raw
0x02C	0	4	U12	LHKDP0TEMCPSTST
				PDU0 TEMC power supply temperature status
	4	12	U12	LHKDP0TEMCPST
				PDU0 TEMC power supply temperature raw
0x02E	0	4	U12	LHKDP0TEMDPSTST
				PDU0 TEMD power supply temperature status
	4	12	U12	LHKDP0TEMDPST
				PDU0 TEMD power supply temperature raw
0x030	0	4	U12	LHKDP0TEMEPSTST; LHKSTATUSBITS
				PDU0 TEME power supply temperature status
	4	12	U12	LHKDP0TEMEPST
				PDU0 TEME power supply temperature raw
0x032	0	4	U12	LHKDP0TEMFPSTST; LHKSTATUSBITS
				PDU0 TEMF power supply temperature status
	4	12	U12	LHKDP0TEMFPST
				PDU0 TEMF power supply temperature raw
0x034	0	4	U12	LHKDP0CAL0BPTST; LHKSTATUSBITS

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU0 TEM0 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL0BPT
				PDU0 TEM0 CAL baseplate temperature raw
0x036	0	4	U12	LHKDP0CAL1BPTST; LHKSTATUSBITS
				PDU0 TEM1 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL1BPT
				PDU0 TEM1 CAL baseplate temperature raw
0x038	0	4	U12	LHKDP0CAL2BPTST; LHKSTATUSBITS
				PDU0 TEM2 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL2BPT
				PDU0 TEM2 CAL baseplate temperature raw
0x03A	0	4	U12	LHKDP0CAL3BPTST
				PDU0 TEM3 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL3BPT
				PDU0 TEM3 CAL baseplate temperature raw
0x03C	0	4	U12	LHKDP0CAL4BPTST
				PDU0 TEM4 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL4BPT
				PDU0 TEM4 CAL baseplate temperature raw
0x03E	0	4	U12	LHKDP0CAL5BPTST
				PDU0 TEM5 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL5BPT
				PDU0 TEM5 CAL baseplate temperature raw
0x040	0	4	U12	LHKDP0CAL6BPTST; LHKSTATUSBITS
				PDU0 TEM6 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL6BPT
				PDU0 TEM6 CAL baseplate temperature raw
0x042	0	4	U12	LHKDP0CAL7BPTST; LHKSTATUSBITS
				PDU0 TEM7 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL7BPT
				PDU0 TEM7 CAL baseplate temperature raw
0x044	0	4	U12	LHKDP0CAL8BPTST; LHKSTATUSBITS
				PDU0 TEM8 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL8BPT
				PDU0 TEM8 CAL baseplate temperature raw
0x046	0	4	U12	LHKDP0CAL9BPTST; LHKSTATUSBITS
				PDU0 TEM9 CAL baseplate temperature status
	4	12	U12	LHKDP0CAL9BPT
				PDU0 TEM9 CAL baseplate temperature raw
0x048	0	4	U12	LHKDP0CALABPTST; LHKSTATUSBITS
				PDU0 TEMA CAL baseplate temperature status
	4	12	U12	LHKDP0CALABPT
				PDU0 TEMA CAL baseplate temperature raw
0x04A	0	4	U12	LHKDP0CALBBPTST
				PDU0 TEMB CAL baseplate temperature status
	4	12	U12	LHKDP0CALBBPT
				PDU0 TEMB CAL baseplate temperature raw
0x04C	0	4	U12	LHKDP0CALCBPTST
				PDU0 TEMC CAL baseplate temperature status
	4	12	U12	LHKDP0CALCBPT
				PDU0 TEMC CAL baseplate temperature raw
0x04E	0	4	U12	LHKDP0CALDBPTST

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU0 TEMD CAL baseplate temperature status
	4	12	U12	LHKDP0CALDBPT
				PDU0 TEMD CAL baseplate temperature raw
0x050	0	4	U12	LHKDP0CALEBPTST; LHKSTATUSBITS
				PDU0 TEME CAL baseplate temperature status
	4	12	U12	LHKDP0CALEBPT
				PDU0 TEME CAL baseplate temperature raw
0x052	0	4	U12	LHKDP0CALFBPTST; LHKSTATUSBITS
				PDU0 TEMF CAL baseplate temperature status
	4	12	U12	LHKDP0CALFBPT
				PDU0 TEMF CAL baseplate temperature raw
0x054	0	8	U1	LHKSPARE08
				Spare 8 bits
0x055	0	8	U1	LHKSPARE08
				Spare 8 bits
0x056	0	8	U1	LHKSPARE08
				Spare 8 bits
0x057	0	8	U1	LHKSPARE08
				Spare 8 bits
0x058	0	8	U1	LHKSPARE08
				Spare 8 bits
0x059	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.46 `DiagPduEnv2` (640/0x280)

Description:

"Diagnostic PDU Environmental Packet 2" Telemetry Packet

PDU Packet 2

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDP0PHP0DSITST; LHKSTATUSBITS
				+Y VCHP 0 DSHP Interface temperature status
	4	12	U12	LHKDP0PHP0DSIT
				+Y VCHP 0 DSHP Interface temperature raw
0x016	0	4	U12	LHKDP0PHP1DSITST; LHKSTATUSBITS
				+Y VCHP 1 DSHP Interface temperature status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDP0PHP1DSIT +Y VCHP 1 DSHP Interface temperature raw
0x018	0	4	U12	LHKDP0PHP2DSITST; LHKSTATUSBITS +Y VCHP 2 DSHP Interface temperature status
	4	12	U12	LHKDP0PHP2DSIT +Y VCHP 2 DSHP Interface temperature raw
0x01A	0	4	U12	LHKDP0PHP3DSITST +Y VCHP 3 DSHP Interface temperature status
	4	12	U12	LHKDP0PHP3DSIT +Y VCHP 3 DSHP Interface temperature raw
0x01C	0	4	U12	LHKDP0PHP4DSITST +Y VCHP 4 DSHP Interface temperature status
	4	12	U12	LHKDP0PHP4DSIT +Y VCHP 4 DSHP Interface temperature raw
0x01E	0	4	U12	LHKDP0PHP5DSITST +Y VCHP 5 DSHP Interface temperature status
	4	12	U12	LHKDP0PHP5DSIT +Y VCHP 5 DSHP Interface temperature raw
0x020	0	4	U12	LHKDP0MHP0DSITST; LHKSTATUSBITS -Y VCHP 0 DSHP Interface temperature status
	4	12	U12	LHKDP0MHP0DSIT -Y VCHP 0 DSHP Interface temperature raw
0x022	0	4	U12	LHKDP0MHP1DSITST; LHKSTATUSBITS -Y VCHP 1 DSHP Interface temperature status
	4	12	U12	LHKDP0MHP1DSIT -Y VCHP 1 DSHP Interface temperature raw
0x024	0	4	U12	LHKDP0MHP2DSITST; LHKSTATUSBITS -Y VCHP 2 DSHP Interface temperature status
	4	12	U12	LHKDP0MHP2DSIT -Y VCHP 2 DSHP Interface temperature raw
0x026	0	4	U12	LHKDP0MHP3DSITST; LHKSTATUSBITS -Y VCHP 3 DSHP Interface temperature status
	4	12	U12	LHKDP0MHP3DSIT -Y VCHP 3 DSHP Interface temperature raw
0x028	0	4	U12	LHKDP0MHP4DSITST; LHKSTATUSBITS -Y VCHP 4 DSHP Interface temperature status
	4	12	U12	LHKDP0MHP4DSIT -Y VCHP 4 DSHP Interface temperature raw
0x02A	0	4	U12	LHKDP0MHP5DSITST -Y VCHP 5 DSHP Interface temperature status
	4	12	U12	LHKDP0MHP5DSIT -Y VCHP 5 DSHP Interface temperature raw
0x02C	0	4	U12	LHKDP0PHP0XLITST +Y VCHP 0 XLHP Interface temperature status
	4	12	U12	LHKDP0PHP0XLIT +Y VCHP 0 XLHP Interface temperature raw
0x02E	0	4	U12	LHKDP0PHP1XLITST +Y VCHP 1 XLHP Interface temperature status
	4	12	U12	LHKDP0PHP1XLIT +Y VCHP 1 XLHP Interface temperature raw
0x030	0	4	U12	LHKDP0PHP2XLITST; LHKSTATUSBITS +Y VCHP 2 XLHP Interface temperature status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDP0PHP2XLIT +Y VCHP 2 XLHP Interface temperature raw
0x032	0	4	U12	LHKDP0PHP3XLITST; LHKSTATUSBITS +Y VCHP 3 XLHP Interface temperature status
	4	12	U12	LHKDP0PHP3XLIT +Y VCHP 3 XLHP Interface temperature raw
0x034	0	4	U12	LHKDP0PHP4XLITST; LHKSTATUSBITS +Y VCHP 4 XLHP Interface temperature status
	4	12	U12	LHKDP0PHP4XLIT +Y VCHP 4 XLHP Interface temperature raw
0x036	0	4	U12	LHKDP0PHP5XLITST; LHKSTATUSBITS +Y VCHP 5 XLHP Interface temperature status
	4	12	U12	LHKDP0PHP5XLIT +Y VCHP 5 XLHP Interface temperature raw
0x038	0	4	U12	LHKDP0MHP0XLITST; LHKSTATUSBITS -Y VCHP 0 XLHP Interface temperature status
	4	12	U12	LHKDP0MHP0XLIT -Y VCHP 0 XLHP Interface temperature raw
0x03A	0	4	U12	LHKDP0MHP1XLITST -Y VCHP 1 XLHP Interface temperature status
	4	12	U12	LHKDP0MHP1XLIT -Y VCHP 1 XLHP Interface temperature raw
0x03C	0	4	U12	LHKDP0MHP2XLITST -Y VCHP 2 XLHP Interface temperature status
	4	12	U12	LHKDP0MHP2XLIT -Y VCHP 2 XLHP Interface temperature raw
0x03E	0	4	U12	LHKDP0MHP3XLITST -Y VCHP 3 XLHP Interface temperature status
	4	12	U12	LHKDP0MHP3XLIT -Y VCHP 3 XLHP Interface temperature raw
0x040	0	4	U12	LHKDP0MHP4XLITST; LHKSTATUSBITS -Y VCHP 4 XLHP Interface temperature status
	4	12	U12	LHKDP0MHP4XLIT -Y VCHP 4 XLHP Interface temperature raw
0x042	0	4	U12	LHKDP0MHP5XLITST; LHKSTATUSBITS -Y VCHP 5 XLHP Interface temperature status
	4	12	U12	LHKDP0MHP5XLIT -Y VCHP 5 XLHP Interface temperature raw
0x044	0	4	U12	LHKDP0PHP0RVHTST; LHKSTATUSBITS +Y VCHP 0 reservoir heater temperature status
	4	12	U12	LHKDP0PHP0RVHT +Y VCHP 0 reservoir heater temperature raw
0x046	0	4	U12	LHKDP0PHP1RVHTST; LHKSTATUSBITS +Y VCHP 1 reservoir heater temperature status
	4	12	U12	LHKDP0PHP1RVHT +Y VCHP 1 reservoir heater temperature raw
0x048	0	4	U12	LHKDP0PHP2RVHTST; LHKSTATUSBITS +Y VCHP 2 reservoir heater temperature status
	4	12	U12	LHKDP0PHP2RVHT +Y VCHP 2 reservoir heater temperature raw
0x04A	0	4	U12	LHKDP0PHP3RVHTST +Y VCHP 3 reservoir heater temperature status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDP0PHP3RVHT +Y VCHP 3 reservoir heater temperature raw
0x04C	0	4	U12	LHKDP0PHP4RVHTST +Y VCHP 4 reservoir heater temperature status
	4	12	U12	LHKDP0PHP4RVHT +Y VCHP 4 reservoir heater temperature raw
0x04E	0	4	U12	LHKDP0PHP5RVHTST +Y VCHP 5 reservoir heater temperature status
	4	12	U12	LHKDP0PHP5RVHT +Y VCHP 5 reservoir heater temperature raw
0x050	0	4	U12	LHKDP0MHP0RVHTST; LHKSTATUSBITS -Y VCHP 0 reservoir heater temperature status
	4	12	U12	LHKDP0MHP0RVHT -Y VCHP 0 reservoir heater temperature raw
0x052	0	4	U12	LHKDP0MHP1RVHTST; LHKSTATUSBITS -Y VCHP 1 reservoir heater temperature status
	4	12	U12	LHKDP0MHP1RVHT -Y VCHP 1 reservoir heater temperature raw
0x054	0	4	U12	LHKDP0MHP2RVHTST; LHKSTATUSBITS -Y VCHP 2 reservoir heater temperature status
	4	12	U12	LHKDP0MHP2RVHT -Y VCHP 2 reservoir heater temperature raw
0x056	0	4	U12	LHKDP0MHP3RVHTST; LHKSTATUSBITS -Y VCHP 3 reservoir heater temperature status
	4	12	U12	LHKDP0MHP3RVHT -Y VCHP 3 reservoir heater temperature raw
0x058	0	4	U12	LHKDP0MHP4RVHTST; LHKSTATUSBITS -Y VCHP 4 reservoir heater temperature status
	4	12	U12	LHKDP0MHP4RVHT -Y VCHP 4 reservoir heater temperature raw
0x05A	0	4	U12	LHKDP0MHP5RVHTST -Y VCHP 5 reservoir heater temperature status
	4	12	U12	LHKDP0MHP5RVHT -Y VCHP 5 reservoir heater temperature raw
0x05C	0	8	U1	LHKSPARE08 Spare 8 bits
0x05D	0	8	U1	LHKSPARE08 Spare 8 bits
0x05E	0	8	U1	LHKSPARE08 Spare 8 bits
0x05F	0	8	U1	LHKSPARE08 Spare 8 bits
0x060	0	8	U1	LHKSPARE08 Spare 8 bits
0x061	0	8	U1	LHKSPARE08 Spare 8 bits
0x062	0	8	U1	LHKSPARE08 Spare 8 bits
0x063	0	8	U1	LHKSPARE08 Spare 8 bits
0x064	0	8	U1	LHKSPARE08 Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.47 `DiagPduEnv3` (641/0x281)

Description:

"Diagnostic PDU Environmental Packet 3" Telemetry Packet

PDU Packet 3

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x014	0	4	U12	LHKDP0GRID0TST; LHKSTATUSBITS
				Grid 0 temperature status
	4	12	U12	LHKDP0GRID0T
				Grid 0 temperature raw
0x016	0	4	U12	LHKDP0GRID1TST; LHKSTATUSBITS
				Grid 1 temperature status
	4	12	U12	LHKDP0GRID1T
				Grid 1 temperature raw
0x018	0	4	U12	LHKDP0GRID2TST; LHKSTATUSBITS
				Grid 2 temperature status
	4	12	U12	LHKDP0GRID2T
				Grid 2 temperature raw
0x01A	0	4	U12	LHKDP0GRID3TST
				Grid 3 temperature status
	4	12	U12	LHKDP0GRID3T
				Grid 3 temperature raw
0x01C	0	4	U12	LHKDP0GRID4TST
				Grid 4 temperature status
	4	12	U12	LHKDP0GRID4T
				Grid 4 temperature raw
0x01E	0	4	U12	LHKDP0GRID5TST
				Grid 5 temperature status
	4	12	U12	LHKDP0GRID5T
				Grid 5 temperature raw
0x020	0	4	U12	LHKDP0GRID6TST; LHKSTATUSBITS
				Grid 6 temperature status
	4	12	U12	LHKDP0GRID6T
				Grid 6 temperature raw
0x022	0	4	U12	LHKDP0GRID7TST; LHKSTATUSBITS
				Grid 7 temperature status
	4	12	U12	LHKDP0GRID7T
				Grid 7 temperature raw
0x024	0	4	U12	LHKDP0GRID8TST; LHKSTATUSBITS
				Grid 8 temperature status
	4	12	U12	LHKDP0GRID8T
				Grid 8 temperature raw
0x026	0	4	U12	LHKDP0GRID9TST; LHKSTATUSBITS
				Grid 9 temperature status
	4	12	U12	LHKDP0GRID9T
				Grid 9 temperature raw
0x028	0	4	U12	LHKDP0GRID10TST; LHKSTATUSBITS
				Grid 10 temperature status
	4	12	U12	LHKDP0GRID10T
				Grid 10 temperature raw
0x02A	0	4	U12	LHKDP0GRID11TST
				Grid 11 temperature status
	4	12	U12	LHKDP0GRID11T
				Grid 11 temperature raw
0x02C	0	4	U12	?
				?
	4	12	U12	LHKDP0ACDSHT0

Offset	S	L	Type	ITOS name, attribute(s), and description
				ACD shell temperature 0 raw
0x02E	0	4	U12	LHKDP0ACDSHT0ST
				ACD shell temperature 0 status
	4	12	U12	LHKDP0ACDSHT1
				ACD shell temperature 1 raw
0x030	0	4	U12	LHKDP0ACDPRT0ST; LHKSTATUSBITS
				ACD PMT rail temperature 0 status
	4	12	U12	LHKDP0ACDPRT0
				ACD PMT rail temperature 0 raw
0x032	0	4	U12	LHKDP0ACDPRT1ST; LHKSTATUSBITS
				ACD PMT rail temperature 1 status
	4	12	U12	LHKDP0ACDPRT1
				ACD PMT rail temperature 1 raw
0x034	0	4	U12	LHKDP0ACDPRT2ST; LHKSTATUSBITS
				ACD PMT rail temperature 2 status
	4	12	U12	LHKDP0ACDPRT2
				ACD PMT rail temperature 2 raw
0x036	0	4	U12	LHKDP0ACDPRT3ST; LHKSTATUSBITS
				ACD PMT rail temperature 3 status
	4	12	U12	LHKDP0ACDPRT3
				ACD PMT rail temperature 3 raw
0x038	0	4	U12	LHKDP0ACDBGT0ST; LHKSTATUSBITS
				ACD BEA grid temperature 0 status
	4	12	U12	LHKDP0ACDBGT0
				ACD BEA grid temperature 0 raw
0x03A	0	4	U12	LHKDP0ACDBGT1ST
				ACD BEA grid temperature 1 status
	4	12	U12	LHKDP0ACDBGT1
				ACD BEA grid temperature 1 raw
0x03C	0	4	U12	LHKDP0RADAFHT0ST
				Radiator 0 antifreeze heater temperature status
	4	12	U12	LHKDP0RADAFHT0
				Radiator 0 antifreeze heater temperature raw
0x03E	0	4	U12	LHKDP0RADAFHT1ST
				Radiator 1 antifreeze heater temperature status
	4	12	U12	LHKDP0RADAFHT1
				Radiator 1 antifreeze heater temperature raw
0x040	0	4	U12	LHKDP0GRAD0IFTST; LHKSTATUSBITS
				Grid radiator 0 interface temperature status
	4	12	U12	LHKDP0GRADIFT0
				Grid radiator 0 interface temperature raw
0x042	0	4	U12	LHKDP0GRAD1IFTST; LHKSTATUSBITS
				Grid radiator 1 interface temperature status
	4	12	U12	LHKDP0GRAD1IFT
				Grid radiator 1 interface temperature raw
0x044	0	4	U12	LHKDP0GRAD2IFTST; LHKSTATUSBITS
				Grid radiator 2 interface temperature status
	4	12	U12	LHKDP0GRAD2IFT
				Grid radiator 2 interface temperature raw
0x046	0	4	U12	LHKDP0GRAD3IFTST; LHKSTATUSBITS
				Grid radiator 3 interface temperature status
	4	12	U12	LHKDP0GRAD3IFT

Offset	S	L	Type	ITOS name, attribute(s), and description
				Grid radiator 3 interface temperature raw
0x048	0	4	U12	LHKDP0RAD0TST; LHKSTATUSBITS
				Radiator 0 temperature status
	4	12	U12	LHKDP0RAD0T
				Radiator 0 temperature raw
0x04A	0	4	U12	LHKDP0RAD1TST
				Radiator 1 temperature status
	4	12	U12	LHKDP0RAD1T
				Radiator 1 temperature raw
0x04C	0	4	U12	LHKDP0RAD2TST
				Radiator 2 temperature status
	4	12	U12	LHKDP0RAD2T
				Radiator 2 temperature raw
0x04E	0	4	U12	LHKDP0RAD3TST
				Radiator 3 temperature status
	4	12	U12	LHKDP0RAD3T
				Radiator 3 temperature raw
0x050	0	4	U12	LHKDP0RAD4TST; LHKSTATUSBITS
				Radiator 4 temperature status
	4	12	U12	LHKDP0RAD4T
				Radiator 4 temperature raw
0x052	0	4	U12	LHKDP0RAD5TST; LHKSTATUSBITS
				Radiator 5 temperature status
	4	12	U12	LHKDP0RAD5T
				Radiator 5 temperature raw
0x054	0	4	U12	LHKDP0RAD6TST; LHKSTATUSBITS
				Radiator 6 temperature status
	4	12	U12	LHKDP0RAD6T
				Radiator 6 temperature raw
0x056	0	4	U12	LHKDP0RAD7TST; LHKSTATUSBITS
				Radiator 7 temperature status
	4	12	U12	LHKDP0RAD7T
				Radiator 7 temperature raw
0x058	0	4	U12	LHKDP0RAD8TST; LHKSTATUSBITS
				Radiator 8 temperature status
	4	12	U12	LHKDP0RAD8T
				Radiator 8 temperature raw
0x05A	0	4	U12	LHKDP0RAD9TST
				Radiator 9 temperature status
	4	12	U12	LHKDP0RAD9T
				Radiator 9 temperature raw
0x05C	0	4	U12	LHKDP0RAD10TST
				Radiator 10 temperature status
	4	12	U12	LHKDP0RAD10T
				Radiator 10 temperature raw
0x05E	0	4	U12	LHKDP0RAD11TST
				Radiator 11 temperature status
	4	12	U12	LHKDP0RAD11T
				Radiator 11 temperature raw
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.48 `DiagPduEnv4` (642/0x282)

Description:

"Diagnostic PDU Environmental Packet 4" Telemetry Packet

PDU Packet 4

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits

Offset	S	L	Type	ITOS name, attribute(s), and description
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	1	U1	LHKDP1TEMFPM; LDPDUTEMPWRST
				PDU1 TEMF Power Mgt Switch
	1	1	U1	LHKDP1TEMEPM
				PDU1 TEME Power Mgt Switch
	2	1	U1	LHKDP1TEMDPM
				PDU1 TEMD Power Mgt Switch
	3	1	U1	LHKDP1TEMCPM
				PDU1 TEMC Power Mgt Switch
	4	1	U1	LHKDP1TEMBPM
				PDU1 TEMB Power Mgt Switch
	5	1	U1	LHKDP1TEMAPM
				PDU1 TEMA Power Mgt Switch
	6	1	U1	LHKDP1TEM9PM
				PDU1 TEM9 Power Mgt Switch
	7	1	U1	LHKDP1TEM8PM
				PDU1 TEM8 Power Mgt Switch
	8	1	U1	LHKDP1TEM7PM
				PDU1 TEM7 Power Mgt Switch
	9	1	U1	LHKDP1TEM6PM
				PDU1 TEM6 Power Mgt Switch
	10	1	U1	LHKDP1TEM5PM
				PDU1 TEM5 Power Mgt Switch
	11	1	U1	LHKDP1TEM4PM
				PDU1 TEM4 Power Mgt Switch
	12	1	U1	LHKDP1TEM3PM
				PDU1 TEM3 Power Mgt Switch
	13	1	U1	LHKDP1TEM2PM
				PDU1 TEM2 Power Mgt Switch
	14	1	U1	LHKDP1TEM1PM
				PDU1 TEM1 Power Mgt Switch
	15	1	U1	LHKDP1TEM0PM
				PDU1 TEM0 Power Mgt Switch
0x016	0	10	U12	LHKSPARE10
				Spare 10 bits
	10	1	U1	LHKDP1EPU2CNVT
				PDU1 EPU2 Converter Switch
	11	1	U1	LHKDP1EPU1CNVT
				PDU1 EPU1 Converter Switch
	12	1	U1	LHKDP1EPU0CNVT
				PDU1 EPU0 Converter Switch
	13	1	U1	LHKDP1EPU2PM
				PDU1 EPU2 Power Mgt Switch
	14	1	U1	LHKDP1EPU1PM
				PDU1 EPU1 Power Mgt Switch

Offset	S	L	Type	ITOS name, attribute(s), and description
	15	1	U1	LHKDP1EPU0PM PDU1 EPU0 Power Mgt Switch
0x018	0	13	U12	LHKSPARE13 Spare 13 bits
	13	1	U1	LHKDP1ACDCNVT PDU1 ACD Converter Switch
	14	1	I1	LHKDP1ACDPSP PDU1 ACD Power Supply Switch
	15	1	I1	LHKDP1ACDPM PDU1 ACD Power Mgt Switch
0x01A	0	4	U12	LHKDP1TEM033VST PDU1 TEM0 3.3V digital status
	4	12	U12	LHKDP1TEM033V PDU1 TEM0 3.3V digital raw
0x01C	0	4	U12	LHKDP1TEM133VST PDU1 TEM1 3.3V digital status
	4	12	U12	LHKDP1TEM133V PDU1 TEM1 3.3V digital raw
0x01E	0	4	U12	LHKDP1TEM233VST PDU1 TEM2 3.3V digital status
	4	12	U12	LHKDP1TEM233V PDU1 TEM2 3.3V digital raw
0x020	0	4	U12	LHKDP1TEM333VST; LHKSTATUSBITS PDU1 TEM3 3.3V digital status
	4	12	U12	LHKDP1TEM333V PDU1 TEM3 3.3V digital raw
0x022	0	4	U12	LHKDP1TEM433VST; LHKSTATUSBITS PDU1 TEM4 3.3V digital status
	4	12	U12	LHKDP1TEM433V PDU1 TEM4 3.3V digital raw
0x024	0	4	U12	LHKDP1TEM533VST; LHKSTATUSBITS PDU1 TEM5 3.3V digital status
	4	12	U12	LHKDP1TEM533V PDU1 TEM5 3.3V digital raw
0x026	0	4	U12	LHKDP1TEM633VST; LHKSTATUSBITS PDU1 TEM6 3.3V digital status
	4	12	U12	LHKDP1TEM633V PDU1 TEM6 3.3V digital raw
0x028	0	4	U12	LHKDP1TEM733VST; LHKSTATUSBITS PDU1 TEM7 3.3V digital status
	4	12	U12	LHKDP1TEM733V PDU1 TEM7 3.3V digital raw
0x02A	0	4	U12	LHKDP1TEM833VST PDU1 TEM8 3.3V digital status
	4	12	U12	LHKDP1TEM833V PDU1 TEM8 3.3V digital raw
0x02C	0	4	U12	LHKDP1TEM933VST PDU1 TEM9 3.3V digital status
	4	12	U12	LHKDP1TEM933V PDU1 TEM9 3.3V digital raw
0x02E	0	4	U12	LHKDP1TEMA33VST PDU1 TEMA 3.3V digital status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDP1TEMA33V
				PDU1 TEMA 3.3V digital raw
0x030	0	4	U12	LHKDP1TEMB33VST; LHKSTATUSBITS
				PDU1 TEMB 3.3V digital status
	4	12	U12	LHKDP1TEMB33V
				PDU1 TEMB 3.3V digital raw
0x032	0	4	U12	LHKDP1TEMC33VST; LHKSTATUSBITS
				PDU1 TEMC 3.3V digital status
	4	12	U12	LHKDP1TEMC33V
				PDU1 TEMC 3.3V digital raw
0x034	0	4	U12	LHKDP1TEMD33VST; LHKSTATUSBITS
				PDU1 TEMD 3.3V digital status
	4	12	U12	LHKDP1TEMD33V
				PDU1 TEMD 3.3V digital raw
0x036	0	4	U12	LHKDP1TEME33VST; LHKSTATUSBITS
				PDU1 TEME 3.3V digital status
	4	12	U12	LHKDP1TEME33V
				PDU1 TEME 3.3V digital raw
0x038	0	4	U12	LHKDP1TEMF33VST; LHKSTATUSBITS
				PDU1 TEMF 3.3V digital status
	4	12	U12	LHKDP1TEMF33V
				PDU1 TEMF 3.3V digital raw
0x03A	0	4	U12	LHKDP1TEM0PCTST
				PDU1 TEM0 PCB temperature status
	4	12	U12	LHKDP1TEM0PCT
				PDU1 TEM0 PCB temperature raw
0x03C	0	4	U12	LHKDP1TEM1PCTST
				PDU1 TEM1 PCB temperature status
	4	12	U12	LHKDP1TEM1PCT
				PDU1 TEM1 PCB temperature raw
0x03E	0	4	U12	LHKDP1TEM2PCTST
				PDU1 TEM2 PCB temperature status
	4	12	U12	LHKDP1TEM2PCT
				PDU1 TEM2 PCB temperature raw
0x040	0	4	U12	LHKDP1TEM3PCTST; LHKSTATUSBITS
				PDU1 TEM3 PCB temperature status
	4	12	U12	LHKDP1TEM3PCT
				PDU1 TEM3 PCB temperature raw
0x042	0	4	U12	LHKDP1TEM4PCTST; LHKSTATUSBITS
				PDU1 TEM4 PCB temperature status
	4	12	U12	LHKDP1TEM4PCT
				PDU1 TEM4 PCB temperature raw
0x044	0	4	U12	LHKDP1TEM5PCTST; LHKSTATUSBITS
				PDU1 TEM5 PCB temperature status
	4	12	U12	LHKDP1TEM5PCT
				PDU1 TEM5 PCB temperature raw
0x046	0	4	U12	LHKDP1TEM6PCTST; LHKSTATUSBITS
				PDU1 TEM6 PCB temperature status
	4	12	U12	LHKDP1TEM6PCT
				PDU1 TEM6 PCB temperature raw
0x048	0	4	U12	LHKDP1TEM7PCTST; LHKSTATUSBITS
				PDU1 TEM7 PCB temperature status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDP1TEM7PCT
				PDU1 TEM7 PCB temperature raw
0x04A	0	4	U12	LHKDP1TEM8PCTST
				PDU1 TEM8 PCB temperature status
	4	12	U12	LHKDP1TEM8PCT
				PDU1 TEM8 PCB temperature raw
0x04C	0	4	U12	LHKDP1TEM9PCTST
				PDU1 TEM9 PCB temperature status
	4	12	U12	LHKDP1TEM9PCT
				PDU1 TEM9 PCB temperature raw
0x04E	0	4	U12	LHKDP1TEMAPCTST
				PDU1 TEMA PCB temperature status
	4	12	U12	LHKDP1TEMAPCT
				PDU1 TEMA PCB temperature raw
0x050	0	4	U12	LHKDP1TEMBPCTST; LHKSTATUSBITS
				PDU1 TEMB PCB temperature status
	4	12	U12	LHKDP1TEMBPCT
				PDU1 TEMB PCB temperature raw
0x052	0	4	U12	LHKDP1TEMCPCTST; LHKSTATUSBITS
				PDU1 TEMC PCB temperature status
	4	12	U12	LHKDP1TEMCPCT
				PDU1 TEMC PCB temperature raw
0x054	0	4	U12	LHKDP1TEMDPCTST; LHKSTATUSBITS
				PDU1 TEMD PCB temperature status
	4	12	U12	LHKDP1TEMDPCT
				PDU1 TEMD PCB temperature raw
0x056	0	4	U12	LHKDP1TEMEPCTST; LHKSTATUSBITS
				PDU1 TEME PCB temperature status
	4	12	U12	LHKDP1TEMEPCT
				PDU1 TEME PCB temperature raw
0x058	0	4	U12	LHKDP1TEMFPCTST; LHKSTATUSBITS
				PDU1 TEMF PCB temperature status
	4	12	U12	LHKDP1TEMFPCT
				PDU1 TEMF PCB temperature raw
0x05A	0	4	U12	LHKDP1EPU033VST
				PDU EPU0 3.3V digital status
	4	12	U12	LHKDP1EPU033V
				PDU1 EPU0 3.3V digital raw
0x05C	0	4	U12	LHKDP1EPU133VST
				PDU1 EPU1 3.3V digital status
	4	12	U12	LHKDP1EPU133V
				PDU1 EPU1 3.3V digital raw
0x05E	0	4	U12	LHKDP1EPU233VST
				PDU1 EPU2 3.3V digital status
	4	12	U12	LHKDP1EPU233V
				PDU1 EPU2 3.3V digital raw
0x060	0	4	U12	LHKDP1EPU0TST; LHKSTATUSBITS
				PDU1 EPU0 temperature status
	4	12	U12	LHKDP1EPU0T
				PDU1 EPU0 temperature raw
0x062	0	4	U12	LHKDP1EPU1TST; LHKSTATUSBITS
				PDU1 EPU1 temperature status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDP1EPU1T PDU1 EPU1 temperature raw
0x064	0	4	U12	LHKDP1EPU2TST; LHKSTATUSBITS PDU1 EPU2 temperature status
	4	12	U12	LHKDP1EPU2T PDU1 EPU2 temperature raw
0x066	0	8	U1	LHKSPARE08 Spare 8 bits
0x067	0	8	U1	LHKSPARE08 Spare 8 bits
0x068	0	8	U1	LHKSPARE08 Spare 8 bits
0x069	0	8	U1	LHKSPARE08 Spare 8 bits
0x06A	0	8	U1	LHKSPARE08 Spare 8 bits
0x06B	0	8	U1	LHKSPARE08 Spare 8 bits
0x06C	0	8	U1	LHKSPARE08 Spare 8 bits
0x06D	0	8	U1	LHKSPARE08 Spare 8 bits
0x06E	0	8	U1	LHKSPARE08 Spare 8 bits
0x06F	0	8	U1	LHKSPARE08 Spare 8 bits
0x070	0	8	U1	LHKSPARE08 Spare 8 bits
0x071	0	8	U1	LHKSPARE08 Spare 8 bits
0x072	0	8	U1	LHKSPARE08 Spare 8 bits
0x073	0	8	U1	LHKSPARE08 Spare 8 bits

10.3.49 `DiagPduEnv5` (643/0x283)

Description:

"Diagnostic PDU Environmental Packet 5" Telemetry Packet

PDU Packet 5

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDP1TEM0PSTST; LHKSTATUSBITS
				PDU1 TEM0 power supply temperature status
	4	12	U12	LHKDP1TEM0PST
				PDU1 TEM0 power supply temperature raw
0x016	0	4	U12	LHKDP1TEM1PSTST; LHKSTATUSBITS
				PDU1 TEM1 power supply temperature status
	4	12	U12	LHKDP1TEM1PST
				PDU1 TEM1 power supply temperature raw
0x018	0	4	U12	LHKDP1TEM2PSTST; LHKSTATUSBITS
				PDU1 TEM2 power supply temperature status
	4	12	U12	LHKDP1TEM2PST
				PDU1 TEM2 power supply temperature raw
0x01A	0	4	U12	LHKDP1TEM3PSTST
				PDU1 TEM3 power supply temperature status
	4	12	U12	LHKDP1TEM3PST
				PDU1 TEM3 power supply temperature raw
0x01C	0	4	U12	LHKDP1TEM4PSTST
				PDU1 TEM4 power supply temperature status
	4	12	U12	LHKDP1TEM4PST
				PDU1 TEM4 power supply temperature raw
0x01E	0	4	U12	LHKDP1TEM5PSTST
				PDU1 TEM5 power supply temperature status
	4	12	U12	LHKDP1TEM5PST
				PDU1 TEM5 power supply temperature raw
0x020	0	4	U12	LHKDP1TEM6PSTST; LHKSTATUSBITS
				PDU1 TEM6 power supply temperature status
	4	12	U12	LHKDP1TEM6PST
				PDU1 TEM6 power supply temperature raw
0x022	0	4	U12	LHKDP1TEM7PSTST; LHKSTATUSBITS
				PDU1 TEM7 power supply temperature status
	4	12	U12	LHKDP1TEM7PST
				PDU1 TEM7 power supply temperature raw
0x024	0	4	U12	LHKDP1TEM8PSTST; LHKSTATUSBITS
				PDU1 TEM8 power supply temperature status
	4	12	U12	LHKDP1TEM8PST
				PDU1 TEM8 power supply temperature raw
0x026	0	4	U12	LHKDP1TEM9PSTST; LHKSTATUSBITS
				PDU1 TEM9 power supply temperature status
	4	12	U12	LHKDP1TEM9PST
				PDU1 TEM9 power supply temperature raw
0x028	0	4	U12	LHKDP1TEMAPSTST; LHKSTATUSBITS
				PDU1 TEMA power supply temperature status
	4	12	U12	LHKDP1TEMAPST
				PDU1 TEMA power supply temperature raw
0x02A	0	4	U12	LHKDP1TEMBPSTST
				PDU1 TEMB power supply temperature status
	4	12	U12	LHKDP1TEMBPST

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU1 TEMB power supply temperature raw
0x02C	0	4	U12	LHKDP1TEMCPSTST
				PDU1 TEMC power supply temperature status
	4	12	U12	LHKDP1TEMCPST
				PDU1 TEMC power supply temperature raw
0x02E	0	4	U12	LHKDP1TEMDPSTST
				PDU1 TEMD power supply temperature status
	4	12	U12	LHKDP1TEMDPST
				PDU1 TEMD power supply temperature raw
0x030	0	4	U12	LHKDP1TEMEPSTST; LHKSTATUSBITS
				PDU1 TEME power supply temperature status
	4	12	U12	LHKDP1TEMEPST
				PDU1 TEME power supply temperature raw
0x032	0	4	U12	LHKDP1TEMFPSTST; LHKSTATUSBITS
				PDU1 TEMF power supply temperature status
	4	12	U12	LHKDP1TEMFPST
				PDU1 TEMF power supply temperature raw
0x034	0	4	U12	LHKDP1CAL0BPTST; LHKSTATUSBITS
				PDU1 TEM0 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL0BPT
				PDU1 TEM0 CAL baseplate temperature raw
0x036	0	4	U12	LHKDP1CAL1BPTST; LHKSTATUSBITS
				PDU1 TEM1 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL1BPT
				PDU1 TEM1 CAL baseplate temperature raw
0x038	0	4	U12	LHKDP1CAL2BPTST; LHKSTATUSBITS
				PDU1 TEM2 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL2BPT
				PDU1 TEM2 CAL baseplate temperature raw
0x03A	0	4	U12	LHKDP1CAL3BPTST
				PDU1 TEM3 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL3BPT
				PDU1 TEM3 CAL baseplate temperature raw
0x03C	0	4	U12	LHKDP1CAL4BPTST
				PDU1 TEM4 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL4BPT
				PDU1 TEM4 CAL baseplate temperature raw
0x03E	0	4	U12	LHKDP1CAL5BPTST
				PDU1 TEM5 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL5BPT
				PDU1 TEM5 CAL baseplate temperature raw
0x040	0	4	U12	LHKDP1CAL6BPTST; LHKSTATUSBITS
				PDU1 TEM6 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL6BPT
				PDU1 TEM6 CAL baseplate temperature raw
0x042	0	4	U12	LHKDP1CAL7BPTST; LHKSTATUSBITS
				PDU1 TEM7 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL7BPT
				PDU1 TEM7 CAL baseplate temperature raw
0x044	0	4	U12	LHKDP1CAL8BPTST; LHKSTATUSBITS
				PDU1 TEM8 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL8BPT

Offset	S	L	Type	ITOS name, attribute(s), and description
				PDU1 TEM8 CAL baseplate temperature raw
0x046	0	4	U12	LHKDP1CAL9BPTST; LHKSTATUSBITS
				PDU1 TEM9 CAL baseplate temperature status
	4	12	U12	LHKDP1CAL9BPT
				PDU1 TEM9 CAL baseplate temperature raw
0x048	0	4	U12	LHKDP1CALABPTST; LHKSTATUSBITS
				PDU1 TEMA CAL baseplate temperature status
	4	12	U12	LHKDP1CALABPT
				PDU1 TEMA CAL baseplate temperature raw
0x04A	0	4	U12	LHKDP1CALBBPTST
				PDU1 TEMB CAL baseplate temperature status
	4	12	U12	LHKDP1CALBBPT
				PDU1 TEMB CAL baseplate temperature raw
0x04C	0	4	U12	LHKDP1CALCBPTST
				PDU1 TEMC CAL baseplate temperature status
	4	12	U12	LHKDP1CALCBPT
				PDU1 TEMC CAL baseplate temperature raw
0x04E	0	4	U12	LHKDP1CALDBPTST
				PDU1 TEMD CAL baseplate temperature status
	4	12	U12	LHKDP1CALDBPT
				PDU1 TEMD CAL baseplate temperature raw
0x050	0	4	U12	LHKDP1CALEBPTST; LHKSTATUSBITS
				PDU1 TEME CAL baseplate temperature status
	4	12	U12	LHKDP1CALEBPT
				PDU1 TEME CAL baseplate temperature raw
0x052	0	4	U12	LHKDP1CALFBPTST; LHKSTATUSBITS
				PDU1 TEMF CAL baseplate temperature status
	4	12	U12	LHKDP1CALFBPT
				PDU1 TEMF CAL baseplate temperature raw
0x054	0	8	U1	LHKSPARE08
				Spare 8 bits
0x055	0	8	U1	LHKSPARE08
				Spare 8 bits
0x056	0	8	U1	LHKSPARE08
				Spare 8 bits
0x057	0	8	U1	LHKSPARE08
				Spare 8 bits
0x058	0	8	U1	LHKSPARE08
				Spare 8 bits
0x059	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x05F	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.50 `DiagPduEnv6` (644/0x284)

Description:

"Diagnostic PDU Environmental Packet 6" Telemetry Packet

PDU Packet 6

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08 Spare 8 bits
0x00F	0	8	U1	LHKSPARE08 Spare 8 bits
0x010	0	8	U1	LHKSPARE08 Spare 8 bits
0x011	0	8	U1	LHKSPARE08 Spare 8 bits
0x012	0	8	U1	LHKSPARE08 Spare 8 bits
0x013	0	8	U1	LHKSPARE08 Spare 8 bits
0x014	0	4	U12	LHKDP1PHP0DSITST; LHKSTATUSBITS +Y VCHP 0 DSHP Interface temperature status
	4	12	U12	LHKDP1PHP0DSIT +Y VCHP 0 DSHP Interface temperature raw
0x016	0	4	U12	LHKDP1PHP1DSITST; LHKSTATUSBITS +Y VCHP 1 DSHP Interface temperature status
	4	12	U12	LHKDP1PHP1DSIT +Y VCHP 1 DSHP Interface temperature raw
0x018	0	4	U12	LHKDP1PHP2DSITST; LHKSTATUSBITS +Y VCHP 2 DSHP Interface temperature status
	4	12	U12	LHKDP1PHP2DSIT +Y VCHP 2 DSHP Interface temperature raw
0x01A	0	4	U12	LHKDP1PHP3DSITST +Y VCHP 3 DSHP Interface temperature status
	4	12	U12	LHKDP1PHP3DSIT +Y VCHP 3 DSHP Interface temperature raw
0x01C	0	4	U12	LHKDP1PHP4DSITST +Y VCHP 4 DSHP Interface temperature status
	4	12	U12	LHKDP1PHP4DSIT +Y VCHP 4 DSHP Interface temperature raw
0x01E	0	4	U12	LHKDP1PHP5DSITST +Y VCHP 5 DSHP Interface temperature status
	4	12	U12	LHKDP1PHP5DSIT +Y VCHP 5 DSHP Interface temperature raw
0x020	0	4	U12	LHKDP1MHP0DSITST; LHKSTATUSBITS -Y VCHP 0 DSHP Interface temperature status
	4	12	U12	LHKDP1MHP0DSIT -Y VCHP 0 DSHP Interface temperature raw
0x022	0	4	U12	LHKDP1MHP1DSITST; LHKSTATUSBITS -Y VCHP 1 DSHP Interface temperature status
	4	12	U12	LHKDP1MHP1DSIT -Y VCHP 1 DSHP Interface temperature raw
0x024	0	4	U12	LHKDP1MHP2DSITST; LHKSTATUSBITS -Y VCHP 2 DSHP Interface temperature status
	4	12	U12	LHKDP1MHP2DSIT -Y VCHP 2 DSHP Interface temperature raw
0x026	0	4	U12	LHKDP1MHP3DSITST; LHKSTATUSBITS -Y VCHP 3 DSHP Interface temperature status
	4	12	U12	LHKDP1MHP3DSIT -Y VCHP 3 DSHP Interface temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x028	0	4	U12	LHKDP1MHP4DSITST; LHKSTATUSBITS -Y VCHP 4 DSHP Interface temperature status
	4	12	U12	LHKDP1MHP4DSIT -Y VCHP 4 DSHP Interface temperature raw
0x02A	0	4	U12	LHKDP1MHP5DSITST -Y VCHP 5 DSHP Interface temperature status
	4	12	U12	LHKDP1MHP5DSIT -Y VCHP 5 DSHP Interface temperature raw
0x02C	0	4	U12	LHKDP1PHP0XLITST +Y VCHP 0 XLHP Interface temperature status
	4	12	U12	LHKDP1PHP0XLIT +Y VCHP 0 XLHP Interface temperature raw
0x02E	0	4	U12	LHKDP1PHP1XLITST +Y VCHP 1 XLHP Interface temperature status
	4	12	U12	LHKDP1PHP1XLIT +Y VCHP 1 XLHP Interface temperature raw
0x030	0	4	U12	LHKDP1PHP2XLITST; LHKSTATUSBITS +Y VCHP 2 XLHP Interface temperature status
	4	12	U12	LHKDP1PHP2XLIT +Y VCHP 2 XLHP Interface temperature raw
0x032	0	4	U12	LHKDP1PHP3XLITST; LHKSTATUSBITS +Y VCHP 3 XLHP Interface temperature status
	4	12	U12	LHKDP1PHP3XLIT +Y VCHP 3 XLHP Interface temperature raw
0x034	0	4	U12	LHKDP1PHP4XLITST; LHKSTATUSBITS +Y VCHP 4 XLHP Interface temperature status
	4	12	U12	LHKDP1PHP4XLIT +Y VCHP 4 XLHP Interface temperature raw
0x036	0	4	U12	LHKDP1PHP5XLITST; LHKSTATUSBITS +Y VCHP 5 XLHP Interface temperature status
	4	12	U12	LHKDP1PHP5XLIT +Y VCHP 5 XLHP Interface temperature raw
0x038	0	4	U12	LHKDP1MHP0XLITST; LHKSTATUSBITS -Y VCHP 0 XLHP Interface temperature status
	4	12	U12	LHKDP1MHP0XLIT -Y VCHP 0 XLHP Interface temperature raw
0x03A	0	4	U12	LHKDP1MHP1XLITST -Y VCHP 1 XLHP Interface temperature status
	4	12	U12	LHKDP1MHP1XLIT -Y VCHP 1 XLHP Interface temperature raw
0x03C	0	4	U12	LHKDP1MHP2XLITST -Y VCHP 2 XLHP Interface temperature status
	4	12	U12	LHKDP1MHP2XLIT -Y VCHP 2 XLHP Interface temperature raw
0x03E	0	4	U12	LHKDP1MHP3XLITST -Y VCHP 3 XLHP Interface temperature status
	4	12	U12	LHKDP1MHP3XLIT -Y VCHP 3 XLHP Interface temperature raw
0x040	0	4	U12	LHKDP1MHP4XLITST; LHKSTATUSBITS -Y VCHP 4 XLHP Interface temperature status
	4	12	U12	LHKDP1MHP4XLIT -Y VCHP 4 XLHP Interface temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x042	0	4	U12	LHKDP1MHP5XLITST; LHKSTATUSBITS -Y VCHP 5 XLHP Interface temperature status
	4	12	U12	LHKDP1MHP5XLIT -Y VCHP 5 XLHP Interface temperature raw
0x044	0	4	U12	LHKDP1PHP0RVHTST; LHKSTATUSBITS +Y VCHP 0 reservoir heater temperature status
	4	12	U12	LHKDP1PHP0RVHT +Y VCHP 0 reservoir heater temperature raw
0x046	0	4	U12	LHKDP1PHP1RVHTST; LHKSTATUSBITS +Y VCHP 1 reservoir heater temperature status
	4	12	U12	LHKDP1PHP1RVHT +Y VCHP 1 reservoir heater temperature raw
0x048	0	4	U12	LHKDP1PHP2RVHTST; LHKSTATUSBITS +Y VCHP 2 reservoir heater temperature status
	4	12	U12	LHKDP1PHP2RVHT +Y VCHP 2 reservoir heater temperature raw
0x04A	0	4	U12	LHKDP1PHP3RVHTST +Y VCHP 3 reservoir heater temperature status
	4	12	U12	LHKDP1PHP3RVHT +Y VCHP 3 reservoir heater temperature raw
0x04C	0	4	U12	LHKDP1PHP4RVHTST +Y VCHP 4 reservoir heater temperature status
	4	12	U12	LHKDP1PHP4RVHT +Y VCHP 4 reservoir heater temperature raw
0x04E	0	4	U12	LHKDP1PHP5RVHTST +Y VCHP 5 reservoir heater temperature status
	4	12	U12	LHKDP1PHP5RVHT +Y VCHP 5 reservoir heater temperature raw
0x050	0	4	U12	LHKDP1MHP0RVHTST; LHKSTATUSBITS -Y VCHP 0 reservoir heater temperature status
	4	12	U12	LHKDP1MHP0RVHT -Y VCHP 0 reservoir heater temperature raw
0x052	0	4	U12	LHKDP1MHP1RVHTST; LHKSTATUSBITS -Y VCHP 1 reservoir heater temperature status
	4	12	U12	LHKDP1MHP1RVHT -Y VCHP 1 reservoir heater temperature raw
0x054	0	4	U12	LHKDP1MHP2RVHTST; LHKSTATUSBITS -Y VCHP 2 reservoir heater temperature status
	4	12	U12	LHKDP1MHP2RVHT -Y VCHP 2 reservoir heater temperature raw
0x056	0	4	U12	LHKDP1MHP3RVHTST; LHKSTATUSBITS -Y VCHP 3 reservoir heater temperature status
	4	12	U12	LHKDP1MHP3RVHT -Y VCHP 3 reservoir heater temperature raw
0x058	0	4	U12	LHKDP1MHP4RVHTST; LHKSTATUSBITS -Y VCHP 4 reservoir heater temperature status
	4	12	U12	LHKDP1MHP4RVHT -Y VCHP 4 reservoir heater temperature raw
0x05A	0	4	U12	LHKDP1MHP5RVHTST -Y VCHP 5 reservoir heater temperature status
	4	12	U12	LHKDP1MHP5RVHT -Y VCHP 5 reservoir heater temperature raw

Offset	S	L	Type	ITOS name, attribute(s), and description
0x05C	0	8	U1	LHKSPARE08 Spare 8 bits
0x05D	0	8	U1	LHKSPARE08 Spare 8 bits
0x05E	0	8	U1	LHKSPARE08 Spare 8 bits
0x05F	0	8	U1	LHKSPARE08 Spare 8 bits
0x060	0	8	U1	LHKSPARE08 Spare 8 bits
0x061	0	8	U1	LHKSPARE08 Spare 8 bits
0x062	0	8	U1	LHKSPARE08 Spare 8 bits
0x063	0	8	U1	LHKSPARE08 Spare 8 bits
0x064	0	8	U1	LHKSPARE08 Spare 8 bits
0x065	0	8	U1	LHKSPARE08 Spare 8 bits
0x066	0	8	U1	LHKSPARE08 Spare 8 bits
0x067	0	8	U1	LHKSPARE08 Spare 8 bits
0x068	0	8	U1	LHKSPARE08 Spare 8 bits
0x069	0	8	U1	LHKSPARE08 Spare 8 bits
0x06A	0	8	U1	LHKSPARE08 Spare 8 bits
0x06B	0	8	U1	LHKSPARE08 Spare 8 bits
0x06C	0	8	U1	LHKSPARE08 Spare 8 bits
0x06D	0	8	U1	LHKSPARE08 Spare 8 bits
0x06E	0	8	U1	LHKSPARE08 Spare 8 bits
0x06F	0	8	U1	LHKSPARE08 Spare 8 bits
0x070	0	8	U1	LHKSPARE08 Spare 8 bits
0x071	0	8	U1	LHKSPARE08 Spare 8 bits
0x072	0	8	U1	LHKSPARE08 Spare 8 bits
0x073	0	8	U1	LHKSPARE08 Spare 8 bits

10.3.51 `DiagPduEnv7` (645/0x285)

Description:

"Diagnostic PDU Environmental Packet 7" Telemetry Packet

PDU Packet 7

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	8	U1	LHKSPARE08
				Spare 8 bits
0x013	0	8	U1	LHKSPARE08
				Spare 8 bits
0x014	0	4	U12	LHKDP1GRID0TST; LHKSTATUSBITS
				Grid 0 temperature status
	4	12	U12	LHKDP1GRID0T
				Grid 0 temperature raw
0x016	0	4	U12	LHKDP1GRID1TST; LHKSTATUSBITS
				Grid 1 temperature status
	4	12	U12	LHKDP1GRID1T
				Grid 1 temperature raw
0x018	0	4	U12	LHKDP1GRID2TST; LHKSTATUSBITS
				Grid 2 temperature status
	4	12	U12	LHKDP1GRID2T
				Grid 2 temperature raw
0x01A	0	4	U12	LHKDP1GRID3TST
				Grid 3 temperature status
	4	12	U12	LHKDP1GRID3T
				Grid 3 temperature raw
0x01C	0	4	U12	LHKDP1GRID4TST
				Grid 4 temperature status
	4	12	U12	LHKDP1GRID4T
				Grid 4 temperature raw
0x01E	0	4	U12	LHKDP1GRID5TST
				Grid 5 temperature status
	4	12	U12	LHKDP1GRID5T
				Grid 5 temperature raw
0x020	0	4	U12	LHKDP1GRID6TST; LHKSTATUSBITS
				Grid 6 temperature status
	4	12	U12	LHKDP1GRID6T
				Grid 6 temperature raw
0x022	0	4	U12	LHKDP1GRID7TST; LHKSTATUSBITS
				Grid 7 temperature status
	4	12	U12	LHKDP1GRID7T

Offset	S	L	Type	ITOS name, attribute(s), and description
				Grid 7 temperature raw
0x024	0	4	U12	LHKDP1GRID8TST; LHKSTATUSBITS
				Grid 8 temperature status
	4	12	U12	LHKDP1GRID8T
				Grid 8 temperature raw
0x026	0	4	U12	LHKDP1GRID9TST; LHKSTATUSBITS
				Grid 9 temperature status
	4	12	U12	LHKDP1GRID9T
				Grid 9 temperature raw
0x028	0	4	U12	LHKDP1GRID10TST; LHKSTATUSBITS
				Grid 10 temperature status
	4	12	U12	LHKDP1GRID10T
				Grid 10 temperature raw
0x02A	0	4	U12	LHKDP1GRID11TST
				Grid 11 temperature status
	4	12	U12	LHKDP1GRID11T
				Grid 11 temperature raw
0x02C	0	4	U12	?
				?
	4	12	U12	LHKDP1ACDSHT0
				ACD shell temperature 0 raw
0x02E	0	4	U12	LHKDP1ACDSHT0ST
				ACD shell temperature 0 status
	4	12	U12	LHKDP1ACDSHT1
				ACD shell temperature 1 raw
0x030	0	4	U12	LHKDP1ACDPRT0ST; LHKSTATUSBITS
				ACD PMT rail temperature 0 status
	4	12	U12	LHKDP1ACDPRT0
				ACD PMT rail temperature 0 raw
0x032	0	4	U12	LHKDP1ACDPRT1ST; LHKSTATUSBITS
				ACD PMT rail temperature 1 status
	4	12	U12	LHKDP1ACDPRT1
				ACD PMT rail temperature 1 raw
0x034	0	4	U12	LHKDP1ACDPRT2ST; LHKSTATUSBITS
				ACD PMT rail temperature 2 status
	4	12	U12	LHKDP1ACDPRT2
				ACD PMT rail temperature 2 raw
0x036	0	4	U12	LHKDP1ACDPRT3ST; LHKSTATUSBITS
				ACD PMT rail temperature 3 status
	4	12	U12	LHKDP1ACDPRT3
				ACD PMT rail temperature 3 raw
0x038	0	4	U12	LHKDP1ACDBGT0ST; LHKSTATUSBITS
				ACD BEA grid temperature 0 status
	4	12	U12	LHKDP1ACDBGT0
				ACD BEA grid temperature 0 raw
0x03A	0	4	U12	LHKDP1ACDBGT1ST
				ACD BEA grid temperature 1 status
	4	12	U12	LHKDP1ACDBGT1
				ACD BEA grid temperature 1 raw
0x03C	0	4	U12	LHKDP1RADAFHT0ST
				Radiator 0 antifreeze heater temperature status
	4	12	U12	LHKDP1RADAFHT0

Offset	S	L	Type	ITOS name, attribute(s), and description
				Radiator 0 antifreeze heater temperature raw
0x03E	0	4	U12	LHKDP1RADAFHT1ST
				Radiator 1 antifreeze heater temperature status
	4	12	U12	LHKDP1RADAFHT1
				Radiator 1 antifreeze heater temperature raw
0x040	0	4	U12	LHKDP1GRAD0IFTST; LHKSTATUSBITS
				Grid radiator 0 interface temperature status
	4	12	U12	LHKDP1GRADIFT0
				Grid radiator 0 interface temperature raw
0x042	0	4	U12	LHKDP1GRAD1IFTST; LHKSTATUSBITS
				Grid radiator 1 interface temperature status
	4	12	U12	LHKDP1GRAD1IFT
				Grid radiator 1 interface temperature raw
0x044	0	4	U12	LHKDP1GRAD2IFTST; LHKSTATUSBITS
				Grid radiator 2 interface temperature status
	4	12	U12	LHKDP1GRAD2IFT
				Grid radiator 2 interface temperature raw
0x046	0	4	U12	LHKDP1GRAD3IFTST; LHKSTATUSBITS
				Grid radiator 3 interface temperature status
	4	12	U12	LHKDP1GRAD3IFT
				Grid radiator 3 interface temperature raw
0x048	0	4	U12	LHKDP1RAD0TST; LHKSTATUSBITS
				Radiator 0 temperature status
	4	12	U12	LHKDP1RAD0T
				Radiator 0 temperature raw
0x04A	0	4	U12	LHKDP1RAD1TST
				Radiator 1 temperature status
	4	12	U12	LHKDP1RAD1T
				Radiator 1 temperature raw
0x04C	0	4	U12	LHKDP1RAD2TST
				Radiator 2 temperature status
	4	12	U12	LHKDP1RAD2T
				Radiator 2 temperature raw
0x04E	0	4	U12	LHKDP1RAD3TST
				Radiator 3 temperature status
	4	12	U12	LHKDP1RAD3T
				Radiator 3 temperature raw
0x050	0	4	U12	LHKDP1RAD4TST; LHKSTATUSBITS
				Radiator 4 temperature status
	4	12	U12	LHKDP1RAD4T
				Radiator 4 temperature raw
0x052	0	4	U12	LHKDP1RAD5TST; LHKSTATUSBITS
				Radiator 5 temperature status
	4	12	U12	LHKDP1RAD5T
				Radiator 5 temperature raw
0x054	0	4	U12	LHKDP1RAD6TST; LHKSTATUSBITS
				Radiator 6 temperature status
	4	12	U12	LHKDP1RAD6T
				Radiator 6 temperature raw
0x056	0	4	U12	LHKDP1RAD7TST; LHKSTATUSBITS
				Radiator 7 temperature status
	4	12	U12	LHKDP1RAD7T

Offset	S	L	Type	ITOS name, attribute(s), and description
				Radiator 7 temperature raw
0x058	0	4	U12	LHKDP1RAD8TST; LHKSTATUSBITS
				Radiator 8 temperature status
	4	12	U12	LHKDP1RAD8T
				Radiator 8 temperature raw
0x05A	0	4	U12	LHKDP1RAD9TST
				Radiator 9 temperature status
	4	12	U12	LHKDP1RAD9T
				Radiator 9 temperature raw
0x05C	0	4	U12	LHKDP1RAD10TST
				Radiator 10 temperature status
	4	12	U12	LHKDP1RAD10T
				Radiator 10 temperature raw
0x05E	0	4	U12	LHKDP1RAD11TST
				Radiator 11 temperature status
	4	12	U12	LHKDP1RAD11T
				Radiator 11 temperature raw
0x060	0	8	U1	LHKSPARE08
				Spare 8 bits
0x061	0	8	U1	LHKSPARE08
				Spare 8 bits
0x062	0	8	U1	LHKSPARE08
				Spare 8 bits
0x063	0	8	U1	LHKSPARE08
				Spare 8 bits
0x064	0	8	U1	LHKSPARE08
				Spare 8 bits
0x065	0	8	U1	LHKSPARE08
				Spare 8 bits
0x066	0	8	U1	LHKSPARE08
				Spare 8 bits
0x067	0	8	U1	LHKSPARE08
				Spare 8 bits
0x068	0	8	U1	LHKSPARE08
				Spare 8 bits
0x069	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06A	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06B	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06C	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06D	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x06F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x070	0	8	U1	LHKSPARE08
				Spare 8 bits
0x071	0	8	U1	LHKSPARE08

Offset	S	L	Type	ITOS name, attribute(s), and description
				Spare 8 bits
0x072	0	8	U1	LHKSPARE08
				Spare 8 bits
0x073	0	8	U1	LHKSPARE08
				Spare 8 bits

10.3.52 `DiagAemEnv0` (646/0x286)

Description:

"Diagnostic AEM Environmental Monitor Packet 0" Telemetry Packet

AEM Packet 0

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	8	U1	LHKSPARE08
				Spare 8 bits
0x00F	0	8	U1	LHKSPARE08
				Spare 8 bits
0x010	0	8	U1	LHKSPARE08
				Spare 8 bits
0x011	0	8	U1	LHKSPARE08
				Spare 8 bits
0x012	0	4	U1	LHKSPARE04
				Spare 4 bits
	4	1	U1	LHKDAEMFR11PWRST
				AEM Free 11 Power State
	5	1	U1	LHKDAEMFR10PWRST
				AEM Free 10 Power State
	6	1	U1	LHKDAEMFR9PWRST
				AEM Free 9 Power State
	7	1	U1	LHKDAEMFR8PWRST
				AEM Free 8 Power State
	8	1	U1	LHKDAEMFR7PWRST
				AEM Free 7 Power State
	9	1	U1	LHKDAEMFR6PWRST
				AEM Free 6 Power State
	10	1	U1	LHKDAEMFR5PWRST
				AEM Free 5 Power State
	11	1	U1	LHKDAEMFR4PWRST
				AEM Free 4 Power State
	12	1	U1	LHKDAEMFR3PWRST
				AEM Free 3 Power State
	13	1	U1	LHKDAEMFR2PWRST
				AEM Free 2 Power State
	14	1	U1	LHKDAEMFR1PWRST
				AEM Free 1 Power State
	15	1	U1	LHKDAEMFR0PWRST
				AEM Free 0 Power State
0x014	0	4	U12	LHKDAEMFR0VDST; LHKSTATUSBITS
				AEM free board 0 VDD status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDAEMFR0VD AEM free board 0 VDD raw
0x016	0	4	U12	LHKDAEMFR0TST; LHKSTATUSBITS AEM free board 0 temperature status
	4	12	U12	LHKDAEMFR0T AEM free board 0 temperature raw
0x018	0	4	U12	LHKDAEMFR0V1ST; LHKSTATUSBITS AEM free board 0 HV1 status
	4	12	U12	LHKDAEMFR0V1 AEM free board 0 HV1 raw
0x01A	0	4	U12	LHKDAEMFR0V2ST AEM free board 0 HV2 status
	4	12	U12	LHKDAEMFR0V2 AEM free board 0 HV2 raw
0x01C	0	4	U12	LHKDAEMFR1VDST AEM free board 1 VDD status
	4	12	U12	LHKDAEMFR1VD AEM free board 1 VDD raw
0x01E	0	4	U12	LHKDAEMFR1TST AEM free board 1 temperature status
	4	12	U12	LHKDAEMFR1T AEM free board 1 temperature raw
0x020	0	4	U12	LHKDAEMFR1V1ST; LHKSTATUSBITS AEM free board 1 HV1 status
	4	12	U12	LHKDAEMFR1V1 AEM free board 1 HV1 raw
0x022	0	4	U12	LHKDAEMFR1V2ST; LHKSTATUSBITS AEM free board 1 HV2 status
	4	12	U12	LHKDAEMFR1V2 AEM free board 1 HV2 raw
0x024	0	4	U12	LHKDAEMFR2VDST; LHKSTATUSBITS AEM free board 2 VDD status
	4	12	U12	LHKDAEMFR2VD AEM free board 2 VDD raw
0x026	0	4	U12	LHKDAEMFR2TST; LHKSTATUSBITS AEM free board 2 temperature status
	4	12	U12	LHKDAEMFR2T AEM free board 2 temperature raw
0x028	0	4	U12	LHKDAEMFR2V1ST; LHKSTATUSBITS AEM free board 2 HV1 status
	4	12	U12	LHKDAEMFR2V1 AEM free board 2 HV1 raw
0x02A	0	4	U12	LHKDAEMFR2V2ST AEM free board 2 HV2 status
	4	12	U12	LHKDAEMFR2V2 AEM free board 2 HV2 raw
0x02C	0	4	U12	LHKDAEMFR3VDST AEM free board 3 VDD status
	4	12	U12	LHKDAEMFR3VD AEM free board 3 VDD raw
0x02E	0	4	U12	LHKDAEMFR3TST AEM free board 3 temperature status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDAEMFR3T
				AEM free board 3 temperature raw
0x030	0	4	U12	LHKDAEMFR3V1ST; LHKSTATUSBITS
				AEM free board 3 HV1 status
	4	12	U12	LHKDAEMFR3V1
				AEM free board 3 HV1 raw
0x032	0	4	U12	LHKDAEMFR3V2ST; LHKSTATUSBITS
				AEM free board 3 HV2 status
	4	12	U12	LHKDAEMFR3V2
				AEM free board 3 HV2 raw
0x034	0	4	U12	LHKDAEMFR4VDST; LHKSTATUSBITS
				AEM free board 4 VDD status
	4	12	U12	LHKDAEMFR4VD
				AEM free board 4 VDD raw
0x036	0	4	U12	LHKDAEMFR4TST; LHKSTATUSBITS
				AEM free board 4 temperature status
	4	12	U12	LHKDAEMFR4T
				AEM free board 4 temperature raw
0x038	0	4	U12	LHKDAEMFR4V1ST; LHKSTATUSBITS
				AEM free board 4 HV1 status
	4	12	U12	LHKDAEMFR4V1
				AEM free board 4 HV1 raw
0x03A	0	4	U12	LHKDAEMFR4V2ST
				AEM free board 4 HV2 status
	4	12	U12	LHKDAEMFR4V2
				AEM free board 4 HV2 raw
0x03C	0	4	U12	LHKDAEMFR5VDST
				AEM free board 5 VDD status
	4	12	U12	LHKDAEMFR5VD
				AEM free board 5 VDD raw
0x03E	0	4	U12	LHKDAEMFR5TST
				AEM free board 5 temperature status
	4	12	U12	LHKDAEMFR5T
				AEM free board 5 temperature raw
0x040	0	4	U12	LHKDAEMFR5V1ST; LHKSTATUSBITS
				AEM free board 5 HV1 status
	4	12	U12	LHKDAEMFR5V1
				AEM free board 5 HV1 raw
0x042	0	4	U12	LHKDAEMFR5V2ST; LHKSTATUSBITS
				AEM free board 5 HV2 status
	4	12	U12	LHKDAEMFR5V2
				AEM free board 5 HV2 raw
0x044	0	4	U12	LHKDAEMFR6VDST; LHKSTATUSBITS
				AEM free board 6 VDD status
	4	12	U12	LHKDAEMFR6VD
				AEM free board 6 VDD raw
0x046	0	4	U12	LHKDAEMFR6TST; LHKSTATUSBITS
				AEM free board 6 temperature status
	4	12	U12	LHKDAEMFR6T
				AEM free board 6 temperature raw
0x048	0	4	U12	LHKDAEMFR6V1ST; LHKSTATUSBITS
				AEM free board 6 HV1 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDAEMFR6V1
				AEM free board 6 HV1 raw
0x04A	0	4	U12	LHKDAEMFR6V2ST
				AEM free board 6 HV2 status
	4	12	U12	LHKDAEMFR6V2
				AEM free board 6 HV2 raw
0x04C	0	4	U12	LHKDAEMFR7VDST
				AEM free board 7 VDD status
	4	12	U12	LHKDAEMFR7VD
				AEM free board 7 VDD raw
0x04E	0	4	U12	LHKDAEMFR7TST
				AEM free board 7 temperature status
	4	12	U12	LHKDAEMFR7T
				AEM free board 7 temperature raw
0x050	0	4	U12	LHKDAEMFR7V1ST; LHKSTATUSBITS
				AEM free board 7 HV1 status
	4	12	U12	LHKDAEMFR7V1
				AEM free board 7 HV1 raw
0x052	0	4	U12	LHKDAEMFR7V2ST; LHKSTATUSBITS
				AEM free board 7 HV2 status
	4	12	U12	LHKDAEMFR7V2
				AEM free board 7 HV2 raw
0x054	0	4	U12	LHKDAEMFR8VDST; LHKSTATUSBITS
				AEM free board 8 VDD status
	4	12	U12	LHKDAEMFR8VD
				AEM free board 8 VDD raw
0x056	0	4	U12	LHKDAEMFR8TST; LHKSTATUSBITS
				AEM free board 8 temperature status
	4	12	U12	LHKDAEMFR8T
				AEM free board 8 temperature raw
0x058	0	4	U12	LHKDAEMFR8V1ST; LHKSTATUSBITS
				AEM free board 8 HV1 status
	4	12	U12	LHKDAEMFR8V1
				AEM free board 8 HV1 raw
0x05A	0	4	U12	LHKDAEMFR8V2ST
				AEM free board 8 HV2 status
	4	12	U12	LHKDAEMFR8V2
				AEM free board 8 HV2 raw
0x05C	0	4	U12	LHKDAEMFR9VDST
				AEM free board 9 VDD status
	4	12	U12	LHKDAEMFR9VD
				AEM free board 9 VDD raw
0x05E	0	4	U12	LHKDAEMFR9TST
				AEM free board 9 temperature status
	4	12	U12	LHKDAEMFR9T
				AEM free board 9 temperature raw
0x060	0	4	U12	LHKDAEMFR9V1ST; LHKSTATUSBITS
				AEM free board 9 HV1 status
	4	12	U12	LHKDAEMFR9V1
				AEM free board 9 HV1 raw
0x062	0	4	U12	LHKDAEMFR9V2ST; LHKSTATUSBITS
				AEM free board 9 HV2 status

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	12	U12	LHKDAEMFR9V2 AEM free board 9 HV2 raw
0x064	0	4	U12	LHKDAEMFR10VDST; LHKSTATUSBITS AEM free board 10 VDD status
	4	12	U12	LHKDAEMFR10VD AEM free board 10 VDD raw
0x066	0	4	U12	LHKDAEMFR10TST; LHKSTATUSBITS AEM free board 10 temperature status
	4	12	U12	LHKDAEMFR10T AEM free board 10 temperature raw
0x068	0	4	U12	LHKDAEMFR10V1ST; LHKSTATUSBITS AEM free board 10 HV1 status
	4	12	U12	LHKDAEMFR10V1 AEM free board 10 HV1 raw
0x06A	0	4	U12	LHKDAEMFR10V2ST AEM free board 10 HV2 status
	4	12	U12	LHKDAEMFR10V2 AEM free board 10 HV2 raw
0x06C	0	4	U12	LHKDAEMFR11VDST AEM free board 11 VDD status
	4	12	U12	LHKDAEMFR11VD AEM free board 11 VDD raw
0x06E	0	4	U12	LHKDAEMFR11TST AEM free board 11 temperature status
	4	12	U12	LHKDAEMFR11T AEM free board 11 temperature raw
0x070	0	4	U12	LHKDAEMFR11V1ST; LHKSTATUSBITS AEM free board 11 HV1 status
	4	12	U12	LHKDAEMFR11V1 AEM free board 11 HV1 raw
0x072	0	4	U12	LHKDAEMFR11V2ST; LHKSTATUSBITS AEM free board 11 HV2 status
	4	12	U12	LHKDAEMFR11V2 AEM free board 11 HV2 raw

10.3.53 `DiagLrs0` (647/0x287)

Description:

"Diagnostic Low-rate Science Packet" Telemetry Packet

Contains TEM dead-time counters and GEM livetime counter

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16 ?
0x010	0	16	U12	LHKSPARE16 ?
0x012	0	16	U12	LHKSPARE16 ?
0x014	0	32	U1234	LHKDGLRSSEC

Offset	S	L	Type	ITOS name, attribute(s), and description
				GEM livetime read timestamp seconds
0x018	0	32	U1234	LHKDGLRSSUB
				GEM livetime read timestamp subseconds
0x01C	0	32	U1234	LHKDGLRSLIVE
				GEM Low-rate Science Livetime
0x020	0	32	U1234	LHKDGLRSPRESC
				GEM Low-rate Science Prescaled
0x024	0	32	U1234	LHKDGLRSDISC
				GEM Low-rate Science Discarded
0x028	0	32	U1234	LHKDGLRSSENT
				GEM Low-rate Science Sent
0x02C	0	32	U1234	LHKDTLRSSEC
				TEM deadtime read timestamp seconds
0x030	0	32	U1234	LHKDTLRSSUB
				TEM deadtime read timestamp seconds
0x034	0	24	U1234	LHKDT0TEMLRSDT
				TEM0 LRS Deadtime Counter
0x038	0	24	U1234	LHKDT1TEMLRSDT
				TEM1 LRS Deadtime Counter
0x03C	0	24	U1234	LHKDT2TEMLRSDT
				TEM2 LRS Deadtime Counter
0x040	0	24	U1234	LHKDT3TEMLRSDT
				TEM3 LRS Deadtime Counter
0x044	0	24	U1234	LHKDT4TEMLRSDT
				TEM4 LRS Deadtime Counter
0x048	0	24	U1234	LHKDT5TEMLRSDT
				TEM5 LRS Deadtime Counter
0x04C	0	24	U1234	LHKDT6TEMLRSDT
				TEM6 LRS Deadtime Counter
0x050	0	24	U1234	LHKDT7TEMLRSDT
				TEM7 LRS Deadtime Counter
0x054	0	24	U1234	LHKDT8TEMLRSDT
				TEM8 LRS Deadtime Counter
0x058	0	24	U1234	LHKDT9TEMLRSDT
				TEM9 LRS Deadtime Counter
0x05C	0	24	U1234	LHKDTATEMLRSDT
				TEMA LRS Deadtime Counter
0x060	0	24	U1234	LHKDTBTEMLRSDT
				TEMB LRS Deadtime Counter
0x064	0	24	U1234	LHKDTCTEMLRSDT
				TEMC LRS Deadtime Counter
0x068	0	24	U1234	LHKDTDTEMLRSDT
				TEMD LRS Deadtime Counter
0x06C	0	24	U1234	LHKDTETEMLRSDT
				TEME LRS Deadtime Counter
0x070	0	24	U1234	LHKDTFTEMLRSDT
				TEMF LRS Deadtime Counter

10.3.54 `DiagCmdCnt0` (648/0x288)

Description:

"Diagnostic Command Statistics Packet 0" Telemetry Packet

Contains task level command statistics

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16 ?
0x010	0	16	U12	LHKSPARE16 ?
0x012	0	16	U12	LHKSPARE16 ?
0x014	0	32	U1234	LHKDTSK0CMDSEC SIU task 0 command counter seconds
0x018	0	32	U1234	LHKDTSK0CMDSUB SIU task 0 command counter subseconds
0x01C	0	32	U1234	LHKDTSK0CMDSENT SIU task 0 command sent counter
0x020	0	16	U12	LHKDTSK0CMDDISP SIU task 0 command dispatch counter
0x022	0	16	U12	LHKDTSK0CMDEXEF SIU task 0 command execution failed counter
0x024	0	32	U1234	LHKDTSK1CMDSEC SIU task 1 command counter seconds
0x028	0	32	U1234	LHKDTSK1CMDSUB SIU task 1 command counter subseconds
0x02C	0	32	U1234	LHKDTSK1CMDSENT SIU task 1 command sent counter
0x030	0	16	U12	LHKDTSK1CMDDISP SIU task 1 command dispatch counter
0x032	0	16	U12	LHKDTSK1CMDEXEF SIU task 1 command execution failed counter
0x034	0	32	U1234	LHKDTSK2CMDSEC SIU task 2 command counter seconds
0x038	0	32	U1234	LHKDTSK2CMDSUB SIU task 2 command counter subseconds
0x03C	0	32	U1234	LHKDTSK2CMDSENT SIU task 2 command sent counter
0x040	0	16	U12	LHKDTSK2CMDDISP SIU task 2 command dispatch counter
0x042	0	16	U12	LHKDTSK2CMDEXEF SIU task 2 command execution failed counter
0x044	0	32	U1234	LHKDTSK3CMDSEC SIU task 3 command counter seconds
0x048	0	32	U1234	LHKDTSK3CMDSUB SIU task 3 command counter subseconds
0x04C	0	32	U1234	LHKDTSK3CMDSENT SIU task 3 command sent counter
0x050	0	16	U12	LHKDTSK3CMDDISP

Offset	S	L	Type	ITOS name, attribute(s), and description
				SIU task 3 command dispatch counter
0x052	0	16	U12	LHKDTSK3CMDEXEF
				SIU task 3 command execution failed counter
0x054	0	32	U1234	LHKDTSK4CMDSEC
				SIU task 4 command counter seconds
0x058	0	32	U1234	LHKDTSK4CMDSUB
				SIU task 4 command counter subseconds
0x05C	0	32	U1234	LHKDTSK4CMDSENT
				SIU task 4 command sent counter
0x060	0	16	U12	LHKDTSK4CMDDISP
				SIU task 4 command dispatch counter
0x062	0	16	U12	LHKDTSK4CMDEXEF
				SIU task 4 command execution failed counter
0x064	0	32	U1234	LHKDTSK5CMDSEC
				SIU task 5 command counter seconds
0x068	0	32	U1234	LHKDTSK5CMDSUB
				SIU task 5 command counter subseconds
0x06C	0	32	U1234	LHKDTSK5CMDSENT
				SIU task 5 command sent counter
0x070	0	16	U12	LHKDTSK5CMDDISP
				SIU task 5 command dispatch counter
0x072	0	16	U12	LHKDTSK5CMDEXEF
				SIU task 5 command execution failed counter

10.3.55 `DiagCmdCnt1` (649/0x289)

Description:

"Diagnostic Command Statistics Packet 1" Telemetry Packet

Contains task level command statistics.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16
				?
0x010	0	16	U12	LHKSPARE16
				?
0x012	0	16	U12	LHKSPARE16
				?
0x014	0	32	U1234	LHKDTSK6CMDSEC
				SIU task 6 command counter seconds
0x018	0	32	U1234	LHKDTSK6CMDSUB
				SIU task 6 command counter subseconds
0x01C	0	32	U1234	LHKDTSK6CMDSENT
				SIU task 6 command sent counter
0x020	0	16	U12	LHKDTSK6CMDDISP
				SIU task 6 command dispatch counter
0x022	0	16	U12	LHKDTSK6CMDEXEF
				SIU task 6 command execution failed counter
0x024	0	32	U1234	LHKDTSK7CMDSEC
				SIU task 7 command counter seconds

Offset	S	L	Type	ITOS name, attribute(s), and description
0x028	0	32	U1234	LHKDTSK7CMDSUB SIU task 7 command counter subseconds
0x02C	0	32	U1234	LHKDTSK7CMDSENT SIU task 7 command sent counter
0x030	0	16	U12	LHKDTSK7CMDDISP SIU task 7 command dispatch counter
0x032	0	16	U12	LHKDTSK7CMDEXEF SIU task 7 command execution failed counter
0x034	0	32	U1234	LHKDTSK8CMDSEC SIU task 8 command counter seconds
0x038	0	32	U1234	LHKDTSK8CMDSUB SIU task 8 command counter subseconds
0x03C	0	32	U1234	LHKDTSK8CMDSENT SIU task 8 command sent counter
0x040	0	16	U12	LHKDTSK8CMDDISP SIU task 8 command dispatch counter
0x042	0	16	U12	LHKDTSK8CMDEXEF SIU task 8 command execution failed counter
0x044	0	32	U1234	LHKDTSK9CMDSEC SIU task 9 command counter seconds
0x048	0	32	U1234	LHKDTSK9CMDSUB SIU task 9 command counter subseconds
0x04C	0	32	U1234	LHKDTSK9CMDSENT SIU task 9 command sent counter
0x050	0	16	U12	LHKDTSK9CMDDISP SIU task 9 command dispatch counter
0x052	0	16	U12	LHKDTSK9CMDEXEF SIU task 9 command execution failed counter
0x054	0	32	U1234	LHKDTSK10CMDSEC SIU task 10 command counter seconds
0x058	0	32	U1234	LHKDTSK10CMDSUB SIU task 10 command counter subseconds
0x05C	0	32	U1234	LHKDTSK10CMDSENT SIU task 10 command sent counter
0x060	0	16	U12	LHKDTSK10CMDDISP SIU task 10 command dispatch counter
0x062	0	16	U12	LHKDTSK10CMDEXEF SIU task 10 command execution failed counter
0x064	0	32	U1234	LHKDTSK11CMDSEC SIU task 11 command counter seconds
0x068	0	32	U1234	LHKDTSK11CMDSUB SIU task 11 command counter subseconds
0x06C	0	32	U1234	LHKDTSK11CMDSENT SIU task 11 command sent counter
0x070	0	16	U12	LHKDTSK11CMDDISP SIU task 11 command dispatch counter
0x072	0	16	U12	LHKDTSK11CMDEXEF SIU task 11 command execution failed counter

10.3.56 `DiagFileStats` (650/0x28A)

Description:

"Diagnositc File System Statistics Packet" Telemetry Packet

Contains FILE system statistics for each CPU.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16 ?
0x010	0	16	U12	LHKSPARE16 ?
0x012	0	16	U12	LHKSPARE16 ?
0x014	0	32	U1234	LHKDSFILSTATE SIU File System State
0x018	0	32	U1234	LHKDSFILCURSIZE SIU File Current Size
0x01C	0	32	U1234	LHKDSFILPKTCNT SIU File Packet Count
0x020	0	32	U1234	LHKDSFILERRCODE SIU File Error Code
0x024	0	32	U1234	LHKDSFILERRCNT SIU File Error Count
0x028	0	32	U1234	LHKDSFILCOMID SIU File Commit ID
0x02C	0	32	U1234	LHKDE0FILSTATE EPU 0 File System State
0x030	0	32	U1234	LHKDE0FILCURSIZE EPU 0 File Current Size
0x034	0	32	U1234	LHKDE0FILPKTCNT EPU 0 File Packet Count
0x038	0	32	U1234	LHKDE0FILERRCODE EPU 0 File Error Code
0x03C	0	32	U1234	LHKDE0FILERRCNT EPU 0 File Error Count
0x040	0	32	U1234	LHKDE0FILCOMID EPU 0 File Commit ID
0x044	0	32	U1234	LHKDE1FILSTATE EPU 1 File System State
0x048	0	32	U1234	LHKDE1FILCURSIZE EPU 1 File Current Size
0x04C	0	32	U1234	LHKDE1FILPKTCNT EPU 1 File Packet Count
0x050	0	32	U1234	LHKDE1FILERRCODE EPU 1 File Error Code
0x054	0	32	U1234	LHKDE1FILERRCNT EPU 1 File Error Count
0x058	0	32	U1234	LHKDE1FILCOMID EPU 1 File Commit ID
0x05C	0	32	U1234	LHKDE2FILSTATE

Offset	S	L	Type	ITOS name, attribute(s), and description
				EPU 2 File System State
0x060	0	32	U1234	LHKDE2FILCURSIZE
				EPU 2 File Current Size
0x064	0	32	U1234	LHKDE2FILPKTCNT
				EPU 2 File Packet Count
0x068	0	32	U1234	LHKDE2FILERRCODE
				EPU 2 File Error Code
0x06C	0	32	U1234	LHKDE2FILERRCNT
				EPU 2 File Error Count
0x070	0	32	U1234	LHKDE2FILCOMID
				EPU 2 File Commit ID

10.3.57 DiagCpuMetr (651/0x28B)

Description:

"Diagnostic CPU Metrics/RT Statistics Packet" Telemetry Packet

Contains CPU metrics for all LAT CPUs. Contains the 1553 RT driver statistics.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16
				?
0x010	0	16	U12	LHKSPARE16
				?
0x012	0	16	U12	LHKSPARE16
				?
0x014	0	32	U1234	LHKDRTERRCNT
				A count of the number of remote terminal errors
0x018	0	32	U1234	LHKDRTINTRCNT
				A count of the number of remote terminal device interrupts
0x01C	0	32	U1234	LHKDRTCRXPKTCNT
				A count of the number of CmdRx packets received by the remote terminal
0x020	0	32	U1234	LHKDRTCRXBYTCNT
				A count of the number of CmdRx bytes received by the remote terminal
0x024	0	32	U1234	LHKDRTCTXPKTCNT
				A count of the number of CmdTx packets sent by the remote terminal
0x028	0	32	U1234	LHKDRTCTXBYTCNT
				A count of the number of CmdTx bytes sent by the remote terminal
0x02C	0	32	U1234	LHKDRTHKPKTCNT
				A count of the number of HKP packets sent by the remote terminal
0x030	0	32	U1234	LHKDRTHKBYTCNT
				A count of the number of HKP bytes sent by the remote terminal
0x034	0	32	U1234	LHKDRTTLMPKTCNT
				A count of the number of Telem packets sent by the remote terminal (not HKP)
0x038	0	32	U1234	LHKDRTTLMBYTCNT
				A count of the number of Telem bytes sent by the remote terminal (not HKP)
0x03C	0	16	U12	LHKDSIUCPUJTEMP
				SIU CPU junction temperature
0x03E	0	16	U12	LHKDEPU0CPUJTEMP
				EPU0 CPU junction temperature

Offset	S	L	Type	ITOS name, attribute(s), and description
0x040	0	16	U12	LHKDEPU1CPUJTEMP EPU1 CPU junction temperature
0x042	0	16	U12	LHKDEPU2CPUJTEMP EPU2 CPU junction temperature
0x044	0	16	U12	LHKSPARE16 ?
0x046	0	16	U12	LHKSPARE16 ?
0x048	0	16	U12	LHKSPARE16 ?
0x04A	0	16	U12	LHKSPARE16 ?
0x04C	0	16	U12	LHKSPARE16 ?
0x04E	0	16	U12	LHKSPARE16 ?
0x050	0	16	U12	LHKSPARE16 ?
0x052	0	16	U12	LHKSPARE16 ?
0x054	0	16	U12	LHKSPARE16 ?
0x056	0	16	U12	LHKSPARE16 ?
0x058	0	16	U12	LHKSPARE16 ?
0x05A	0	16	U12	LHKSPARE16 ?
0x05C	0	16	U12	LHKSPARE16 ?
0x05E	0	16	U12	LHKSPARE16 ?
0x060	0	16	U12	LHKSPARE16 ?
0x062	0	16	U12	LHKSPARE16 ?
0x064	0	16	U12	LHKSPARE16 ?
0x066	0	16	U12	LHKSPARE16 ?
0x068	0	16	U12	LHKSPARE16 ?
0x06A	0	16	U12	LHKSPARE16 ?
0x06C	0	16	U12	LHKSPARE16 ?
0x06E	0	16	U12	LHKSPARE16 ?
0x070	0	16	U12	LHKSPARE16 ?
0x072	0	16	U12	LHKSPARE16 ?

10.3.58 `DiagMemStats0` (652/0x28C)

Description:

"Diagnostic Memory Load/Dump Statistics" Telemetry Packet

Contains the statistics for memory loads and dumps on the SIU and EPU0.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16 Spare 16 bit field
0x010	0	16	U12	LHKSPARE16 Spare 16 bit field
0x012	0	16	U12	LHKSPARE16 Spare 16 bit field
0x014	0	32	U1234	LHKDSMEMLDSTAT SIU Status of most recent load action
0x018	0	32	U1234	LHKDSMEMLDACT SIU Memory load active flag
0x01C	0	32	U1234	LHKDSMEMLDSTART SIU Starting memory load address
0x020	0	32	U1234	LHKDSMEMLDBYTES SIU Memory load total bytes
0x024	0	32	U1234	LHKDSMEMLDOFST SIU Memory load offset
0x028	0	32	U1234	LHKDSMEMDMPSTAT SIU Memory dump status
0x02C	0	32	U1234	LHKDSMEMDMPACT SIU Memory dump active
0x030	0	32	U1234	LHKDSMEMDMPSTRT SIU Memory dump start address
0x034	0	32	U1234	LHKDSMEMDMPBYT SIU Memory dump bytes
0x038	0	32	U1234	LHKDSMEMDMPADDR SIU Memory dump address
0x03C	0	32	U1234	LHKDSMEMDMPFCDE SIU Memory dump function code
0x040	0	32	U1234	LHKDSMEM0MPTID SIU Memory dump transaction ID
0x044	0	32	U1234	LHKDE0MEMLDSTAT EPU0 Status of most recent load action
0x048	0	32	U1234	LHKDE0MEMLDACT EPU0 Memory load active flag
0x04C	0	32	U1234	LHKDE0MEMLDSTART EPU0 Starting memory load address
0x050	0	32	U1234	LHKDE0MEMLDBYTES EPU0 Memory load total bytes
0x054	0	32	U1234	LHKDE0MEMLDOFST EPU0 Memory load offset
0x058	0	32	U1234	LHKDE0MEMDMPSTAT EPU0 Memory dump status
0x05C	0	32	U1234	LHKDE0MEMDMPACT

Offset	S	L	Type	ITOS name, attribute(s), and description
				EPU0 Memory dump active
0x060	0	32	U1234	LHKDE0MEMDMPSTRT
				EPU0 Memory dump start address
0x064	0	32	U1234	LHKDE0MEMDMPBYT
				EPU0 Memory dump bytes
0x068	0	32	U1234	LHKDE0MEMDMPADDR
				EPU0 Memory dump address
0x06C	0	32	U1234	LHKDE0MEMDMPFCDE
				EPU0 Memory dump function code
0x070	0	32	U1234	LHKDE0MEMDMPTID
				EPU0 Memory dump transaction ID

10.3.59 `DiagMemStats1` (653/0x28D)

Description:

"Diagnostic Memory Load/Dump Statistics" Telemetry Packet

Contains the statistics for memory loads and dumps on the EPU1 and EPU2.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKSPARE16
				Spare 16 bit field
0x010	0	16	U12	LHKSPARE16
				Spare 16 bit field
0x012	0	16	U12	LHKSPARE16
				Spare 16 bit field
0x014	0	32	U1234	LHKDE1MEMLDSTAT
				EPU1 Status of most recent load action
0x018	0	32	U1234	LHKDE1MEMLDACT
				EPU1 Memory load active flag
0x01C	0	32	U1234	LHKDE1MEMLDSTART
				EPU1 Starting memory load address
0x020	0	32	U1234	LHKDE1MEMLDBYTES
				EPU1 Memory load total bytes
0x024	0	32	U1234	LHKDE1MEMLDOFST
				EPU1 Memory load offset
0x028	0	32	U1234	LHKDE1MEMDMPSTAT
				EPU1 Memory dump status
0x02C	0	32	U1234	LHKDE1MEMDMPACT
				EPU1 Memory dump active
0x030	0	32	U1234	LHKDE1MEMDMPSTRT
				EPU1 Memory dump start address
0x034	0	32	U1234	LHKDE1MEMDMPBYT
				EPU1 Memory dump bytes
0x038	0	32	U1234	LHKDE1MEMDMPADDR
				EPU1 Memory dump address
0x03C	0	32	U1234	LHKDE1MEMDMPFCDE
				EPU1 Memory dump function code
0x040	0	32	U1234	LHKDE1MEMDMPTID
				EPU1 Memory dump transaction ID

Offset	S	L	Type	ITOS name, attribute(s), and description
0x044	0	32	U1234	LHKDE2MEMLDSTAT EPU2 Status of most recent load action
0x048	0	32	U1234	LHKDE2MEMLDACT EPU2 Memory load active flag
0x04C	0	32	U1234	LHKDE2MEMLDSTART EPU2 Starting memory load address
0x050	0	32	U1234	LHKDE2MEMLDBYTES EPU2 Memory load total bytes
0x054	0	32	U1234	LHKDE2MEMLDOFST EPU2 Memory load offset
0x058	0	32	U1234	LHKDE2MEMDMPSTAT EPU2 Memory dump status
0x05C	0	32	U1234	LHKDE2MEMDMPACT EPU2 Memory dump active
0x060	0	32	U1234	LHKDE2MEMDMPSTRT EPU2 Memory dump start address
0x064	0	32	U1234	LHKDE2MEMDMPBYT EPU2 Memory dump bytes
0x068	0	32	U1234	LHKDE2MEMDMPADDR EPU2 Memory dump address
0x06C	0	32	U1234	LHKDE2MEMDMPFCDE EPU2 Memory dump function code
0x070	0	32	U1234	LHKDE2MEMDMPTID EPU2 Memory dump transaction ID

10.3.60 `RedLimAlrt` (851/0x353)

Description:

"Red Limit Alert Packet" Telemetry Packet

This packet reports alert data related to an ADC limit threshold violation.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LHKALRTREDDEV; LRLIMDEVICE Red limit device
0x010	0	16	U12	LHKALRTREDADC Red limit ADC number
0x012	0	16	U12	LHKALRTREDCNT Red limit counts
0x014	0	16	U12	LHKALRTREDLIM Red limit threshold

10.4 Algorithms

10.4.0 `LDTEMVADCCNV` (TEM Voltage Conversion) Algorithm

Description:

Definition:

C0	0.00000000	C4	0.00000000
C1	0.00122100	C5	0.00000000
C2	0.00000000	C6	0.00000000
C3	0.00000000	C7	0.00000000

Used by:

???

10.5 Discretes

10.5.0 LAEMFRPWRSTATES (AEM FREE Board Power States) Discrete

Description:

Converts AEM FREE board power status values to ON/OFF discrete states.

Definition:

0 AEM Free Board Off State (AEMFRBRDOFF)
Denotes the OFF power state for an AEM free board

1 AEM FREE Board On State (AEMFRBRDON)
Denotes the ON power state for an AEM FREE board.

Used by:

???

10.5.1 LAPDUPWRCNVTSTAT (ACD PDU Power Converter State) Discrete

Description:

Definition:

0 ACD PDU Converter Primary (LAPDUCNVTPRI)

1 ACD PDU Power Converter Redundant (LAPDUCNVTRED)

Used by:

???

10.5.2 LAPDUPWRSTATES (ACD PDU Power States) Discrete

Description:

Definition:

0 ACD PDU Power Off State (LAPDUPWROFFSTATE)

1 ACD PDU Power On State (LAPDUPWRONSTATE)

Used by:

???

10.5.3 LAPDUPWRSUPSTAT (ACD PDU Power Supply Sources) Discrete

Description:

Definition:

0 ACD PDU Power Supply Primary (LAPDUPWRSUPPRI)

1 ACD PDU Power Supply Redundant (LAPDUPWRSUPRED)

Used by:

???

10.5.4 LDPDUEPUCNVT (PDU EPU Converter) Discrete

Description:

Definition:

0 PDU EPU Converter Status Primary (LDPDUEPUCVTPRI)

1 PDU EPU Converter Status Redundant (LPDUEPUCVTRED)

Used by:

???

10.5.5 LDPDUEPUPWRST (EPU Power States) Discrete

Description:

Definition:

0 PDU EPU Power Off State (LDPDUEPUPWROFF)

1 PDU EPU Power On State (LDPDUEPUPWRON)

Used by:

???

10.5.6 LDPDUTEMPWRST (PDU TEM Power State) Discrete

Description:

Definition:

0 PDU TEM Power Off (LPDUTEMPWROFF)

1 PDU TEM Power On State (LPDUTEMPWRON)

Used by:

???

10.5.7 LHKSTATUSBITS (ADC status bit conversions) Discrete

Description:

Describes the discrete conversion of a 4 bit status value.

Definition:

0 Data OK status (LHKSTATOK)
Status indicating measurements was evaluated as OK.

1 Status Undefined (LHKSTATUNDF)
Indicates absence of data due to acquisition timeout or other failure.

2 Status Masked (LHKSTATMSK)
Indicates no evalutation status because value was masked as disabled.

3 ADC red limit status (LHKREDSTAT)
Status indicating an ADC red limit threshold violation.

Used by:

???

10.5.8 LRLIMDEVICE (Device Opcodes for Red Limit Alerts) Discrete

Description:

Enumerates the device opcode that exceeded a red limit.

Definition:

0 AEM Free Board 0 (AEMFR0)

1 AEM Free Board 1 (AEMFR1)

2 AEM Free Board 2 (AEMFR2)

3 AEM Free Board 3 (AEMFR3)

4 AEM Free Board 4 (AEMFR4)

5 AEM Free Board 5 (AEMFR5)

6 AEM Free Board 6 (AEMFR6)

7 AEM Free Board 7 (AEMFR7)

8 AEM Free Board 8 (AEMFR8)

9 AEM Free Board 9 (AEMFR9)

10 AEM Free Board 10 (AEMFR10)

11 AEM Free Board 11 (AEMFR11)

12 AEM DAB (AEMDAB)

Used by:

???

10.6 Limit Sets

10.6.0 `LABEAGTEMPADCLIM` (ACD BEA Grid Interface Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.1 `LAPMTRTEMPADCLIM` (ACD PMT Rail Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.2 `LASHLTEMPADCLIM` (ACD Shell Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.3 `LC33IADCLIM` (CAL 3.3I ADC limits) Limit

Description:

Describes the CAL 3.3 current ADC limit set

Definition:

Inversion flag	F
Limit switch	none

Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.4 `LC33VADCLIM` (CAL 3.3V ADC limits) Limit

Description:

Describes the CAL 3.3 volt adc limit set.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.5 `LCAFETADCLIM` (CAL AFFE temperature limits) Limit

Description:

Describes the CAL AFFE temperature limit set

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.6 `LCBASPLADCLIM` (CAL Baseplate Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.7 `LCBIASIADCLIM` (CAL bias current limits) Limit

Description:

Describes the CAL bias current ADC limit set.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.8 `LCBIASVADCLIM` (CAL bias voltage limits) Limit

Description:

Describes the CAL bias voltage ADC limit set.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.9 `LDAEMFRHV1ADCLIM` (AEM Free Board HV1 Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.10 `LDAEMFRHV2ADCLIM` (AEM Free Board HV2 Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none

Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.11 `LDAEMFRTMPADCLIM` (AEM Free Board Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.12 `LDAEMFRVDDADCLIM` (AEM Free Board VDD Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.13 `LDEPUTEMPADCLIM` (EPU Temperature ADC Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.14 `LDEPUVADCLIM` (EPU Voltage ADC Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.15 `LDTEM33IADCLIM` (TEM 3.3I digital limits) Limit

Description:

Describes the TEM 3.3 current ADC limit set.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.16 `LDTEM33VADCLIM` (TEM digital 3.3V limits) Limit

Description:

Describes the TEM 3.3V digital ADC limit set.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.17 `LDTEMPCBTADCLIM` (TEM PCB Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.18 `LDTEMPSTADCLIM` (TEM Power Supply Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.19 `LMGRDRADIFADCLIM` (Grid Radiator Interface Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.20 `LMGRIDTEMPADCLIM` (Grid Temperature ADC Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2048
Yellow alert	0 - 2047

Used by:

???

10.6.21 `LMRADAFHTRADCLIM` (Radiator Anitfreeze Heater Temperature Limits) Limit

Description:

Definition:

Inversion flag	F

Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.22 `LMRADTEMPADCLIM` (Radiator Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.23 `LMVCHPDSHPADCLIM` (VCHP-DSHP Interface Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.24 `LMVCHPRSVTADCLIM` (VCHP Reservoir Heater Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.25 `LMVCHPXLHPADCLIM` (VCHP-XLHP Interface Temperature Limits) Limit

Description:

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.26 `LT15IADCLIM` (TKR 1.5I ADC limits) Limit

Description:

Describes the TKR 1.5I ADC limit set.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.27 `LT15VADCLIM` (TKR 1.5V ADC Limits) Limit

Description:

Describes the limit set for a TKR 1.5 volt ADC value.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.28 `LT25IADCLIM` (TKR 2.5I ADC limits) Limit

Description:

Describes the TKR 2.5I ADC limit set.

Definition:

Inversion flag	F

Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.29 `LT25VADCLIM` (TKR 2.5V ADC limits) Limit

Description:

Describes the limits for a TKR 2.5 volt ADC value.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.30 `LTBIASIADCLIM` (TKR bias current ADC limits) Limit

Description:

Describes the limit set for a TKR bias current ADC value.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.31 `LTBIASVADCLIM` (TKR bias voltage ADC limits) Limit

Description:

Describes the limit set for a TKR bias voltage ADC value.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

10.6.32 `LTCBLTADCLIM` (TKR cable temperature limits) Limit

Description:

Describes the TKR cable temperature ADC limit set.

Definition:

Inversion flag	F
Limit switch	none
Red alert	0 - 2047
Yellow alert	0 - 2047

Used by:

???

11 LMC Package

11.0 Overview

The LMC package handles the LAT multiplexed counters.

11.1 Command Packets

11.1.0 `cal_lrs` (1692/0x69C:0)

Description:

"CAL Low Rate Science Counters" Telecommand Packet

Start collection of CAL low rate science counter data

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LMCINTERVAL ?
0x00A	0	16	U12	LMCCOUNT ?
0x00C	0	32	U1234	LMCCALMASK ?
0x010	0	16	U12	LMCTEMMASK ?

11.1.1 `tkr_lrs` (1692/0x69C:1)

Description:

"TKR Low Rate Science Counters" Telecommand Packet

Starts collection of TKR 3-in-a-row counters.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LMCINTERVAL ?
0x00A	0	16	U12	LMCCOUNT ?
0x00C	0	16	U12	LMCTKRMASK ?
0x00E	0	16	U12	LMCTEMMASK ?

11.1.2 `acd_tile_pair` (1692/0x69C:2)

Description:

"ACD Tile Counter (Pair)" Telecommand Packet

Starts collection of a pair of ACD tile counters.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LMCINTERVAL ?
0x00A	0	16	U12	LMCCOUNT ?
0x00C	0	16	U12	LMCTILEID0 ?
0x00E	0	16	U12	LMCTILEID1 ?

11.1.3 `acd_tile_all` (1692/0x69C:3)

Description:

"ACD Tile Counters (All)" Telecommand Packet

Starts collection of all ACD tile counters.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LMCINTERVAL ?
0x00A	0	16	U12	LMCCOUNT ?

11.1.4 `stop_count` (1692/0x69C:4)

Description:

"Stop Active Counter" Telecommand Packet

Stop the active counter

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	LMCCOUNTOPCODE ?

11.2 Telemetry Packets

11.2.0 `cal_cnt` (705/0x2C1)

Description:

"CAL Low Rate Science Counters" Telemetry Packet

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LDMSK ?
0x010	0	32	U1234	LLMSK ?
0x014	0	32	U1234	LCNTRS0DT ?
0x018	0	32	U1234	LCNTRS0CNT ?
0x01C	0	32	U1234	LCNTRS1DT ?
0x020	0	32	U1234	LCNTRS1CNT ?
0x024	0	32	U1234	LCNTRS2DT ?
0x028	0	32	U1234	LCNTRS2CNT ?
0x02C	0	32	U1234	LCNTRS3DT ?
0x030	0	32	U1234	LCNTRS3CNT ?
0x034	0	32	U1234	LCNTRS4DT ?
0x038	0	32	U1234	LCNTRS4CNT ?
0x03C	0	32	U1234	LCNTRS5DT ?
0x040	0	32	U1234	LCNTRS5CNT ?
0x044	0	32	U1234	LCNTRS6DT ?
0x048	0	32	U1234	LCNTRS6CNT ?
0x04C	0	32	U1234	LCNTRS7DT ?
0x050	0	32	U1234	LCNTRS7CNT ?
0x054	0	32	U1234	LCNTRS8DT ?
0x058	0	32	U1234	LCNTRS8CNT ?
0x05C	0	32	U1234	LCNTRS9DT ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x060	0	32	U1234	LCNTRS9CNT ?
0x064	0	32	U1234	LCNTRS10DT ?
0x068	0	32	U1234	LCNTRS10CNT ?
0x06C	0	32	U1234	LCNTRS11DT ?
0x070	0	32	U1234	LCNTRS11CNT ?
0x074	0	32	U1234	LCNTRS12DT ?
0x078	0	32	U1234	LCNTRS12CNT ?
0x07C	0	32	U1234	LCNTRS13DT ?
0x080	0	32	U1234	LCNTRS13CNT ?
0x084	0	32	U1234	LCNTRS14DT ?
0x088	0	32	U1234	LCNTRS14CNT ?
0x08C	0	32	U1234	LCNTRS15DT ?
0x090	0	32	U1234	LCNTRS15CNT ?

11.2.1 `tkr_cnt` (706/0x2C2)

Description:

"TKR Low Rate Science Counters" Telemetry Packet

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LDMSK ?
0x010	0	32	U1234	LLMSK ?
0x014	0	32	U1234	LCNTRS0DT ?
0x018	0	32	U1234	LCNTRS0CNT ?
0x01C	0	32	U1234	LCNTRS1DT ?
0x020	0	32	U1234	LCNTRS1CNT ?
0x024	0	32	U1234	LCNTRS2DT ?
0x028	0	32	U1234	LCNTRS2CNT ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x02C	0	32	U1234	LCNTRS3DT ?
0x030	0	32	U1234	LCNTRS3CNT ?
0x034	0	32	U1234	LCNTRS4DT ?
0x038	0	32	U1234	LCNTRS4CNT ?
0x03C	0	32	U1234	LCNTRS5DT ?
0x040	0	32	U1234	LCNTRS5CNT ?
0x044	0	32	U1234	LCNTRS6DT ?
0x048	0	32	U1234	LCNTRS6CNT ?
0x04C	0	32	U1234	LCNTRS7DT ?
0x050	0	32	U1234	LCNTRS7CNT ?
0x054	0	32	U1234	LCNTRS8DT ?
0x058	0	32	U1234	LCNTRS8CNT ?
0x05C	0	32	U1234	LCNTRS9DT ?
0x060	0	32	U1234	LCNTRS9CNT ?
0x064	0	32	U1234	LCNTRS10DT ?
0x068	0	32	U1234	LCNTRS10CNT ?
0x06C	0	32	U1234	LCNTRS11DT ?
0x070	0	32	U1234	LCNTRS11CNT ?
0x074	0	32	U1234	LCNTRS12DT ?
0x078	0	32	U1234	LCNTRS12CNT ?
0x07C	0	32	U1234	LCNTRS13DT ?
0x080	0	32	U1234	LCNTRS13CNT ?
0x084	0	32	U1234	LCNTRS14DT ?
0x088	0	32	U1234	LCNTRS14CNT ?
0x08C	0	32	U1234	LCNTRS15DT ?
0x090	0	32	U1234	LCNTRS15CNT ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x094	0	32	U1234	LCNTRS16DT ?
0x098	0	32	U1234	LCNTRS16CNT ?
0x09C	0	32	U1234	LCNTRS17DT ?
0x0A0	0	32	U1234	LCNTRS17CNT ?
0x0A4	0	32	U1234	LCNTRS18DT ?
0x0A8	0	32	U1234	LCNTRS18CNT ?
0x0AC	0	32	U1234	LCNTRS19DT ?
0x0B0	0	32	U1234	LCNTRS19CNT ?
0x0B4	0	32	U1234	LCNTRS20DT ?
0x0B8	0	32	U1234	LCNTRS20CNT ?
0x0BC	0	32	U1234	LCNTRS21DT ?
0x0C0	0	32	U1234	LCNTRS21CNT ?
0x0C4	0	32	U1234	LCNTRS22DT ?
0x0C8	0	32	U1234	LCNTRS22CNT ?
0x0CC	0	32	U1234	LCNTRS23DT ?
0x0D0	0	32	U1234	LCNTRS23CNT ?
0x0D4	0	32	U1234	LCNTRS24DT ?
0x0D8	0	32	U1234	LCNTRS24CNT ?
0x0DC	0	32	U1234	LCNTRS25DT ?
0x0E0	0	32	U1234	LCNTRS25CNT ?
0x0E4	0	32	U1234	LCNTRS26DT ?
0x0E8	0	32	U1234	LCNTRS26CNT ?
0x0EC	0	32	U1234	LCNTRS27DT ?
0x0F0	0	32	U1234	LCNTRS27CNT ?
0x0F4	0	32	U1234	LCNTRS28DT ?
0x0F8	0	32	U1234	LCNTRS28CNT ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x0FC	0	32	U1234	LCNTRS29DT ?
0x100	0	32	U1234	LCNTRS29CNT ?
0x104	0	32	U1234	LCNTRS30DT ?
0x108	0	32	U1234	LCNTRS30CNT ?
0x10C	0	32	U1234	LCNTRS31DT ?
0x110	0	32	U1234	LCNTRS31CNT ?

11.2.2 `acd_cnt` (707/0x2C3)

Description:

"ACD Tile Counters" Telemetry Packet

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LSPARE ?
0x010	0	16	U12	LCNTRS0TILE_0 ?
0x012	0	16	U12	LCNTRS0TILE_1 ?
0x014	0	32	U1234	LCNTRS0DT ?
0x018	0	32	U1234	LCNTRS0CNT ?
0x01C	0	16	U12	LCNTRS1TILE_0 ?
0x01E	0	16	U12	LCNTRS1TILE_1 ?
0x020	0	32	U1234	LCNTRS1DT ?
0x024	0	32	U1234	LCNTRS1CNT ?
0x028	0	16	U12	LCNTRS2TILE_0 ?
0x02A	0	16	U12	LCNTRS2TILE_1 ?
0x02C	0	32	U1234	LCNTRS2DT ?
0x030	0	32	U1234	LCNTRS2CNT ?
0x034	0	16	U12	LCNTRS3TILE_0 ?
0x036	0	16	U12	LCNTRS3TILE_1 ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x038	0	32	U1234	LCNTRS3DT ?
0x03C	0	32	U1234	LCNTRS3CNT ?
0x040	0	16	U12	LCNTRS4TILE_0 ?
0x042	0	16	U12	LCNTRS4TILE_1 ?
0x044	0	32	U1234	LCNTRS4DT ?
0x048	0	32	U1234	LCNTRS4CNT ?
0x04C	0	16	U12	LCNTRS5TILE_0 ?
0x04E	0	16	U12	LCNTRS5TILE_1 ?
0x050	0	32	U1234	LCNTRS5DT ?
0x054	0	32	U1234	LCNTRS5CNT ?
0x058	0	16	U12	LCNTRS6TILE_0 ?
0x05A	0	16	U12	LCNTRS6TILE_1 ?
0x05C	0	32	U1234	LCNTRS6DT ?
0x060	0	32	U1234	LCNTRS6CNT ?
0x064	0	16	U12	LCNTRS7TILE_0 ?
0x066	0	16	U12	LCNTRS7TILE_1 ?
0x068	0	32	U1234	LCNTRS7DT ?
0x06C	0	32	U1234	LCNTRS7CNT ?
0x070	0	16	U12	LCNTRS8TILE_0 ?
0x072	0	16	U12	LCNTRS8TILE_1 ?
0x074	0	32	U1234	LCNTRS8DT ?
0x078	0	32	U1234	LCNTRS8CNT ?
0x07C	0	16	U12	LCNTRS9TILE_0 ?
0x07E	0	16	U12	LCNTRS9TILE_1 ?
0x080	0	32	U1234	LCNTRS9DT ?
0x084	0	32	U1234	LCNTRS9CNT ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x088	0	16	U12	LCNTRS10TILE_0 ?
0x08A	0	16	U12	LCNTRS10TILE_1 ?
0x08C	0	32	U1234	LCNTRS10DT ?
0x090	0	32	U1234	LCNTRS10CNT ?
0x094	0	16	U12	LCNTRS11TILE_0 ?
0x096	0	16	U12	LCNTRS11TILE_1 ?
0x098	0	32	U1234	LCNTRS11DT ?
0x09C	0	32	U1234	LCNTRS11CNT ?
0x0A0	0	16	U12	LCNTRS12TILE_0 ?
0x0A2	0	16	U12	LCNTRS12TILE_1 ?
0x0A4	0	32	U1234	LCNTRS12DT ?
0x0A8	0	32	U1234	LCNTRS12CNT ?
0x0AC	0	16	U12	LCNTRS13TILE_0 ?
0x0AE	0	16	U12	LCNTRS13TILE_1 ?
0x0B0	0	32	U1234	LCNTRS13DT ?
0x0B4	0	32	U1234	LCNTRS13CNT ?
0x0B8	0	16	U12	LCNTRS14TILE_0 ?
0x0BA	0	16	U12	LCNTRS14TILE_1 ?
0x0BC	0	32	U1234	LCNTRS14DT ?
0x0C0	0	32	U1234	LCNTRS14CNT ?
0x0C4	0	16	U12	LCNTRS15TILE_0 ?
0x0C6	0	16	U12	LCNTRS15TILE_1 ?
0x0C8	0	32	U1234	LCNTRS15DT ?
0x0CC	0	32	U1234	LCNTRS15CNT ?
0x0D0	0	16	U12	LCNTRS16TILE_0 ?
0x0D2	0	16	U12	LCNTRS16TILE_1 ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x0D4	0	32	U1234	LCNTRS16DT ?
0x0D8	0	32	U1234	LCNTRS16CNT ?
0x0DC	0	16	U12	LCNTRS17TILE_0 ?
0x0DE	0	16	U12	LCNTRS17TILE_1 ?
0x0E0	0	32	U1234	LCNTRS17DT ?
0x0E4	0	32	U1234	LCNTRS17CNT ?
0x0E8	0	16	U12	LCNTRS18TILE_0 ?
0x0EA	0	16	U12	LCNTRS18TILE_1 ?
0x0EC	0	32	U1234	LCNTRS18DT ?
0x0F0	0	32	U1234	LCNTRS18CNT ?
0x0F4	0	16	U12	LCNTRS19TILE_0 ?
0x0F6	0	16	U12	LCNTRS19TILE_1 ?
0x0F8	0	32	U1234	LCNTRS19DT ?
0x0FC	0	32	U1234	LCNTRS19CNT ?
0x100	0	16	U12	LCNTRS20TILE_0 ?
0x102	0	16	U12	LCNTRS20TILE_1 ?
0x104	0	32	U1234	LCNTRS20DT ?
0x108	0	32	U1234	LCNTRS20CNT ?
0x10C	0	16	U12	LCNTRS21TILE_0 ?
0x10E	0	16	U12	LCNTRS21TILE_1 ?
0x110	0	32	U1234	LCNTRS21DT ?
0x114	0	32	U1234	LCNTRS21CNT ?
0x118	0	16	U12	LCNTRS22TILE_0 ?
0x11A	0	16	U12	LCNTRS22TILE_1 ?
0x11C	0	32	U1234	LCNTRS22DT ?
0x120	0	32	U1234	LCNTRS22CNT ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x124	0	16	U12	LCNTRS23TILE_0 ?
0x126	0	16	U12	LCNTRS23TILE_1 ?
0x128	0	32	U1234	LCNTRS23DT ?
0x12C	0	32	U1234	LCNTRS23CNT ?
0x130	0	16	U12	LCNTRS24TILE_0 ?
0x132	0	16	U12	LCNTRS24TILE_1 ?
0x134	0	32	U1234	LCNTRS24DT ?
0x138	0	32	U1234	LCNTRS24CNT ?
0x13C	0	16	U12	LCNTRS25TILE_0 ?
0x13E	0	16	U12	LCNTRS25TILE_1 ?
0x140	0	32	U1234	LCNTRS25DT ?
0x144	0	32	U1234	LCNTRS25CNT ?
0x148	0	16	U12	LCNTRS26TILE_0 ?
0x14A	0	16	U12	LCNTRS26TILE_1 ?
0x14C	0	32	U1234	LCNTRS26DT ?
0x150	0	32	U1234	LCNTRS26CNT ?

12 LSM Package

12.0 Overview

The LSM package processes the seven telecommands per second that the spacecraft sends the LAT continuously to inform the LAT of things like orbital position, time, etc. LSM runs in its own task.

The package supports the following functions:

- Wall clock time services (GPS)

12.1 Command Packets

12.1.0 LLSMSIATTITUDE (1793/0x701:1)

Description:

"SC Attitude Broadcast Message" Telecommand Packet

The SC sends this message 5 times a second on the CTDB bus. It contains information about the SC-J2000 attitude.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	?
				?
0x00C	0	32	U1234	?
				?
0x010	0	64	F12345678	?
				?
0x018	0	64	F12345678	?
				?
0x020	0	64	F12345678	?
				?
0x028	0	64	F12345678	?
				?
0x030	0	32	F1234	?
				?
0x034	0	32	F1234	?
				?
0x038	0	32	F1234	?
				?

12.1.1 LLSMSIANCILLARY (1793/0x701:2)

Description:

"SC Ancillary Broadcast Message" Telecommand Packet

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	?
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00C	0	32	U1234	?
				?
0x010	0	32	F1234	?
				?
0x014	0	32	F1234	?
				?
0x018	0	32	F1234	?
				?
0x01C	0	32	F1234	?
				?
0x020	0	32	F1234	?
				?
0x024	0	32	F1234	?
				?
0x028	0	8	U1	?
				?
0x029	0	8	U1	?
				?
0x02A	0	16	U12	?
				?

12.1.2 LLSMSITIMETONE (1793/0x701:3)

Description:

"SC Timetone Broadcast Message" Telecommand Packet

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	?
				?
0x00C	0	16	U12	?
				?

13 LTC Package

13.0 Overview

The LTC package provides the LAT thermal control mechanism. It reads temperatures from within the instrument, and on that basis, decides how much heat to dump. LTC runs as its own task.

13.0.0 `ReStart` (1605/0x645:1)

Description:

"Restart and initialize Thermal Control" Telecommand Packet

Restart thermal control by reading configuration files and initializing. Depending on paramter may start active control or passive operation.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	32	U1234	LTCCFGFID File identification number
0x00C	0	32	U1234	LTCSNSRFID File identification number

13.0.1 `Start` (1605/0x645:2)

Description:

"Start control" Telecommand Packet

Start active or passive control.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LTCACTORPASS Unsigned 16-bit word

13.0.2 `Stop` (1605/0x645:3)

Description:

"Terminate Thermal Control processing" Telecommand Packet

Terminates thermal control processing tasks, but message processing remains.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description

13.0.3 SetMode (1605/0x645:4)

Description:

"Set thermal control mode to active or passive." Telecommand Packet

Sets thermal control processing to active or processing. Active is normal control by turning on or off heat pipe reservoir heaters to keep termperature within specified limits. Passive does all normal control processing, but does not send commands to heaters.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LTCACTORPASS Unsigned 16-bit word

13.0.4 HtrOnOffCtl (1605/0x645:5)

Description:

"Set heater to always on, or off or automatic control." Telecommand Packet

Sets a specified heater to on, or off or automatic control.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LTCHTRNUM Unsigned 16-bit word
0x00A	0	16	U12	LTCONOFFCTL Unsigned 16-bit word

13.0.5 SetParam (1605/0x645:6)

Description:

"Set control parameters to new values." Telecommand Packet

Sets reservoir and RIT temperature control limits to new values for all or a specified heat pipe. New values are used immediately.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LTCHTPIPESEL Unsigned 16-bit word
0x00A	0	32	F1234	LTCRESLO 32-bit real number.
0x00E	0	32	F1234	LTCRESHI 32-bit real number.
0x012	0	32	F1234	LTCRITLO 32-bit real number.
0x016	0	32	F1234	LTCRITHI 32-bit real number.
0x01A	0	32	F1234	LTCDBDELTA

Offset	S	L	Type	ITOS name, attribute(s), and description
				32-bit real number.

13.0.6 `SetTlmFreq` (1605/0x645:7)

Description:

"Set LTC telemetry frequency, 0 is off." Telecommand Packet

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LTCTLMFREQ Unsigned 16-bit word

13.1 Telemetry Packets

13.1.0 `DiagLTC` (700/0x2BC)

Description:

"LAT Thermal Control diagnostic telemetry" Telemetry Packet

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x010	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x012	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x014	0	4	U1	? ?

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x016	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x018	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x01A	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x01C	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x01E	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?
	12	4	U1	? ?
0x020	0	4	U1	? ?
	4	4	U1	? ?
	8	4	U1	? ?

Offset	S	L	Type	ITOS name, attribute(s), and description
	12	4	U1	?
				?
0x022	0	4	U1	?
				?
	4	4	U1	?
				?
	8	4	U1	?
				?
	12	4	U1	?
				?
0x024	0	4	U1	?
				?
	4	4	U1	?
				?
	8	4	U1	?
				?
	12	4	U1	?
				?
0x026	0	4	U1	?
				?
	4	4	U1	?
				?
0x027	0	4	U1	?
				?
	4	4	U1	?
				?
0x028	0	4	U1	?
				?
	4	4	U1	?
				?
0x029	0	4	U1	?
				?
	4	4	U1	?
				?
0x02A	0	4	U1	?
				?
	4	4	U1	?
				?
0x02B	0	4	U1	?
				?
	4	4	U1	?
				?
0x02C	0	4	U1	?
				?
	4	4	U1	?
				?
0x02D	0	4	U1	?
				?
	4	4	U1	?
				?
0x02E	0	4	U1	?
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
	4	4	U1	?
				?
0x02F	0	4	U1	?
				?
	4	4	U1	?
				?
0x030	0	4	U1	?
				?
	4	4	U1	?
				?
0x031	0	4	U1	?
				?
	4	4	U1	?
				?
0x032	0	16	U12	?
				?
0x034	0	16	U12	?
				?
0x036	0	16	U12	?
				?
0x038	0	16	U12	?
				?
0x03A	0	16	U12	?
				?
0x03C	0	16	U12	?
				?
0x03E	0	16	U12	?
				?
0x040	0	16	U12	?
				?
0x042	0	16	U12	?
				?
0x044	0	16	U12	?
				?
0x046	0	16	U12	?
				?
0x048	0	16	U12	?
				?
0x04A	0	16	U12	?
				?
0x04C	0	16	U12	?
				?
0x04E	0	16	U12	?
				?
0x050	0	16	U12	?
				?
0x052	0	16	U12	?
				?
0x054	0	16	U12	?
				?
0x056	0	16	U12	?
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x058	0	16	U12	?
				?
0x05A	0	16	U12	?
				?
0x05C	0	16	U12	?
				?
0x05E	0	16	U12	?
				?
0x060	0	16	U12	?
				?
0x062	0	16	U12	?
				?
0x064	0	16	U12	?
				?
0x066	0	16	U12	?
				?
0x068	0	16	U12	?
				?
0x06A	0	16	U12	?
				?
0x06C	0	16	U12	?
				?
0x06E	0	16	U12	?
				?
0x070	0	16	U12	?
				?
0x072	0	16	U12	?
				?
0x074	0	16	U12	?
				?
0x076	0	16	U12	?
				?
0x078	0	16	U12	?
				?
0x07A	0	16	U12	?
				?
0x07C	0	16	U12	?
				?
0x07E	0	16	U12	?
				?
0x080	0	16	U12	?
				?
0x082	0	16	U12	?
				?
0x084	0	16	U12	?
				?
0x086	0	16	U12	?
				?
0x088	0	16	U12	?
				?
0x08A	0	16	U12	?
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x08C	0	16	U12	? ?
0x08E	0	16	U12	? ?
0x090	0	16	U12	? ?
0x092	0	16	U12	? ?
0x094	0	16	U12	? ?
0x096	0	16	U12	? ?
0x098	0	16	U12	? ?
0x09A	0	16	U12	? ?
0x09C	0	16	U12	? ?
0x09E	0	16	U12	? ?
0x0A0	0	16	U12	? ?
0x0A2	0	16	U12	? ?
0x0A4	0	16	U12	? ?
0x0A6	0	16	U12	? ?
0x0A8	0	16	U12	? ?
0x0AA	0	16	U12	? ?
0x0AC	0	16	U12	? ?
0x0AE	0	16	U12	? ?
0x0B0	0	16	U12	? ?
0x0B2	0	16	U12	? ?
0x0B4	0	16	U12	? ?
0x0B6	0	16	U12	? ?
0x0B8	0	16	U12	? ?
0x0BA	0	16	U12	? ?
0x0BC	0	16	U12	? ?
0x0BE	0	16	U12	? ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x0C0	0	16	U12	?
				?
0x0C2	0	16	U12	?
				?
0x0C4	0	16	I12	?
				?
0x0C6	0	16	I12	?
				?
0x0C8	0	16	I12	?
				?
0x0CA	0	16	I12	?
				?
0x0CC	0	16	I12	?
				?
0x0CE	0	16	I12	?
				?
0x0D0	0	16	I12	?
				?
0x0D2	0	16	I12	?
				?
0x0D4	0	16	I12	?
				?
0x0D6	0	16	I12	?
				?
0x0D8	0	16	I12	?
				?
0x0DA	0	16	I12	?
				?
0x0DC	0	16	I12	?
				?
0x0DE	0	16	I12	?
				?
0x0E0	0	16	I12	?
				?
0x0E2	0	16	I12	?
				?
0x0E4	0	16	I12	?
				?
0x0E6	0	16	I12	?
				?
0x0E8	0	16	I12	?
				?
0x0EA	0	16	I12	?
				?
0x0EC	0	16	I12	?
				?
0x0EE	0	16	I12	?
				?
0x0F0	0	16	I12	?
				?
0x0F2	0	16	I12	?
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x0F4	0	16	U12	? ?

14 MEM Package

14.0 Overview

The MEM package contains routines that are specific to the Memory Dump/Load facility.

14.1 Command Packets

14.1.0 `LMEMDUMPMEM` (1604/0x644:0)

Description:

"Memory Data Dump" Telecommand Packet

Dump data from a region of memory.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?
0x00A	0	16	U12	LMEMPAD
				?
0x00C	0	16	U12	LMEMADDRESSHI
				?
	16	16	U12	?
				?
0x010	0	16	U12	LMEMSIZEHI
				?
	16	16	U12	LMEMSIZELO
				?

14.1.1 `LMEMDUMPCANCEL` (1604/0x644:1)

Description:

"Memory Dump Cancel" Telecommand Packet

Cancel a memory dump operation.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?

14.1.2 LMEMDUMPPCI (1604/0x644:2)

Description:

"PCI Device Header Dump" Telecommand Packet

Dump data from a PCI device header.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?
0x00A	0	1	U12	LMEMPCIBUS
				?
	1	5	U12	LMEMPCIDEVICE
				?
	6	2	U12	LMEMPCIFUNCTION
				?
	8	8	U12	LMEMPCIOFFSET
				?

14.1.3 LMEMDUMPREG (1604/0x644:3)

Description:

"Processor Register Dump" Telecommand Packet

Dump CPU register values.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?

14.1.4 LMEMLOADMEM (1604/0x644:4)

Description:

"Memory Write" Telecommand Packet

Load data to a region in memory.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00A	0	16	U12	LMEMSIZE
				?
0x00C	0	16	U12	LMEMADDRHI
				?
	16	16	U12	LMEMADDRLO
				?
0x010	0	16	U12	LMEMDATA00HI
				?
0x012	0	16	U12	LMEMDATA00LO
				?
0x014	0	16	U12	LMEMDATA01HI
				?
0x016	0	16	U12	LMEMDATA01LO
				?
0x018	0	16	U12	LMEMDATA02HI
				?
0x01A	0	16	U12	LMEMDATA02LO
				?
0x01C	0	16	U12	LMEMDATA03HI
				?
0x01E	0	16	U12	LMEMDATA03LO
				?
0x020	0	16	U12	LMEMDATA04HI
				?
0x022	0	16	U12	LMEMDATA04LO
				?
0x024	0	16	U12	LMEMDATA05HI
				?
0x026	0	16	U12	LMEMDATA05LO
				?
0x028	0	16	U12	LMEMDATA06HI
				?
0x02A	0	16	U12	LMEMDATA06LO
				?
0x02C	0	16	U12	LMEMDATA07HI
				?
0x02E	0	16	U12	LMEMDATA07LO
				?
0x030	0	16	U12	LMEMDATA08HI
				?
0x032	0	16	U12	LMEMDATA08LO
				?
0x034	0	16	U12	LMEMDATA09HI
				?
0x036	0	16	U12	LMEMDATA09LO
				?
0x038	0	16	U12	LMEMDATA10HI
				?
0x03A	0	16	U12	LMEMDATA10LO
				?

14.1.5 `LMEMLOADPCI` (1604/0x644:5)

Description:

"PCI Device Header Write" Telecommand Packet

Load data to a PCI device header.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?
0x00A	0	1	U12	LMEMPCIBUS
				?
	1	5	U12	LMEMPCIDEVICE
				?
	6	2	U12	LMEMPCIFUNCTION
				?
	8	8	U12	LMEMPCIOFFSET
				?
0x00C	0	16	U12	LMEMDATA
				?

14.1.6 `LMEMLOADREG` (1604/0x644:6)

Description:

"Processor Register Write" Telecommand Packet

Load data to CPU registers.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?
0x00A	0	16	U12	LMEMSIZE
				?
0x00C	0	16	U12	LMEMOFFSETHI
				?
	16	16	U12	LMEMOFFSETLO
				?
0x010	0	16	U12	LMEMDATA00HI
				?
0x012	0	16	U12	LMEMDATA00LO
				?
0x014	0	16	U12	LMEMDATA01HI
				?
0x016	0	16	U12	LMEMDATA01LO
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x018	0	16	U12	LMEMDATA02HI ?
0x01A	0	16	U12	LMEMDATA02LO ?
0x01C	0	16	U12	LMEMDATA03HI ?
0x01E	0	16	U12	LMEMDATA03LO ?
0x020	0	16	U12	LMEMDATA04HI ?
0x022	0	16	U12	LMEMDATA04LO ?
0x024	0	16	U12	LMEMDATA05HI ?
0x026	0	16	U12	LMEMDATA05LO ?
0x028	0	16	U12	LMEMDATA06HI ?
0x02A	0	16	U12	LMEMDATA06LO ?
0x02C	0	16	U12	LMEMDATA07HI ?
0x02E	0	16	U12	LMEMDATA07LO ?
0x030	0	16	U12	LMEMDATA08HI ?
0x032	0	16	U12	LMEMDATA08LO ?
0x034	0	16	U12	LMEMDATA09HI ?
0x036	0	16	U12	LMEMDATA09LO ?
0x038	0	16	U12	LMEMDATA10HI ?
0x03A	0	16	U12	LMEMDATA10LO ?

14.1.7 LMEMDUMPPOOL (1604/0x644:7)

Description:

"Memory Pool Status Dump" Telecommand Packet

Dump the statistics for a memory pool.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT ?
	4	12	U12	LMEMTRANID ?
0x00A	0	16	U12	LMEMPOOLID

Offset	S	L	Type	ITOS name, attribute(s), and description
				?

14.1.8 LMEMDUMPSYMVAL (1604/0x644:8)

Description:

"Memory Symbol Lookup" Telecommand Packet

Dump the value of a symbol.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?
0x00A	0	8	U1	LMEMSIZE
				?
0x00B	0	8	U1	LMEMPAD
				?
0x00C	0	8	U1	LMEMNAME00
				?
0x00D	0	8	U1	LMEMNAME01
				?
0x00E	0	8	U1	LMEMNAME02
				?
0x00F	0	8	U1	LMEMNAME03
				?
0x010	0	8	U1	LMEMNAME04
				?
0x011	0	8	U1	LMEMNAME05
				?
0x012	0	8	U1	LMEMNAME06
				?
0x013	0	8	U1	LMEMNAME07
				?
0x014	0	8	U1	LMEMNAME08
				?
0x015	0	8	U1	LMEMNAME09
				?
0x016	0	8	U1	LMEMNAME10
				?
0x017	0	8	U1	LMEMNAME11
				?
0x018	0	8	U1	LMEMNAME12
				?
0x019	0	8	U1	LMEMNAME13
				?
0x01A	0	8	U1	LMEMNAME14
				?
0x01B	0	8	U1	LMEMNAME15
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x01C	0	8	U1	LMEMNAME16 ?
0x01D	0	8	U1	LMEMNAME17 ?
0x01E	0	8	U1	LMEMNAME18 ?
0x01F	0	8	U1	LMEMNAME19 ?
0x020	0	8	U1	LMEMNAME20 ?
0x021	0	8	U1	LMEMNAME21 ?
0x022	0	8	U1	LMEMNAME22 ?
0x023	0	8	U1	LMEMNAME23 ?
0x024	0	8	U1	LMEMNAME24 ?
0x025	0	8	U1	LMEMNAME25 ?
0x026	0	8	U1	LMEMNAME26 ?
0x027	0	8	U1	LMEMNAME27 ?
0x028	0	8	U1	LMEMNAME28 ?
0x029	0	8	U1	LMEMNAME29 ?
0x02A	0	8	U1	LMEMNAME30 ?
0x02B	0	8	U1	LMEMNAME31 ?
0x02C	0	8	U1	LMEMNAME32 ?
0x02D	0	8	U1	LMEMNAME33 ?
0x02E	0	8	U1	LMEMNAME34 ?
0x02F	0	8	U1	LMEMNAME35 ?
0x030	0	8	U1	LMEMNAME36 ?
0x031	0	8	U1	LMEMNAME37 ?
0x032	0	8	U1	LMEMNAME38 ?
0x033	0	8	U1	LMEMNAME39 ?
0x034	0	8	U1	LMEMNAME40 ?
0x035	0	8	U1	LMEMNAME41 ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x036	0	8	U1	LMEMNAME42
				?
0x037	0	8	U1	LMEMNAME43
				?
0x038	0	8	U1	LMEMNAME44
				?
0x039	0	8	U1	LMEMNAME45
				?
0x03A	0	8	U1	LMEMNAME46
				?
0x03B	0	8	U1	LMEMNAME47
				?

14.1.9 LMEMDUMPSYMREL (1604/0x644:9)

Description:

"Memory Dump Symbol Relative" Telecommand Packet

Dump memory data starting at an offset relative to a symbol.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?
0x00A	0	16	U12	LMEMPAD1
				?
0x00C	0	16	U12	LMEMOFFSETHI
				?
	16	16	U12	LMEMOFFSETLO
				?
0x010	0	16	U12	LMEMSIZEHI
				?
	16	16	U12	LMEMSIZELO
				?
0x014	0	8	U1	LMEMNAMESIZE
				?
0x015	0	8	U1	LMEMPAD2
				?
0x016	0	16	U12	LMEMPAD3
				?
0x018	0	8	U1	LMEMNAME00
				?
0x019	0	8	U1	LMEMNAME01
				?
0x01A	0	8	U1	LMEMNAME02
				?
0x01B	0	8	U1	LMEMNAME03
				?
0x01C	0	8	U1	LMEMNAME04

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x01D	0	8	U1	LMEMNAME05
				?
0x01E	0	8	U1	LMEMNAME06
				?
0x01F	0	8	U1	LMEMNAME07
				?
0x020	0	8	U1	LMEMNAME08
				?
0x021	0	8	U1	LMEMNAME09
				?
0x022	0	8	U1	LMEMNAME10
				?
0x023	0	8	U1	LMEMNAME11
				?
0x024	0	8	U1	LMEMNAME12
				?
0x025	0	8	U1	LMEMNAME13
				?
0x026	0	8	U1	LMEMNAME14
				?
0x027	0	8	U1	LMEMNAME15
				?
0x028	0	8	U1	LMEMNAME16
				?
0x029	0	8	U1	LMEMNAME17
				?
0x02A	0	8	U1	LMEMNAME18
				?
0x02B	0	8	U1	LMEMNAME19
				?
0x02C	0	8	U1	LMEMNAME20
				?
0x02D	0	8	U1	LMEMNAME21
				?
0x02E	0	8	U1	LMEMNAME22
				?
0x02F	0	8	U1	LMEMNAME23
				?
0x030	0	8	U1	LMEMNAME24
				?
0x031	0	8	U1	LMEMNAME25
				?
0x032	0	8	U1	LMEMNAME26
				?
0x033	0	8	U1	LMEMNAME27
				?
0x034	0	8	U1	LMEMNAME28
				?
0x035	0	8	U1	LMEMNAME29
				?
0x036	0	8	U1	LMEMNAME30

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x037	0	8	U1	LMEMNAME31
				?
0x038	0	8	U1	LMEMNAME32
				?
0x039	0	8	U1	LMEMNAME33
				?
0x03A	0	8	U1	LMEMNAME34
				?
0x03B	0	8	U1	LMEMNAME35
				?

14.1.10 `LMEMDUMPNEXT` (1604/0x644:100)

Description:

"Send Next Dump Packet" Telecommand Packet

Send the next chunk of memory dump data.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	4	U12	LMEMLATUNIT
				?
	4	12	U12	LMEMTRANID
				?

14.2 Telemetry Packets

14.2.0 LMEMPOOLDATA (785/0x311)

Description:

"Memory Pool Statistics Dump" Telemetry Packet

Dump of memory pool statistics.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	4	U12	LMEMTPOOLLATUNIT ?
	4	12	U12	LMEMTPOOLTRANID ?
0x010	0	16	U12	LMEMTPOOLID ?
0x012	0	16	U12	LMEMTPOOLPAD ?
0x014	0	32	U1234	LMEMTPOOLFREBYT ?
0x018	0	32	U1234	LMEMTPOOLFREBLK ?
0x01C	0	32	U1234	LMEMTPOOLMAXBLK ?
0x020	0	32	U1234	LMEMTPOOLALCBYT ?
0x024	0	32	U1234	LMEMTPOOLALCBLK ?

14.2.1 LMEMSYMVAL (786/0x312)

Description:

"Symbol Value Dump" Telemetry Packet

Dump of a symbol's 32-bit value.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	4	U12	LMEMTSYMLATUNIT ?
	4	12	U12	LMEMTSYMTRANID ?
0x010	0	32	U1234	LMEMTSYMVALUE ?
0x014	0	8	U1	LMEMTSYMNAMESIZE ?
0x015	0	8	U1	LMEMTSYMPAD8 ?
0x016	0	16	U12	LMEMTSYMPAD16 ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x018	0	8	U1	LMEMTSYMNAME00 ?
0x019	0	8	U1	LMEMTSYMNAME01 ?
0x01A	0	8	U1	LMEMTSYMNAME02 ?
0x01B	0	8	U1	LMEMTSYMNAME03 ?
0x01C	0	8	U1	LMEMTSYMNAME04 ?
0x01D	0	8	U1	LMEMTSYMNAME05 ?
0x01E	0	8	U1	LMEMTSYMNAME06 ?
0x01F	0	8	U1	LMEMTSYMNAME07 ?
0x020	0	8	U1	LMEMTSYMNAME08 ?
0x021	0	8	U1	LMEMTSYMNAME09 ?
0x022	0	8	U1	LMEMTSYMNAME10 ?
0x023	0	8	U1	LMEMTSYMNAME11 ?
0x024	0	8	U1	LMEMTSYMNAME12 ?
0x025	0	8	U1	LMEMTSYMNAME13 ?
0x026	0	8	U1	LMEMTSYMNAME14 ?
0x027	0	8	U1	LMEMTSYMNAME15 ?
0x028	0	8	U1	LMEMTSYMNAME16 ?
0x029	0	8	U1	LMEMTSYMNAME17 ?
0x02A	0	8	U1	LMEMTSYMNAME18 ?
0x02B	0	8	U1	LMEMTSYMNAME19 ?
0x02C	0	8	U1	LMEMTSYMNAME20 ?
0x02D	0	8	U1	LMEMTSYMNAME21 ?
0x02E	0	8	U1	LMEMTSYMNAME22 ?
0x02F	0	8	U1	LMEMTSYMNAME23 ?
0x030	0	8	U1	LMEMTSYMNAME24 ?
0x031	0	8	U1	LMEMTSYMNAME25 ?

Offset	S	L	Type	ITOS name, attribute(s), and description
0x032	0	8	U1	LMEMTSYMNAME26 ?
0x033	0	8	U1	LMEMTSYMNAME27 ?
0x034	0	8	U1	LMEMTSYMNAME28 ?
0x035	0	8	U1	LMEMTSYMNAME29 ?
0x036	0	8	U1	LMEMTSYMNAME30 ?
0x037	0	8	U1	LMEMTSYMNAME31 ?
0x038	0	8	U1	LMEMTSYMNAME32 ?
0x039	0	8	U1	LMEMTSYMNAME33 ?
0x03A	0	8	U1	LMEMTSYMNAME34 ?
0x03B	0	8	U1	LMEMTSYMNAME35 ?
0x03C	0	8	U1	LMEMTSYMNAME36 ?
0x03D	0	8	U1	LMEMTSYMNAME37 ?
0x03E	0	8	U1	LMEMTSYMNAME38 ?
0x03F	0	8	U1	LMEMTSYMNAME39 ?
0x040	0	8	U1	LMEMTSYMNAME40 ?
0x041	0	8	U1	LMEMTSYMNAME41 ?
0x042	0	8	U1	LMEMTSYMNAME42 ?
0x043	0	8	U1	LMEMTSYMNAME43 ?
0x044	0	8	U1	LMEMTSYMNAME44 ?
0x045	0	8	U1	LMEMTSYMNAME45 ?
0x046	0	8	U1	LMEMTSYMNAME46 ?
0x047	0	8	U1	LMEMTSYMNAME47 ?

14.2.2 LMEMSIUDATA (788/0x314)

Description:

"SIU Memory Dump Data" Telemetry Packet

Memory dump data from the SIU.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	4	U12	LMEMTSIULATUNIT ?
	4	12	U12	LMEMTSIUTRANID ?
0x010	0	32	U1234	LMEMTSIUADDRESS ?
0x014	0	16	U12	LMEMTSIUWORDCNT ?
0x016	0	16	U12	LMEMTSIUCMDFUNC ?
0x018	0	32	U1234	LMEMTSIUDATA0 ?
0x01C	0	32	U1234	LMEMTSIUDATA1 ?
0x020	0	32	U1234	LMEMTSIUDATA2 ?
0x024	0	32	U1234	LMEMTSIUDATA3 ?
0x028	0	32	U1234	LMEMTSIUDATA4 ?
0x02C	0	32	U1234	LMEMTSIUDATA5 ?
0x030	0	32	U1234	LMEMTSIUDATA6 ?
0x034	0	32	U1234	LMEMTSIUDATA7 ?
0x038	0	32	U1234	LMEMTSIUDATA8 ?
0x03C	0	32	U1234	LMEMTSIUDATA9 ?
0x040	0	32	U1234	LMEMTSIUDATA10 ?
0x044	0	32	U1234	LMEMTSIUDATA11 ?
0x048	0	32	U1234	LMEMTSIUDATA12 ?
0x04C	0	32	U1234	LMEMTSIUDATA13 ?
0x050	0	32	U1234	LMEMTSIUDATA14 ?
0x054	0	32	U1234	LMEMTSIUDATA15 ?
0x058	0	32	U1234	LMEMTSIUDATA16 ?
0x05C	0	32	U1234	LMEMTSIUDATA17 ?
0x060	0	32	U1234	LMEMTSIUDATA18 ?
0x064	0	32	U1234	LMEMTSIUDATA19 ?
0x068	0	32	U1234	LMEMTSIUDATA20

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x06C	0	32	U1234	LMEMTSIUDATA21
				?
0x070	0	32	U1234	LMEMTSIUDATA22
				?
0x074	0	32	U1234	LMEMTSIUDATA23
				?
0x078	0	32	U1234	LMEMTSIUDATA24
				?
0x07C	0	32	U1234	LMEMTSIUDATA25
				?
0x080	0	32	U1234	LMEMTSIUDATA26
				?
0x084	0	32	U1234	LMEMTSIUDATA27
				?
0x088	0	32	U1234	LMEMTSIUDATA28
				?
0x08C	0	32	U1234	LMEMTSIUDATA29
				?
0x090	0	32	U1234	LMEMTSIUDATA30
				?
0x094	0	32	U1234	LMEMTSIUDATA31
				?
0x098	0	32	U1234	LMEMTSIUDATA32
				?
0x09C	0	32	U1234	LMEMTSIUDATA33
				?
0x0A0	0	32	U1234	LMEMTSIUDATA34
				?
0x0A4	0	32	U1234	LMEMTSIUDATA35
				?
0x0A8	0	32	U1234	LMEMTSIUDATA36
				?
0x0AC	0	32	U1234	LMEMTSIUDATA37
				?
0x0B0	0	32	U1234	LMEMTSIUDATA38
				?
0x0B4	0	32	U1234	LMEMTSIUDATA39
				?
0x0B8	0	32	U1234	LMEMTSIUDATA40
				?
0x0BC	0	32	U1234	LMEMTSIUDATA41
				?
0x0C0	0	32	U1234	LMEMTSIUDATA42
				?
0x0C4	0	32	U1234	LMEMTSIUDATA43
				?
0x0C8	0	32	U1234	LMEMTSIUDATA44
				?
0x0CC	0	32	U1234	LMEMTSIUDATA45
				?
0x0D0	0	32	U1234	LMEMTSIUDATA46

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x0D4	0	32	U1234	LMEMTSIUDATA47
				?
0x0D8	0	32	U1234	LMEMTSIUDATA48
				?
0x0DC	0	32	U1234	LMEMTSIUDATA49
				?
0x0E0	0	32	U1234	LMEMTSIUDATA50
				?
0x0E4	0	32	U1234	LMEMTSIUDATA51
				?
0x0E8	0	32	U1234	LMEMTSIUDATA52
				?
0x0EC	0	32	U1234	LMEMTSIUDATA53
				?
0x0F0	0	32	U1234	LMEMTSIUDATA54
				?
0x0F4	0	32	U1234	LMEMTSIUDATA55
				?
0x0F8	0	32	U1234	LMEMTSIUDATA56
				?
0x0FC	0	32	U1234	LMEMTSIUDATA57
				?
0x100	0	32	U1234	LMEMTSIUDATA58
				?
0x104	0	32	U1234	LMEMTSIUDATA59
				?
0x108	0	32	U1234	LMEMTSIUDATA60
				?
0x10C	0	32	U1234	LMEMTSIUDATA61
				?
0x110	0	32	U1234	LMEMTSIUDATA62
				?
0x114	0	32	U1234	LMEMTSIUDATA63
				?
0x118	0	32	U1234	LMEMTSIUDATA64
				?
0x11C	0	32	U1234	LMEMTSIUDATA65
				?
0x120	0	32	U1234	LMEMTSIUDATA66
				?
0x124	0	32	U1234	LMEMTSIUDATA67
				?
0x128	0	32	U1234	LMEMTSIUDATA68
				?
0x12C	0	32	U1234	LMEMTSIUDATA69
				?
0x130	0	32	U1234	LMEMTSIUDATA70
				?
0x134	0	32	U1234	LMEMTSIUDATA71
				?
0x138	0	32	U1234	LMEMTSIUDATA72

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x13C	0	32	U1234	LMEMTSIUDATA73
				?
0x140	0	32	U1234	LMEMTSIUDATA74
				?
0x144	0	32	U1234	LMEMTSIUDATA75
				?
0x148	0	32	U1234	LMEMTSIUDATA76
				?
0x14C	0	32	U1234	LMEMTSIUDATA77
				?
0x150	0	32	U1234	LMEMTSIUDATA78
				?
0x154	0	32	U1234	LMEMTSIUDATA79
				?
0x158	0	32	U1234	LMEMTSIUDATA80
				?
0x15C	0	32	U1234	LMEMTSIUDATA81
				?
0x160	0	32	U1234	LMEMTSIUDATA82
				?
0x164	0	32	U1234	LMEMTSIUDATA83
				?
0x168	0	32	U1234	LMEMTSIUDATA84
				?
0x16C	0	32	U1234	LMEMTSIUDATA85
				?
0x170	0	32	U1234	LMEMTSIUDATA86
				?
0x174	0	32	U1234	LMEMTSIUDATA87
				?
0x178	0	32	U1234	LMEMTSIUDATA88
				?
0x17C	0	32	U1234	LMEMTSIUDATA89
				?

15 PBC Package

15.0 Overview

The PBC package contains routines that are specific to the Primary Boot Code.

The package supports the following functions:

- RAD750 boot and crate initialization

15.1 Command Packets

15.1.0 `LBTSTART` (1600/0x640:0)

Description:

"Boot code no-op" Telecommand Packet

No-op command for the PBC.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LPBCLATUNIT ?

15.1.1 `LBTRESET` (1600/0x640:1)

Description:

"Warm reboot" Telecommand Packet

Initiate a warm reboot of the unit.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LPBCLATUNIT ?
0x00A	0	16	U12	LPBCPAD ?
0x00C	0	32	U1234	LPBCPRIFLAGS ?

15.1.2 `LBTERRDUMP` (1600/0x640:2)

Description:

"Error code pop" Telecommand Packet

Pop the next error code from the PBC error queue.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LPBCLATUNIT ?

15.1.3 LBTRTOSEXEC (1600/0x640:3)

Description:

"Boot RTOS" Telecommand Packet

Start the RTOS.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LPBCLATUNIT ?
0x00A	0	16	U12	LPBCPAD ?
0x00C	0	32	U1234	LPBCSBCFLAGS ?

15.1.4 LBTBAD (1600/0x640:4)

Description:

"Invalid boot command" Telecommand Packet

Boot command with an invalid function code. This is used for testing the PBC.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x008	0	16	U12	LPBCLATUNIT ?

15.2 Telemetry Packets

15.2.0 LBTHKP (512/0x200)

Description:

"Boot housekeeping telemetry" Telemetry Packet

Boot housekeeping telemetry.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LPBCBOOTSTAT ?
0x010	0	16	U12	LPBCTOTALERRCNT ?
0x012	0	16	U12	LPBCQUEUEERRCNT ?
0x014	0	32	U1234	LPBCNEXTERRWORD ?
0x018	0	16	U12	LPBCTCRECVCNT ?
0x01A	0	16	U12	LPBCTCACCCNT ?
0x01C	0	32	U1234	LPBCLASTERRWORD ?
0x020	0	5	U12	LPBCLASTFUNC ?
	5	11	U12	LPBCLASTAPID ?
0x022	0	16	U12	LPBCSPARE1 ?
0x024	0	16	U12	LPBCSPARE2 ?
0x026	0	16	U12	LPBCFILESTAT ?
0x028	0	16	U12	LPBCFILEPKTCNT ?
0x02A	0	16	U12	LPBCSCRUBADDRHI ?
0x02C	0	16	U12	LPBCBOOTTYPE ?
0x02E	0	16	U12	LPBCMEMDUMPWC ?
0x030	0	32	U1234	LPBCMEMDUMPADDR ?
0x034	0	32	U1234	LPBCMEMDUMPDAT00 ?
0x038	0	32	U1234	LPBCMEMDUMPDAT01 ?
0x03C	0	32	U1234	LPBCMEMDUMPDAT02 ?
0x040	0	32	U1234	LPBCMEMDUMPDAT03

Offset	S	L	Type	ITOS name, attribute(s), and description
				?
0x044	0	32	U1234	LPBCMEMDUMPDAT04
				?
0x048	0	32	U1234	LPBCMEMDUMPDAT05
				?
0x04C	0	32	U1234	LPBCMEMDUMPDAT06
				?
0x050	0	32	U1234	LPBCMEMDUMPDAT07
				?
0x054	0	32	U1234	LPBCMEMDUMPDAT08
				?
0x058	0	32	U1234	LPBCMEMDUMPDAT09
				?
0x05C	0	32	U1234	LPBCMEMDUMPDAT10
				?
0x060	0	32	U1234	LPBCMEMDUMPDAT11
				?
0x064	0	32	U1234	LPBCMEMDUMPDAT12
				?
0x068	0	32	U1234	LPBCMEMDUMPDAT13
				?
0x06C	0	32	U1234	LPBCMEMDUMPDAT14
				?
0x070	0	32	U1234	LPBCMEMDUMPDAT15
				?

15.2.1 `LBTEPU0HKP` (609/0x261)

Description:

"EPU 0 Boot Housekeeping Telemetry" Telemetry Packet

Boot housekeeping telemetry from EPU 0.

Layout:

Offset	S	L	Type	ITOS name, attribute(s), and description
0x00E	0	16	U12	LPBC0BOOTSTAT
				?
0x010	0	16	U12	LPBC0TOTALERRCNT
				?
0x012	0	16	U12	LPBC0QUEUEERRCNT
				?
0x014	0	32	U1234	LPBC0NEXTERRWORD
				?
0x018	0	16	U12	LPBC0TCRECVCNT
				?
0x01A	0	16	U12	LPBC0TCACCCNT
				?
0x01C	0	32	U1234	LPBC0LASTERRWORD
				?
0x020	0	5	U12	LPBC0LASTFUNC
				?

Offset	S	L	Type	ITOS name, attribute(s), and description
	5	11	U12	LPBC0LASTAPID ?
0x022	0	16	U12	LPBC0SPARE1 ?
0x024	0	16	U12	LPBC0SPARE2 ?
0x026	0	16	U12	LPBC0FILESTAT ?
0x028	0	16	U12	LPBC0FILEPKTCNT ?
0x02A	0	16	U12	LPBC0SCRUBADDRHI ?
0x02C	0	16	U12	LPBC0BOOTTYPE ?
0x02E	0	16	U12	LPBC0DUMPWC ?
0x030	0	32	U1234	LPBC0DUMPADDR ?
0x034	0	32	U1234	LPBC0DUMPDATA00 ?
0x038	0	32	U1234	LPBC0DUMPDATA01 ?
0x03C	0	32	U1234	LPBC0DUMPDATA02 ?
0x040	0	32	U1234	LPBC0DUMPDATA03 ?
0x044	0	32	U1234	LPBC0DUMPDATA04 ?
0x048	0	32	U1234	LPBC0DUMPDATA05 ?
0x04C	0	32	U1234	LPBC0DUMPDATA06 ?
0x050	0	32	U1234	LPBC0DUMPDATA07 ?
0x054	0	32	U1234	LPBC0DUMPDATA08 ?
0x058	0	32	U1234	LPBC0DUMPDATA09 ?
0x05C	0	32	U1234	LPBC0DUMPDATA10 ?
0x060	0	32	U1234	LPBC0DUMPDATA11 ?
0x064	0	32	U1234	LPBC0DUMPDATA12 ?
0x068	0	32	U1234	LPBC0DUMPDATA13 ?
0x06C	0	32	U1234	LPBC0DUMPDATA14 ?
0x070	0	32	U1234	LPBC0DUMPDATA15 ?

16 Telecommand Packet Index, by APID

APID	FC	Cmd. Packet (I)	Section	Descripti
0x640	0	LPBCSTART	PBC/cmd/LBTSTART/000_P.LBTSTART.shtml:%	Boot cod
0x640	1	LPBCRESET	PBC/cmd/LBTRESET/000_P.LBTRESET.shtml:%	Warm reb
0x640	2	LPBCERRDUMP	PBC/cmd/LBTERRDUMP/000_P.LBTERRDUMP.shtml:%	Error cod
0x640	3	LPBCRTOSEXEC	PBC/cmd/LBTRTOSEXEC/000_P.LBTRTOSEXEC.shtml:%	Boot RTO
0x640	4	LPBCBADCMD	PBC/cmd/LBTBAD/000_P.LBTBAD.shtml:%	Invalid bo
0x641	0	LFILUPLSTART	FILE/cmd/LFILUPLSTART/000_P.LFILUPLSTART	File Uplo
0x641	1	LFILUPLCANCEL	FILE/cmd/LFILUPLCANCEL/000_P.LFILUPLCA	File Uplo
0x641	2	LFILUPLCOMMIT	FILE/cmd/LFILUPLCOMMIT/000_P.LFILUPL	File Uplo
0x641	3	LFILUPLDATA	FILE/cmd/LFILUPLDATA/000_P.LFILUPL	File Uplo
0x641	4	LFILUPLEPU	FILE/cmd/LFILUPLEPU/000_P.LFILUP	File Uplo
0x644	0	LMEMDUMPMEM	MEM/cmd/LMEMDUMPMEM/000_P.LMEM	Memory
0x644	1	LMEMDUMPCANCEL	MEM/cmd/LMEMDUMPCANCEL/000_P	Memory
0x644	2	LMEMDUMPPCI	MEM/cmd/LMEMDUMPPCI/000_P.LM	PCI Devi
0x644	3	LMEMDUMPREG	MEM/cmd/LMEMDUMPREG/000_P	Processo
0x644	4	LMEMLOADMEM	MEM/cmd/LMEMLOADMEM/000_P	Memory
0x645	4	LMEMLOADPCI	MEM/cmd/LMEMLOADPCI/000_P	PCI Devi
0x644	4	LMEMLOADREG	MEM/cmd/LMEMLOADREG/000_P	Processo
0x644	4	LMEMDUMPPOOL	MEM/cmd/LMEMDUMPPOOL/000_P	Memory
0x644	4	LMEMDUMPSYMVAL	MEM/cmd/LMEMDUMPSYMVAL	Memory
0x644	4	LMEMDUMPSYMREF	MEM/cmd/LMEMDUMPSYMREF	Memory
0x644	4	LMEMDUMPNEXT	MEM/cmd/LMEMDUMPNEXT	Send Nex
0x644	4	LRestart	Restart/cmd/Restart/000_P	Restart a
0x644	4	LStart	Start/cmd/Start/000_P	Start Cont
0x644	4	LStop	Stop/cmd/Stop/000_P	Terminat
0x644	4	LSetMode	Mode/cmd/SetMode/000_P	Set Oper
0x644	4	LSetTrnOff	Transponder/cmd/SetTrnOff	Set Trans
0x644	4	LSetTrnParam	Transponder/cmd/SetTrnParam	Set Trans
0x644	4	LSetTrnMode	Transponder/cmd/SetTrnMode	Set Trans
0x644	4	LSetTrnCmdMode	Transponder/cmd/SetTrnCmdMode	Set Trans
0x644	4	LSetTrnTlmMode	Transponder/cmd/SetTrnTlmMode	Set Trans
0x644	4	LSetTrnTlmRate	Transponder/cmd/SetTrnTlmRate	Set Trans
0x644	4	LSetTrnTlmFreq	Transponder/cmd/SetTrnTlmFreq	Set Trans
0x644	4	LSetTrnTlmPwr	Transponder/cmd/SetTrnTlmPwr	Set Trans
0x644	4	LSetTrnTlmEncode	Transponder/cmd/SetTrnTlmEncode	Set Trans
0x644	4	LSetTrnTlmPN	Transponder/cmd/SetTrnTlmPN	Set Trans
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LLFSDIRDELETE	0x648	3	LFS/cmd/LLFSDIRDELETE/000_P.LLFSDIRDELETE.shtml:%	Directory
LLFSDIRDUMP	0x648	5	LFS/cmd/LLFSDIRDUMP/000_P.LLFSDIRDUMP.shtml:%	Directory
LLFSFILECOPY	0x648	1	LFS/cmd/LLFSFILECOPY/000_P.LLFSFILECOPY.shtml:%	File Copy
LLFSFILEDELETE	0x648	0	LFS/cmd/LLFSFILEDELETE/000_P.LLFSFILEDELETE.shtml:%	File Dele
LLFSFILEDUMPC	0x648	4	LFS/cmd/LLFSFILEDUMPC/000_P.LLFSFILEDUMPC.shtml:%	File Dum
LLFSSYSSTATUS	0x648	6	LFS/cmd/LLFSSYSSTATUS/000_P.LLFSSYSSTATUS.shtml:%	File Syste
LMCACDTILEALL	0x69C	3	LMC/cmd/acd_tile_all/000_P.acd_tile_all.shtml:%	ACD Tile
LMCACDTILEPAIR	0x69C	2	LMC/cmd/acd_tile_pair/000_P.acd_tile_pair.shtml:%	ACD Tile
LMCCALLRS	0x69C	0	LMC/cmd/cal_lrs/000_P.cal_lrs.shtml:%	CAL Low
LMCSTOPCOUNT	0x69C	4	LMC/cmd/stop_count/000_P.stop_count.shtml:%	Stop Acti
LMCTKRLRS	0x69C	1	LMC/cmd/tkr_lrs/000_P.tkr_lrs.shtml:%	TKR Low
LMEMDUMPCANCEL	0x644	1	MEM/cmd/LMEMDUMPCANCEL/000_P.LMEMDUMPCANCEL.shtml:%	Memory
LMEMDUMPMEM	0x644	0	MEM/cmd/LMEMDUMPMEM/000_P.LMEMDUMPMEM.shtml:%	Memory
LMEMDUMPNEXT	0x644	100	MEM/cmd/LMEMDUMPNEXT/000_P.LMEMDUMPNEXT.shtml:%	Send Nex
LMEMDUMPPCI	0x644	2	MEM/cmd/LMEMDUMPPCI/000_P.LMEMDUMPPCI.shtml:%	PCI Devi
LMEMDUMPPOOL	0x644	7	MEM/cmd/LMEMDUMPPOOL/000_P.LMEMDUMPPOOL.shtml:%	Memory
LMEMDUMPREG	0x644	3	MEM/cmd/LMEMDUMPREG/000_P.LMEMDUMPREG.shtml:%	Processor
LMEMDUMPSYMREL	0x644	9	MEM/cmd/LMEMDUMPSYMREL/000_P.LMEMDUMPSYMREL.shtml:%	Memory
LMEMDUMPSYMVAL	0x644	8	MEM/cmd/LMEMDUMPSYMVAL/000_P.LMEMDUMPSYMVAL.shtml:%	Memory
LMEMLOADMEM	0x644	4	MEM/cmd/LMEMLOADMEM/000_P.LMEMLOADMEM.shtml:%	Memory
LMEMLOADPCI	0x644	5	MEM/cmd/LMEMLOADPCI/000_P.LMEMLOADPCI.shtml:%	PCI Devi
LMEMLOADREG	0x644	6	MEM/cmd/LMEMLOADREG/000_P.LMEMLOADREG.shtml:%	Processor
LPBCBADCMD	0x640	4	PBC/cmd/LBTBAD/000_P.LBTBAD.shtml:%	Invalid bo
LPBCERRDUMP	0x640	2	PBC/cmd/LBTERRDUMP/000_P.LBTERRDUMP.shtml:%	Error cod
LPBCRESET	0x640	1	PBC/cmd/LBTRESET/000_P.LBTRESET.shtml:%	Warm reb
LPBCRTOSEXEC	0x640	3	PBC/cmd/LBTRTOSEXEC/000_P.LBTRTOSEXEC.shtml:%	Boot RTO
LPBCSTART	0x640	0	PBC/cmd/LBTSTART/000_P.LBTSTART.shtml:%	Boot cod
LTCHtrOnOffCtl	0x645	5	LTC/cmd/HtrOnOffCtl/000_P.HtrOnOffCtl.shtml:%	Set heate
LTCReStart	0x645	1	LTC/cmd/ReStart/000_P.ReStart.shtml:%	Restart ar
LTCSetMode	0x645	4	LTC/cmd/SetMode/000_P.SetMode.shtml:%	Set therm
LTCSetParam	0x645	6	LTC/cmd/SetParam/000_P.SetParam.shtml:%	Set contro
LTCSetTlmFreq	0x645	7	LTC/cmd/SetTlmFreq/000_P.SetTlmFreq.shtml:%	Set LTC t
LTCStart	0x645	2	LTC/cmd/Start/000_P.Start.shtml:%	Start cont
LTCStop	0x645	3	LTC/cmd/Stop/000_P.Stop.shtml:%	Terminate
MsgResponse	0x695	0	LCM/cmd/msgResponse/000_P.msgResponse.shtml:%	Change ta

18 Telecommand Enumeration Index, by Name

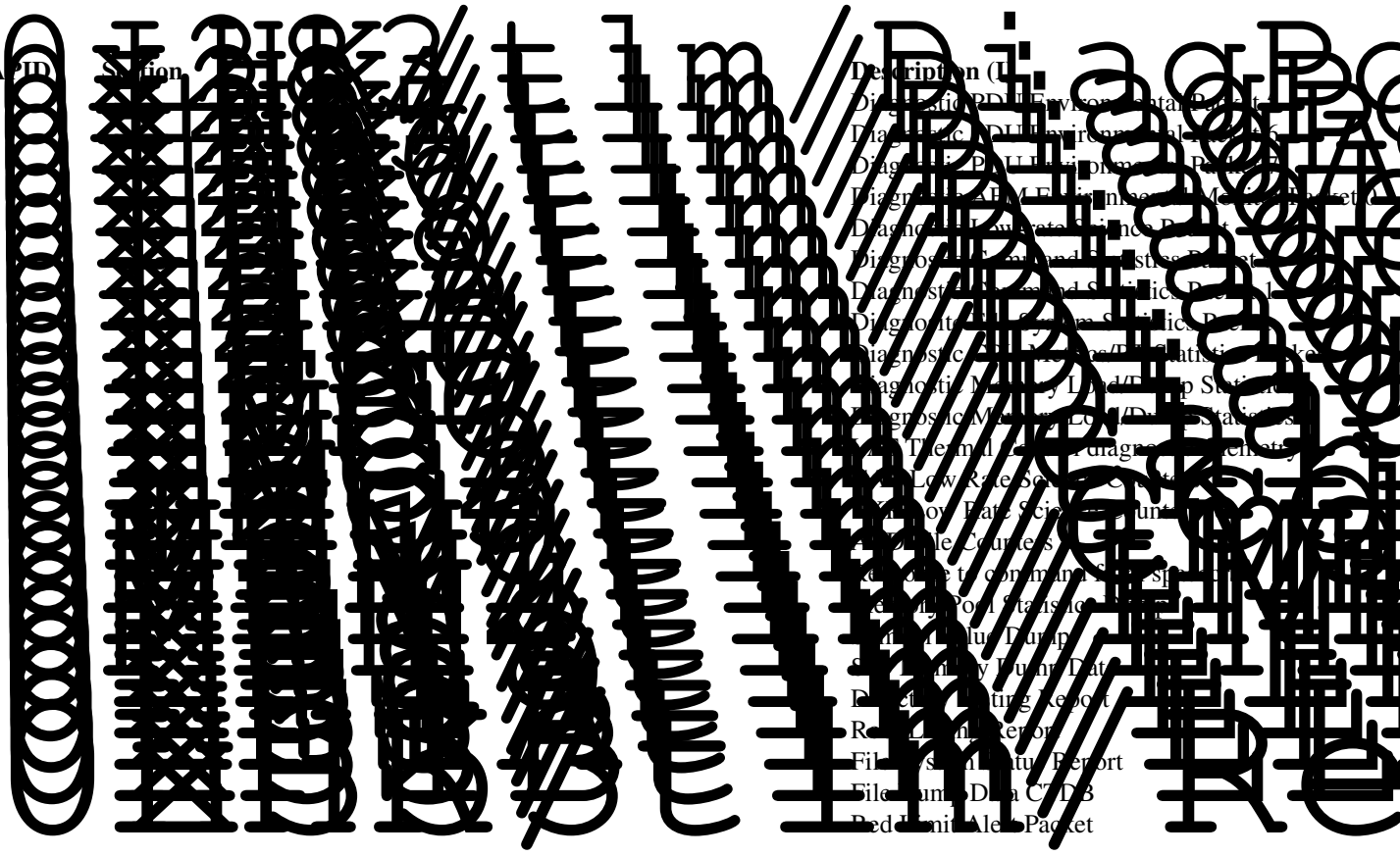
Enumeration	Section	Description
CMD_CNT_SEL	ISIS/att/_/E.CMD_CNT_SEL.shtml:%	Selects count to return as diagnostic telemetry
EPU_ID	ISIS/att/_/E.EPU_ID.shtml:%	Enumeration of the EPUs
FILEDEVICE	ISIS/att/_/E.FILEDEVICE.shtml:%	Code for file device
ON_OFF_SELECTOR	ISIS/att/_/E.ON_OFF_SELECTOR.shtml:%	Enumeration of the options for the simple on-off selector
P_S_SELECTOR	ISIS/att/_/E.P_S_SELECTOR.shtml:%	Enumeration for the simple primary-secondary selector
PDU_ID	ISIS/att/_/E.PDU_ID.shtml:%	Identifies a PDU
SCIPATTYPE	ISIS/att/_/E.SCIPATTYPE.shtml:%	Science data generation pattern types
SIU_ID	ISIS/att/_/E.SIU_ID.shtml:%	Enumeration of the possible SIU IDs

19 Telecommand Range Index, by Name

Range	Section	Description
bits_12_range	ISIS/att/_/R.bits_12_range.shtml:%	Range for 12-bit fields
cmd_cnt_range	ISIS/att/_/R.cmd_cnt_range.shtml:%	Range for command count selection
epu_range	ISIS/att/_/R.epu_range.shtml:%	EPU number range
LHKAPIDRNG	LHK/att/_/R.LHKAPIDRNG.shtml:%	LHK APID Range
LHKDIAGINTV	LHK/att/_/R.LHKDIAGINTV.shtml:%	Diagnostic Interval
LHKDIAGPKTCNT	LHK/att/_/R.LHKDIAGPKTCNT.shtml:%	Diagnostic Packet Count
on_off_range	ISIS/att/_/R.on_off_range.shtml:%	On and off selector range
p_s_range	ISIS/att/_/R.p_s_range.shtml:%	Primary and secondary selector range
pdu_id_range	ISIS/att/_/R.pdu_id_range.shtml:%	PDU ID range
siu_id_range	ISIS/att/_/R.siu_id_range.shtml:%	SIU ID range
tem_mask_range	ISIS/att/_/R.tem_mask_range.shtml:%	TEM mask range

20 Telemetry Packet Index, by APID

APID	Section	Description (I)
0x200	PBC/tlm/LBTHKP/000_P.LBTHKP.shtml:%	Boot housekeeping telemetry
0x210	LHK/tlm/TemEnvPwr0/000_P.TemEnvPwr0.shtml:%	TEM Power Packet 0
0x211	LHK/tlm/TemEnvPwr1/000_P.TemEnvPwr1.shtml:%	TEM Power Packet 1
0x212	LHK/tlm/TemEnvPwr2/000_P.TemEnvPwr2.shtml:%	TEM Power Packet 2
0x213	LHK/tlm/TemEnvPwr3/000_P.TemEnvPwr3.shtml:%	TEM Power Packet 3
0x214	LHK/tlm/TemEnvPwr4/000_P.TemEnvPwr4.shtml:%	TEM Power Packet 4
0x215	LHK/tlm/TemEnvPwr5/000_P.TemEnvPwr5.shtml:%	TEM Power Packet 5
0x216	LHK/tlm/TemEnvTemp0/000_P.TemEnvTemp0.shtml:%	TEM Temperature Packet 0
0x217	LHK/tlm/TemEnvTemp1/000_P.TemEnvTemp1.shtml:%	TEM Temperature Packet 1
0x218	LHK/tlm/TemEnvTemp2/000_P.TemEnvTemp2.shtml:%	TEM Temperature Packet 2
0x219	LHK/tlm/TemEnvTemp3/000_P.TemEnvTemp3.shtml:%	TEM Temperature Packet 3
0x21A	LHK/tlm/TemEnvTemp4/000_P.TemEnvTemp4.shtml:%	TEM Temperature Packet 4
0x21B	LHK/tlm/TemEnvTemp5/000_P.TemEnvTemp5.shtml:%	TEM Temperature Packet 5
0x21C	LHK/tlm/TemEnvTemp6/000_P.TemEnvTemp6.shtml:%	TEM Temperature Packet 6
0x21D	LHK/tlm/TemEnvTemp7/000_P.TemEnvTemp7.shtml:%	TEM Temperature Packet 7
0x21E	LHK/tlm/PduEnv0/000_P.PduEnv0.shtml:%	PDU Environmental Packet 0
0x21F	LHK/tlm/PduEnv1/000_P.PduEnv1.shtml:%	PDU Environmental Packet 1
0x220	LHK/tlm/PduEnv2/000_P.PduEnv2.shtml:%	PDU Environmental Packet 2
0x221	LHK/tlm/PduEnv3/000_P.PduEnv3.shtml:%	PDU Environmental Packet 3
0x222	LHK/tlm/PduEnv4/000_P.PduEnv4.shtml:%	PDU Environmental Packet 4
0x223	LHK/tlm/PduEnv5/000_P.PduEnv5.shtml:%	PDU Environmental Packet 5
0x224	LHK/tlm/PduEnv6/000_P.PduEnv6.shtml:%	PDU Environmental Packet 6
0x225	LHK/tlm/PduEnv7/000_P.PduEnv7.shtml:%	PDU Environmental Packet 7
0x226	LHK/tlm/AemEnv0/000_P.AemEnv0.shtml:%	AEM Environmental Monitor Packet 0
0x227	LHK/tlm/LrSc/000_P.LrSc.shtml:%	Low-Rate Science Packet
0x228	LHK/tlm/CmdCnt0/000_P.CmdCnt0.shtml:%	Command Statistics Packet 0
0x229	LHK/tlm/CmdCnt1/000_P.CmdCnt1.shtml:%	Command Statistics Packet 1
0x22A	LHK/tlm/FileStat/000_P.FileStat.shtml:%	File System Statistics Packet
0x22B	LHK/tlm/CpuMetrics/000_P.CpuMetrics.shtml:%	CPU Metrics/RT Statistics Packet
0x22C	LHK/tlm/MemDump/000_P.MemDump.shtml:%	Memory Load Dump Statistics
0x22D	LHK/tlm/MemLoad/000_P.MemLoad.shtml:%	Memory Load/Dump Statistics
0x22E	LHK/tlm/DiagBootHkp/000_P.DiagBootHkp.shtml:%	DIAG Boot Housekeeping Telemetry
0x22F	LHK/tlm/DiagTemEnvPwr0/000_P.DiagTemEnvPwr0.shtml:%	Diagnostic TEM Power Packet 0
0x230	LHK/tlm/DiagTemEnvPwr1/000_P.DiagTemEnvPwr1.shtml:%	Diagnostic TEM Power Packet 1
0x231	LHK/tlm/DiagTemEnvPwr2/000_P.DiagTemEnvPwr2.shtml:%	Diagnostic TEM Power Packet 2
0x232	LHK/tlm/DiagTemEnvPwr3/000_P.DiagTemEnvPwr3.shtml:%	Diagnostic TEM Power Packet 3
0x233	LHK/tlm/DiagTemEnvPwr4/000_P.DiagTemEnvPwr4.shtml:%	Diagnostic TEM Power Packet 4
0x234	LHK/tlm/DiagTemEnvPwr5/000_P.DiagTemEnvPwr5.shtml:%	Diagnostic TEM Power Packet 5
0x235	LHK/tlm/DiagTemEnvTemp0/000_P.DiagTemEnvTemp0.shtml:%	Diagnostic TEM Temperature Packet 0
0x236	LHK/tlm/DiagTemEnvTemp1/000_P.DiagTemEnvTemp1.shtml:%	Diagnostic TEM Temperature Packet 1
0x237	LHK/tlm/DiagTemEnvTemp2/000_P.DiagTemEnvTemp2.shtml:%	Diagnostic TEM Temperature Packet 2
0x238	LHK/tlm/DiagTemEnvTemp3/000_P.DiagTemEnvTemp3.shtml:%	Diagnostic TEM Temperature Packet 3
0x239	LHK/tlm/DiagTemEnvTemp4/000_P.DiagTemEnvTemp4.shtml:%	Diagnostic TEM Temperature Packet 4
0x23A	LHK/tlm/DiagTemEnvTemp5/000_P.DiagTemEnvTemp5.shtml:%	Diagnostic TEM Temperature Packet 5
0x23B	LHK/tlm/DiagTemEnvTemp6/000_P.DiagTemEnvTemp6.shtml:%	Diagnostic TEM Temperature Packet 6
0x23C	LHK/tlm/DiagTemEnvTemp7/000_P.DiagTemEnvTemp7.shtml:%	Diagnostic TEM Temperature Packet 7
0x23D	LHK/tlm/DiagPduEnv0/000_P.DiagPduEnv0.shtml:%	Diagnostic PDU Environmental Packet 0
0x23E	LHK/tlm/DiagPduEnv1/000_P.DiagPduEnv1.shtml:%	Diagnostic PDU Environmental Packet 1
0x23F	LHK/tlm/DiagPduEnv2/000_P.DiagPduEnv2.shtml:%	Diagnostic PDU Environmental Packet 2
0x240	LHK/tlm/DiagPduEnv3/000_P.DiagPduEnv3.shtml:%	Diagnostic PDU Environmental Packet 3
0x241	LHK/tlm/DiagPduEnv4/000_P.DiagPduEnv4.shtml:%	Diagnostic PDU Environmental Packet 4



APID	Station	Description (L
		Diagnostic PDU Environmental Packet
		Diagnostic PDU Environmental Packet
		Diagnostic PDU Environmental Packet
		Diagnostic APM Environmental Packet
		Diagnostic Automated Science Packet
		Diagnostic Command Execution Packet
		Diagnostic Command Execution Packet
		Diagnostic Command Execution Packet
		Diagnostic Memory Load/Dump Status
		Diagnostic Memory Load/Dump Status
		Diagnostic Thermal Control Diagnostic Packet
		Low Rate Science Packet
		Low Rate Science Packet
		Module Counters
		Real-time command execution
		Post Transmission
		Science Buffer Dump
		Memory Dump Data
		Rebooting Report
		Reboot Report
		File System Status Report
		File System Data CRC
		Redundant Alert Packet

21 Telemetry Analog Conv. Index, by Name

Analog Conv.	Section	Description
LDTEMVADCCNV	LHK/att/_/A.LDTEMVADCCNV.shtml:%	TEM Voltage Conversion

22 Telemetry Discrete Conv. Index, by Name

Discrete Conv.	Section	Description
ITC_NODEID	ITC/att/_/D.ITC_NODEID.shtml:%	Discrete list of ITC nodes
ITC_TASKID	ITC/att/_/D.ITC_TASKID.shtml:%	Discrete list of ITC task IDs
LAEMFRPWRSTATES	LHK/att/_/D.LAEMFRPWRSTATES.shtml:%	AEM FREE Board Power States
LAPDUPWRCNVTSTAT	LHK/att/_/D.LAPDUPWRCNVTSTAT.shtml:%	ACD PDU Power Converter State
LAPDUPWRSTATES	LHK/att/_/D.LAPDUPWRSTATES.shtml:%	ACD PDU Power States
LAPDUPWRSUPSTAT	LHK/att/_/D.LAPDUPWRSUPSTAT.shtml:%	ACD PDU Power Supply Sources
LDPDUEPUCNVT	LHK/att/_/D.LDPDUEPUCNVT.shtml:%	PDU EPU Converter
LDPDUEPUPWRST	LHK/att/_/D.LDPDUEPUPWRST.shtml:%	EPU Power States
LDPDUTEMPWRST	LHK/att/_/D.LDPDUTEMPWRST.shtml:%	PDU TEM Power State
LHKSTATUSBITS	LHK/att/_/D.LHKSTATUSBITS.shtml:%	ADC status bit conversions
LRLIMDEVICE	LHK/att/_/D.LRLIMDEVICE.shtml:%	Device Opcodes for Red Limit Alerts

23 Telemetry Limit Set Index, by Name

Limit Set	Section	Description
LABEAGTEMPADCLIM	LHK/att/_/L.LABEAGTEMPADCLIM.shtml:%	ACD BEA Grid Interface Temperature Limits
LAPMTRTEMPADCLIM	LHK/att/_/L.LAPMTRTEMPADCLIM.shtml:%	ACD PMT Rail Temperature Limits
LASHLTEMPADCLIM	LHK/att/_/L.LASHLTEMPADCLIM.shtml:%	ACD Shell Temperature Limits
LC33IADCLIM	LHK/att/_/L.LC33IADCLIM.shtml:%	CAL 3.3I ADC limits
LC33VADCLIM	LHK/att/_/L.LC33VADCLIM.shtml:%	CAL 3.3V ADC limits
LCAFETADCLIM	LHK/att/_/L.LCAFETADCLIM.shtml:%	CAL AFFE temperature limits
LCBASPLADCLIM	LHK/att/_/L.LCBASPLADCLIM.shtml:%	CAL Baseplate Temperature Limits
LCBIASIADCLIM	LHK/att/_/L.LCBIASIADCLIM.shtml:%	CAL bias current limits
LCBIASVADCLIM	LHK/att/_/L.LCBIASVADCLIM.shtml:%	CAL bias voltage limits
LDAEMFRHV1ADCLIM	LHK/att/_/L.LDAEMFRHV1ADCLIM.shtml:%	AEM Free Board HV1 Limits
LDAEMFRHV2ADCLIM	LHK/att/_/L.LDAEMFRHV2ADCLIM.shtml:%	AEM Free Board HV2 Limits
LDAEMFRTMPADCLIM	LHK/att/_/L.LDAEMFRTMPADCLIM.shtml:%	AEM Free Board Temperature Limits
LDAEMFRVDDADCLIM	LHK/att/_/L.LDAEMFRVDDADCLIM.shtml:%	AEM Free Board VDD Limits
LDEPUTEMPADCLIM	LHK/att/_/L.LDEPUTEMPADCLIM.shtml:%	EPU Temperature ADC Limits
LDEPUVADCLIM	LHK/att/_/L.LDEPUVADCLIM.shtml:%	EPU Voltage ADC Limits
LDTEM33IADCLIM	LHK/att/_/L.LDTEM33IADCLIM.shtml:%	TEM 3.3I digital limits
LDTEM33VADCLIM	LHK/att/_/L.LDTEM33VADCLIM.shtml:%	TEM digital 3.3V limits
LDTEMPCBTADCLIM	LHK/att/_/L.LDTEMPCBTADCLIM.shtml:%	TEM PCB Temperature Limits
LDTEMPSTADCLIM	LHK/att/_/L.LDTEMPSTADCLIM.shtml:%	TEM Power Supply Temperature Limits
LMGRDRADIFADCLIM	LHK/att/_/L.LMGRDRADIFADCLIM.shtml:%	Grid Radiator Interface Temperature Limits
LMGRIDTEMPADCLIM	LHK/att/_/L.LMGRIDTEMPADCLIM.shtml:%	Grid Temperature ADC Limits
LMRADAFHTRADCLIM	LHK/att/_/L.LMRADAFHTRADCLIM.shtml:%	Radiator Anitfreeze Heater Temperature Limits
LMRADTEMPADCLIM	LHK/att/_/L.LMRADTEMPADCLIM.shtml:%	Radiator Temperature Limits
LMVCHPDSHPADCLIM	LHK/att/_/L.LMVCHPDSHPADCLIM.shtml:%	VCHP-DSHP Interface Temperature Limits
LMVCHPRSVTADCLIM	LHK/att/_/L.LMVCHPRSVTADCLIM.shtml:%	VCHP Reservoir Heater Temperature Limits
LMVCHPXLHPADCLIM	LHK/att/_/L.LMVCHPXLHPADCLIM.shtml:%	VCHP-XLHP Interface Temperature Limits
LT15IADCLIM	LHK/att/_/L.LT15IADCLIM.shtml:%	TKR 1.5I ADC limits
LT15VADCLIM	LHK/att/_/L.LT15VADCLIM.shtml:%	TKR 1.5V ADC Limits
LT25IADCLIM	LHK/att/_/L.LT25IADCLIM.shtml:%	TKR 2.5I ADC limits
LT25VADCLIM	LHK/att/_/L.LT25VADCLIM.shtml:%	TKR 2.5V ADC limits
LTBIASIADCLIM	LHK/att/_/L.LTBIASIADCLIM.shtml:%	TKR bias current ADC limits
LTBIASVADCLIM	LHK/att/_/L.LTBIASVADCLIM.shtml:%	TKR bias voltage ADC limits
LTCBLTADCLIM	LHK/att/_/L.LTCBLTADCLIM.shtml:%	TKR cable temperature limits