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CFS Command and Telemetry Handbook

For the CFS COSMOS Project



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Commands

CFS CFE_ES_CLEAR_ERLOG

This command causes the contents of the Executive Services Exception and Reset Log to be cleared.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	12	56	8	UINT	

CFS CFE_ES_CLEAR_SYSLOG

This command clears the contents of the Executive Services System Log.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	

CFS CFE_ES_DELETE_CDS

This command allows the user to delete a Critical Data Store that was created by an Application that is now no longer executing.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	21	56	8	UINT	

ASCII text string containing:



CDSNAME	ASCII text string containing name of CDS to delete.	default	64	304	STRING
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CFS CFE_ES_DUMP_CDS_REG

This command allows the user to dump the Critical Data Store Registry to an onboard file.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	23	56	8	UINT	
DUMPFILENAME	ASCII text string of full path and filename of file CDS Registry is to be written.			default	64	512	STRING	

CFS CFE_ES_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Executive Services task.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS CFE_ES_OVERWRITE_SYSLOG

This command allows the user to configure the Executive Services to either discard new System Log messages when it is full or to overwrite the oldest messages.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	18	56	8	UINT	
MODE	CFE_ES_LOG_DISCARD=Throw away most recent messages, CFE_ES_LOG_OVERWRITE=Overwrite oldest with most recent	0	4294967295	0	64	32	UINT	



CFS CFE_ES_PERF_SETFILTERMASK

This command sets the Performance Analyzer's Filter Masks.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	16	56	8	UINT	
FILTERMASKNUM	Index into array of Filter Masks.	0	4294967295	0	64	32	UINT	
FILTERMASK	New Mask for specified entry in array of Filter Masks.	0	4294967295	0	96	32	UINT	

CFS CFE_ES_PERF_SETTRIGMASK

This command sets the Performance Analyzer's Trigger Masks.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	17	56	8	UINT	
TRIGGERMASKNUM	Index into array of Trigger Masks.	0	4294967295	0	64	32	UINT	
TRIGGERMASK	New Mask for specified entry in array of Trigger Masks.	0	4294967295	0	96	32	UINT	

CFS CFE_ES_PERF_STARTDATA

This command causes the Performance Analyzer to begin collecting data using the specified trigger mode.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data	0	65535	1	32	16	UINT	



CCSDS_LENGTH	Length	0	00000	1	02	10	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	14	56	8	UINT
TRIGGERMODE	Desired trigger position (Start, Center, End).	0	4294967295	0	64	32	UINT

CFS CFE_ES_PERF_STOPDATA

This command stops the Performance Analyzer from collecting any more data.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	15	56	8	UINT	
DATAFILENAME	ASCII text string of full path and filename of file Performance Analyzer data is to be written.			default	64	512	STRING	

CFS CFE_ES_QUERY_ALL

This command takes the information kept by Executive Services on all of the registered applications and writes it to the specified file.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	
QUERYALLFILENAME	ASCII text string containing full path and filename of file in which Application data is to be dumped.			default	64	512	STRING	

CFS CFE_ES_QUERY_ALL_TASKS

This command takes the information kept by Executive Services on all of the registered tasks and writes it to the specified file.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
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CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	24	56	8	UINT
QUERYALLFILENAME	ASCII text string containing full path and filename of file in which Application data is to be dumped.			default	64	512	STRING

CFS CFE_ES_QUERY_ONE

This command takes the information kept by Executive Services on the specified application and telemeters it to the ground.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	
APPLICATION	ASCII text string containing Application Name.			default	64	160	STRING	

CFS CFE_ES_RELOAD_APP

This command halts and removes the specified Application from the system. Then it immediately loads the Application from the command specified file and restarts it. This command is especially useful for restarting a Command Ingest Application since once it has been stopped, no further commands can come in to restart it.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	
APPLICATION	ASCII text string containing Application Name.			default	64	160	STRING	
APPFILENAME	Full path and filename of Application's executable image.			default	224	512	STRING	



CFS CFE_ES_RESET

This command resets the following counters within the Executive Services housekeeping telemetry:
Command Execution CounterCommand Error Counter

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS CFE_ES_RESET_PR_COUNT

This command allows the user to reset the Processor Reset Counter to zero. The Processor Reset Counter counts the number of Processor Resets that have occurred so as to identify when a Processor Reset should automatically be upgraded to a full Power-On Reset.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	19	56	8	UINT	

CFS CFE_ES_RESTART

This command restarts the cFE in one of two modes. The Power-On Reset will cause the cFE to restart as though the power were first applied to the processor. The Processor Reset will attempt to retain the contents of the volatile disk and the contents of the Critical Data Store. NOTE: If a requested Processor Reset should cause the Processor Reset Counter (\$sc_\$cpu_ES_ProcResetCnt) to exceed OR EQUAL the limit CFE_ES_MAX_PROCESSOR_RESETS (which is reported in housekeeping telemetry as \$sc_\$cpu_ES_MaxProcResets), the command is AUTOMATICALLY upgraded to a Power-On Reset.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	



RESTARTTYPE	CFE_ES_PROCESSOR_RESET=Processor Reset or CFE_ES_POWERON_RESET=Power-On Reset	0	65535	0	64	16	UINT
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CFS CFE_ES_RESTART_APP

This command halts and restarts the specified Application. This command does NOT reload the application from the onboard filesystem.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	
APPLICATION	ASCII text string containing Application Name.			default	64	160	STRING	

CFS CFE_ES_SET_MAX_PR_COUNT

This command allows the user to specify the number of Processor Resets that are allowed before the next Processor Reset is upgraded to a Power-On Reset.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	20	56	8	UINT	
MAXPRCOUNT	New maximum number of Processor Resets before an automatic Power-On Reset is performed.	0	65535	0	64	16	UINT	

CFS CFE_ES_SHELL_CMD

This command passes an ASCII string as a command line to the underlying realtime operating system shell. Any response to the command is both written to the shell command output file and sent as a series of shell command output telemetry packets.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	



CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT
CMDSTRING	ASCII text string containing shell command to be executed.			64	8	UINT	
OUTPUTFILENAME	Filename where shell command output is to be written.		default	576	512	STRING	

CFS CFE_ES_START_APP

This command starts the specified application with the specified start address, stack size, etc options.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
APPLICATION	Name of Application to be started.			default	64	160	STRING	
APPENTRYPOINT	Symbolic name of Application's entry point.			default	224	160	STRING	
APPFILENAME	Full path and filename of Application's executable image.			default	384	512	STRING	
STACKSIZE	Desired stack size for the new application. CFE_ES_APP_EXCEPTION_RESTART_APP=On exception, restart Application, CFE_ES_APP_EXCEPTION_PROC_RESTART=On exception, perform a Processor Reset	0	4294967295	0	896	32	UINT	
EXCEPTIONACTION		0	65535	0	928	16	UINT	
PRIORITY	The new Applications runtime priority.	0	65535	0	944	16	UINT	

CFS CFE_ES_STOP_APP

This command halts and removes the specified Application from the system. NOTE: This command should never be used on the Command Ingest application. This would prevent further commands from entering the system. If Command Ingest needs to be stopped and restarted, use CFE_ES_RESTART_APP_CC or CFE_ES_RELOAD_APP_CC.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	
APPLICATION	ASCII text string containing Application Name.		default	64	160	STRING		



CFS CFE_ES_TLM_POOL_STATS

This command allows the user to obtain a snapshot of the statistics maintained for a specified memory pool.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	22	56	8	UINT	
APPLICATION	RESERVED - should be all zeroes			default	64	160	STRING	
POOLHANDLE	Handle of Pool whose statistics are to be telemetered.	0	4294967295	0	224	32	UINT	

CFS CFE_ES_WRITE_ERLOG

This command causes the contents of the Executive Services Exception and Reset Log to be written to the specified file.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	13	56	8	UINT	
ERLOGFILENAME	ASCII text string containing full path and filename of file in which ER Log is to be dumped.			default	64	512	STRING	

CFS CFE_ES_WRITE_SYSLOG

This command causes the contents of the Executive Services System Log to be written to a log file.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6150	0	65535	6150	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	



CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT
SYSLOGFILENAME	ASCII text string containing full path and filename of file in which System Log is to be dumped.			default	64	512	STRING

CFS CFE_EVS_ADD_EVENT_FILTER

This command adds the given filter for the given application identifier and event identifier. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	15	56	8	UINT	
APPNAME	Application name to use in the command.			default	64	160	STRING	
EVENTID	Event ID to use in the command.	0	65535	0	224	16	UINT	
MASK	Mask to use in the command.	0	65535	0	240	16	UINT	

CFS CFE_EVS_CLEAR_LOG

This command clears the contents of the local event log.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	20	56	8	UINT	

CFS CFE_EVS_DELETE_EVENT_FILTER

This command removes the given filter for the given application identifier and event identifier. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	



CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	16	56	8	UINT
APPNAME	Application name to use in the command.			default	64	160	STRING
EVENTID	Event ID to use in the command.	0	65535	0	224	16	UINT
MASK	Mask to use in the command.	0	65535	0	240	16	UINT

CFS CFE_EVS_DISABLE_APP_EVENTS

This command disables the command specified application from sending events through Event Service. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	
APPNAME	Application name to use in the command.			default	64	160	STRING	

CFS CFE_EVS_DISABLE_APP_EVENT_TYPE

This command disables the command specified event type for the command specified application, preventing the application from sending event messages of the command specified event type through Event Service. An Event Type is defined to be a classification of an Event Message such as debug, informational, critical, and error. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	
APPNAME	Application name to use in			default	64	160	STRING	



Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
BITMASK	BitMask to use in the command.	0	255	0	224	8	UINT	
SPARE	Pad to even byte.	0	255	0	232	8	UINT	

CFS CFE_EVS_DISABLE_EVENT_TYPE

This command disables the command specified Event Type preventing event messages of this type to be sent through Event Service. An Event Type is defined to be a classification of an Event Message such as debug, informational, error and critical. This command is a global disable of a particular event type, it applies to all applications.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	
BITMASK	BitMask to use in the command.	0	255	0	64	8	UINT	
SPARE	Pad to even byte.	0	255	0	72	8	UINT	

CFS CFE_EVS_DISABLE_PORTS

This command disables the specified port from outputting event messages.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	12	56	8	UINT	
BITMASK	BitMask to use in the command.	0	255	0	64	8	UINT	
SPARE	Pad to even byte.	0	255	0	72	8	UINT	

CFS CFE_EVS_ENABLE_APP_EVENTS

This command enables the command specified application to send events through the Event Service. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_PACKET	CCSDS Packet							



CCSDS_STREAMID	Identification Id Value: 6145	0	65535	6145	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT
APPNAME	Application name to use in the command.		default	64	160	STRING	

CFS CFE_EVS_ENABLE_APP_EVENT_TYPE

This command enables the command specified event type for the command specified application, allowing the application to send event messages of the command specified event type through Event Service. An Event Type is defined to be a classification of an Event Message such as debug, informational, critical, and error. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	
APPNAME	Application name to use in the command.		default	64	160	STRING		
BITMASK	BitMask to use in the command.	0	255	0	224	8	UINT	
SPARE	Pad to even byte.	0	255	0	232	8	UINT	

CFS CFE_EVS_ENABLE_EVENT_TYPE

This command enables the command specified Event Type allowing event messages of this type to be sent through Event Service. An Event Type is defined to be a classification of an Event Message such as debug, informational, error and critical. This command is a global enable of a particular event type, it applies to all applications.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	



BITMASK	BitMask to use in the command.	0	255	0	64	8	UINT
SPARE	Pad to even byte.	0	255	0	72	8	UINT

CFS CFE_EVS_ENABLE_PORTS

This command enables the command specified port to output event messages

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT	
BITMASK	BitMask to use in the command.	0	255	0	64	8	UINT	
SPARE	Pad to even byte.	0	255	0	72	8	UINT	

CFS CFE_EVS_FILE_WRITE_APP_DATA

This command writes all application data to a file for all applications that have registered with the EVS. The application data includes the Application ID, Active Flag, Event Count, Event Types Active Flag, and Filter Data.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	17	56	8	UINT	
APPDATAFILENAME	Filename where application data is to be written.			default	64	512	STRING	

CFS CFE_EVS_FILE_WRITE_LOG_DATA

This command requests the Event Service to generate a file containing the contents of the local event log.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data	0	65535	1	20	16	UINT	



Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_LENGTH	Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	18	56	8	UINT	
LOGFILENAME	Filename where log data is to be written.			default	64	512	STRING	

CFS CFE_EVS_NO_OPERATION

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Event Services task.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS CFE_EVS_RESET_ALL_FILTERS

This command resets all of the command specified applications event filters. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	14	56	8	UINT	
APPNAME	Application name to use in the command.			default	64	160	STRING	

CFS CFE_EVS_RESET_APP_COUNTER

This command sets the command specified application's event counter to zero. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence	0	65535	49152	16	16	UINT	



CCSDS_SEQUENCE	Control	0	65535	49152	10	10	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT
APPNAME	Application name to use in the command.		default	64	160	STRING	

CFS CFE_EVS_RESET_COUNTERS

This command resets the following counters within the Event Services housekeeping telemetry:

Command Execution Counter (\$sc_\$cpu_EVS_CMDPC)

Command Error Counter (\$sc_\$cpu_EVS_CMDEC)

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS CFE_EVS_RESET_FILTER

This command resets the command specified application's event filter for the command specified event ID. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	13	56	8	UINT	
APPNAME	Application name to use in the command.		default	64	160	STRING		
EVENTID	Event ID to use in the command.	0	65535	0	224	16	UINT	

CFS CFE_EVS_SET_EVENT_FORMAT_MODE

This command sets the event format mode to the command specified value. The event format mode may be either short or long. A short event format detaches the Event Data from the event message and only includes the following information in the event packet: Processor ID, Application ID, Event



ID, and Event Type. Refer to section 5.3.3.4 for a description of the Event Service event packet contents. Event Data is defined to be data describing an Event that is supplied to the cFE Event Service. ASCII text strings are used as the primary format for Event Data because heritage ground systems use string compares as the basis for their automated alert systems. Two systems, ANSR and SERS were looked at for interface definitions. The short event format is used to accommodate experiences with limited telemetry bandwidth. The long event format includes all event information included within the short format along with the Event Data.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
MODE	Mode to use in the command.	0	255	0	64	8	UINT	
SPARE	Pad to even byte.	0	255	0	72	8	UINT	

CFS CFE_EVS_SET_FILTER

This command sets the command specified application's event filter mask to the command specified value for the command specified event. Note: In order for this command to take effect, applications must be registered for Event Service.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	
APPNAME	Application name to use in the command.			default	64	160	STRING	
EVENTID	Event ID to use in the command.	0	65535	0	224	16	UINT	
MASK	Mask to use in the command.	0	65535	0	240	16	UINT	

CFS CFE_EVS_SET_LOG_MODE

This command sets the logging mode to the command specified value.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6145	0	65535	6145	0	16	UINT	



CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	19	56	8	UINT
MODE	Mode to use in the command.	0	255	0	64	8	UINT
SPARE	Pad to even byte.	0	255	0	72	8	UINT

CFS CFE_SB_DISABLE_ROUTE

This command will disable a particular destination. The destination is specified in terms of MsgID and PipeID. The MsgId and PipeID are parameters in the command. All destinations are enabled by default.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	
MSGID	Message ID of route to be enabled or disabled CFE_SB_MsgId_t.	0	65535	0	64	16	UINT	
PIPE	Pipe ID of route to be enabled or disabled CFE_SB_PipeId_t.	0	255	0	80	8	UINT	
SPARE	Spare byte to make command even number of bytes.	0	255	0	88	8	UINT	

CFS CFE_SB_DISABLE_SUB_REPORTING

be used only by the CFS SBN (Software Bus Networking) Application. It is not intended to be sent from the ground or used by operations. When subscription reporting is enabled, SB will generate and send a software bus packet for each subscription received. The software bus packet that is sent contains the information received in the subscription API. This subscription report is needed by SBN if offboard routing is required.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	

CFS CFE_SB_ENABLE_ROUTE



This command will enable a particular destination. The destination is specified in terms of MsgID and PipeID. The MsgID and PipeID are parameters in the command. All destinations are enabled by default. This command is needed only after a CFE_SB_DISABLE_ROUTE_CC command is used.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
MSGID	Message ID of route to be enabled or disabled CFE_SB_MsgId_t.	0	65535	0	64	16	UINT	
PIPE	Pipe ID of route to be enabled or disabled CFE_SB_PipeId_t.	0	255	0	80	8	UINT	
SPARE	Spare byte to make command even number of bytes.	0	255	0	88	8	UINT	

CFS CFE_SB_ENABLE_SUB_REPORTING

be used only by the CFS SBN (Software Bus Networking) Application. It is not intended to be sent from the ground or used by operations. When subscription reporting is enabled, SB will generate and send a software bus packet for each subscription received. The software bus packet that is sent contains the information received in the subscription API. This subscription report is needed by SBN if offboard routing is required.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	

CFS CFE_SB_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Software Bus task.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	



CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT
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CFS CFE_SB_RESET_CTRS

This command resets the following counters within the Software Bus housekeeping telemetry:
Command Execution Counter (\$sc_\$cpu_SB_CMDPC)Command Error Counter
(\$sc_\$cpu_SB_CMDEC)

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS CFE_SB_SEND_MAP_INFO

map information. The message map is a lookup table (an array of uint16s)that allows fast access to the correct routing table element during a software bus send operation. This is diagnostic information that may be needed due to the dynamic nature of the cFE software bus. An absolute path and filename may be specified in the command. If this command field contains an empty string (NULL terminator as the first character) the default file path and name is used. The default file path and name is defined in the platform configuration file as CFE_SB_DEFAULT_MAP_FILENAME.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	
FILENAME	Path and Filename of data to be loaded.			default	64	512	STRING	

CFS CFE_SB_SEND_PIPE_INFO

This command will create a file containing the software bus pipe information. The pipe information contains information about every pipe that has been created through the CFE_SB_CreatePipe API. An absolute path and filename may be specified in the command. If this command field contains an empty string (NULL terminator as the first character) the default file path and name is used. The default file path and name is defined in the platform configuration file as CFE_SB_DEFAULT_PIPE_FILENAME.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_PACKET	CCSDS Packet							



CCSDS_STREAMID	Identification Id Value: 6147	0	65535	6147	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT
FILENAME	Path and Filename of data to be loaded.			default	64	512	STRING

CFS CFE_SB_SEND_PREV_SUBS

regarding all subscriptions previously received by SB. This command is intended to be used only by the CFS SBN(Software Bus Networking) Application. It is not intended to be sent from the ground or used by operations. When this command is received the software bus will generate and send a series of packets containing information about all subscription previously received.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT	

CFS CFE_SB_SEND_ROUTING_INFO

This command will create a file containing the software bus routing information. The routing information contains information about every subscription that has been received through the SB subscription APIs. An absolute path and filename may be specified in the command. If this command field contains an empty string (NULL terminator as the first character) the default file path and name is used. The default file path and name is defined in the platform configuration file as CFE_SB_DEFAULT_ROUTING_FILENAME.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	
FILENAME	Path and Filename of data to be loaded.			default	64	512	STRING	



CFS CFE_SB_SEND_SB_STATS

This command will cause the SB task to send a statistics packet containing current utilization figures and high water marks which may be useful for checking the margin of the SB platform configuration settings.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6147	0	65535	6147	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	

CFS CFE_TBL_ABORT_LOAD

This command will cause Table Services to discard the contents of a table buffer that was previously loaded with the data in a file as specified by a Table Load command. For single buffered tables, the allocated shared working buffer is freed and becomes available for other Table Load commands.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	
TABLENAME	Full Name of Table whose load is to be aborted.			default	64	304	STRING	

CFS CFE_TBL_ACTIVATE

This command will cause Table Services to notify a table's owner that an update is pending. The owning application will then update the contents of the active table buffer with the contents of the associated inactive table buffer at a time of their convenience.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	



TABLENAME	Full Name of Table to be activated.	default	64	304	STRING
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CFS CFE_TBL_DELETE_CDS

This command will delete the Critical Data Store (CDS) associated with the specified Critical Table. Note that any table still present in the Table Registry is unable to be deleted from the Critical Data Store. All Applications that are accessing the critical table must release and unregister their access before the CDS can be deleted.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	
TABLENAME	Full Name of Table whose CDS is to be deleted.			default	64	304	STRING	

CFS CFE_TBL_DUMP

This command will cause the Table Services to put the contents of the specified table buffer into the command specified file.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	
ACTIVETBLFLAG	CFE_TBL_INACTIVE_BUFFER=Inactive Table, CFE_TBL_ACTIVE_BUFFER=Active Table	0	65535	0	64	16	UINT	
TABLENAME	Full name of table to be dumped.			default	80	304	STRING	
DUMPFILENAME	Full Filename where data is to be written.			default	384	512	STRING	

CFS CFE_TBL_DUMP_REG

This command will cause Table Services to write some of the contents of the Table Registry to the command specified file. This allows the operator to see the current state and configuration of all tables that have been registered with the cFE.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	



CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT
DUMPFILENAME	Full Filename where dumped data is to be written.			default	64	512	STRING

CFS CFE_TBL_LOAD

This command loads the contents of the specified file into an inactive buffer for the table specified within the file.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	
LOADFILENAME	Filename (and path) of data to be loaded.			default	64	512	STRING	

CFS CFE_TBL_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Table Services task.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS CFE_TBL_RESET

This command resets the following counters within the Table Services housekeeping telemetry:
 Command Execution Counter (\$sc_\$cpu_TBL_CMDPC)
 Command Error Counter (\$sc_\$cpu_TBL_CMDEC)
 Successful Table Validations Counter (\$sc_\$cpu_TBL_ValSuccessCtr)
 Failed Table Validations Counter (\$sc_\$cpu_TBL_ValFailedCtr)
 Number of Table Validations Requested (\$sc_\$cpu_TBL_ValReqCtr)

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification	0	65535	6148	0	16	UINT	

**Id Value: 6148**

CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT

CFS CFE_TBL_TLM_REG

This command will cause Table Services to telemeter the contents of the Table Registry for the command specified table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	
TABLENAME	Full Name of Table whose registry entry is to be telemetered.			default	64	304	STRING	

CFS CFE_TBL_VALIDATE

This command will cause Table Services to calculate the Data Integrity Value for the specified table and to notify the owning application that the table's validation function should be executed. The results of both the Data Integrity Value computation and the validation function are reported in Table Services Housekeeping Telemetry.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6148	0	65535	6148	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
ACTIVETBLFLAG	CFE_TBL_INACTIVE_BUFFER=Inactive Table, CFE_TBL_ACTIVE_BUFFER=Active Table	0	65535	0	64	16	UINT	
TABLENAME	Full Name of Table to be validated.			default	80	304	STRING	

CFS CFE_TIME_ADD_1HZADJ

This command has been updated to take actual sub-seconds (1/2^32 seconds) rather than microseconds as an input argument. This change occurred after the determination was made that one micro-second is too large an increment for a constant 1Hz adjustment. This command continuously adjusts the Spacecraft Time Correlation Factor (STCF) every second, by adding the specified value. The adjustment to the STCF is applied in the Time Service local 1Hz interrupt handler. As the local



1Hz interrupt is not synchronized to the tone signal, one cannot say when the adjustment will occur, other than once a second, at about the same time relative to the tone. There was some debate about whether the maximum 1Hz clock drift correction factor would ever need to exceed some small fraction of a second. But, the decision was made to provide the capability to make 1Hz adjustments greater than one second and leave it to the ground system to provide mission specific limits.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	13	56	8	UINT	
SECONDS		0	4294967295	0	64	32	UINT	
SUBSECONDS		0	4294967295	0	96	32	UINT	

CFS CFE_TIME_ADD_ADJUST

This command adjusts the Spacecraft Time Correlation Factor (STCF) by adding the specified value. The new STCF takes effect immediately upon execution of this command.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT	
SECONDS		0	4294967295	0	64	32	UINT	
MICROSECONDS		0	4294967295	0	96	32	UINT	

CFS CFE_TIME_ADD_DELAY

This command is used to factor out a known, predictable latency between the Time Server and a particular Time Client. The correction is applied (added) to the current time calculation for Time Clients, so this command has no meaning for Time Servers. Each Time Client can have a unique latency setting. The latency value is a positive number of seconds and microseconds that represent the deviation from the time maintained by the Time Server.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	



CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT
SECONDS		0	4294967295	0	64	32	UINT
MICROSECONDS		0	4294967295	0	96	32	UINT

CFS CFE_TIME_DIAG_TLM

This command requests that the Time Service generate a message containing various data values not included in the normal Time Service housekeeping message. The command requests only a single copy of the diagnostic message. Refer to CFE_TIME_DiagPacket_t for a description of the Time Service diagnostic message contents.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	

CFS CFE_TIME_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Time Services task.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS CFE_TIME_RESET

This command resets the following counters within the Time Services Housekeeping Telemetry :
Command Execution Counter (\$sc_\$cpu_TIME_CMDPC)Command Error Counter
(\$sc_\$cpu_TIME_CMDEC) This command also resets the following counters within the Time Services Diagnostic Telemetry :Tone Signal Detected Software Bus Message Counter
(\$sc_\$cpu_TIME_DTSDetCNT)Time at the Tone Data Software Bus Message Counter
(\$sc_\$cpu_TIME_DTatTCNT)Tone Signal/Data Verify Counter
(\$sc_\$cpu_TIME_DVerifyCNT)Tone Signal/Data Error Counter (\$sc_\$cpu_TIME_DVerifyER)Tone Signal Interrupt Counter (\$sc_\$cpu_TIME_DTsISRCNT)Tone Signal Interrupt Error Counter
(\$sc_\$cpu_TIME_DTsISRERR)Tone Signal Task Counter (\$sc_\$cpu_TIME_DTsTaskCNT)Local 1 Hz Interrupt Counter (\$sc_\$cpu_TIME_D1HzSRCNT)Local 1 Hz Task Counter



`($sc_$cpu_TIME_D1HzTaskCNT)` Reference Time Version Counter
`($sc_$cpu_TIME_DVersionCNT)`

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS CFE_TIME_SET_LEAPS

This command sets the spacecraft Leap Seconds to the specified value. Leap Seconds may be positive or negative, and there is no limit to the value except, of course, the limit imposed by the 16 bit signed integer data type. The new Leap Seconds value takes effect immediately upon execution of this command.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	
SECONDS		0	4294967295	0	64	32	UINT	
MICROSECONDS		0	4294967295	0	96	32	UINT	

CFS CFE_TIME_SET_MET

This command sets the Mission Elapsed Timer (MET) to the specified value. Note that the MET (as implemented for cFE Time Service) is a logical representation and not a physical timer. Thus, setting the MET is not dependent on whether the hardware supports a MET register that can be written to. Note also that Time Service 'assumes' that during normal operation, the MET is synchronized to the tone signal. Therefore, unless operating in FLYWHEEL mode, the sub-seconds portion of the MET will be set to zero at the next tone signal interrupt. The new MET takes effect immediately upon execution of this command.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	



CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT
SECONDS		0	4294967295	0	64	32	UINT
MICROSECONDS		0	4294967295	0	96	32	UINT

CFS CFE_TIME_SET_SIGNAL

This command selects the Time Service tone signal source. Although the list of potential tone signal sources is mission specific, a common choice is the selection of primary or redundant tone signal. The selection may be available to both the Time Server and Time Clients, depending on hardware configuration. Notes: This command is only valid when the CFE_TIME_CFG_SIGNAL configuration parameter in the cfe_platform_cfg.h file has been set to TRUE.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	15	56	8	UINT	
	CFE_TIME_TONE_PRI=Primary							
TONESOURCE	Source, CFE_TIME_TONE_RED=Redundant Source	-32768	32767	0	64	16	INT	

CFS CFE_TIME_SET_SOURCE

This command selects the Time Service clock source. Although the list of potential clock sources is mission specific and defined via configuration parameters, this command provides a common method for switching between the local processor clock and an external source for time data. When commanded to accept external time data (GPS, MET, spacecraft time, etc.), the Time Server will enable input via an API function specific to the configuration definitions for the particular source. When commanded to use internal time data, the Time Server will ignore the external data. However, the Time Server will continue to use the API function as the trigger to generate a 'time at the tone' command packet regardless of the internal/external command selection. Notes: Operating in FLYWHEEL mode is not considered a choice related to clock source, but rather an element of the clock state. See below for a description of the CFE_TIME_SET_STATE_CC command. This command is only valid when the CFE_TIME_CFG_SOURCE configuration parameter in the cfe_platform_cfg.h file has been set to TRUE.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	
	CFE_TIME_USE_INTERN=Internal							
TIMESOURCE	Source, CFE_TIME_USE_EXTERN=External Source	-32768	32767	0	64	16	INT	

CFS CFE_TIME_SET_STATE

This command indirectly affects the Time Service on-board determination of clock state. Clock state is a combination of factors, most significantly whether the spacecraft time has been accurately set, and whether Time Service is operating in FLYWHEEL mode. This command may be used to notify



the Time Server that spacecraft time is now correct, or that time is no longer correct. This information will be distributed to Time Clients, and in turn, to any interested sub-systems. Also, this command may be used to force a Time Server or Time Client into FLYWHEEL mode. Use of FLYWHEEL mode is mainly for debug purposes although in extreme circumstances, it may be of value to force Time Service not to rely on normal time updates. Note that when commanded into FLYWHEEL mode, the Time Service will remain so until receipt of another 'set state' command setting the state into a mode other than FLYWHEEL. Note also that setting the clock state to VALID or INVALID on a Time Client that is currently getting time updates from the Time Server will have very limited effect. As soon as the Time Client receives the next time update, the VALID/INVALID selection will be set to that of the Time Server. However, setting a Time Client to FLYWHEEL cannot be overridden by the Time Server since the Time Client will ignore time updates from the Time Server while in FLYWHEEL mode.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
CLOCKSTATE	CFE_TIME_INVALID=Spacecraft time has not been accurately set, CFE_TIME_VALID=Spacecraft clock has been accurately set, CFE_TIME_FLYWHEEL=Force into FLYWHEEL mode	-32768	32767	0	64	16	INT	

CFS CFE_TIME_SET_STCF

This command sets the Spacecraft Time Correlation Factor (STCF) to the specified value. This command differs from the previously described SET CLOCK in the nature of the command argument. This command sets the STCF value directly, rather than extracting the STCF from a value representing the total of MET, STCF and optionally, Leap Seconds. The new STCF takes effect immediately upon execution of this command.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	
SECONDS		0	4294967295	0	64	32	UINT	
MICROSECONDS		0	4294967295	0	96	32	UINT	

CFS CFE_TIME_SET_TIME

This command sets the spacecraft clock to a new value, regardless of the current setting (time jam). The new time value represents the desired offset from the mission-defined time epoch and takes effect immediately upon execution of this command. Time Service will calculate a new STCF value based on the current MET and the desired new time using one of the following: If Time Service is configured to compute current time as TAI STCF = (new time) - (current MET) (current time) =



(current MET) + STCF If Time Service is configured to compute current time as UTC STCF = ((new time) - (current MET)) + (Leap Seconds) (current time) = ((current MET) + STCF) - (Leap Seconds)

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	
SECONDS		0	4294967295	0	64	32	UINT	
MICROSECONDS		0	4294967295	0	96	32	UINT	

CFS CFE_TIME_SUB_1HZADJ

This command has been updated to take actual sub-seconds ($1/2^{32}$ seconds) rather than microseconds as an input argument. This change occurred after the determination was made that one micro-second is too large an increment for a constant 1Hz adjustment. This command continuously adjusts the Spacecraft Time Correlation Factor (STCF) every second, by subtracting the specified value. The adjustment to the STCF is applied in the Time Service local 1Hz interrupt handler. As the local 1Hz interrupt is not synchronized to the tone signal, one cannot say when the adjustment will occur, other than once a second, at about the same time relative to the tone. There was some debate about whether the maximum 1Hz clock drift correction factor would ever need to exceed some small fraction of a second. But, the decision was made to provide the capability to make 1Hz adjustments greater than one second and leave it to the ground system to provide mission specific limits.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	14	56	8	UINT	
SECONDS		0	4294967295	0	64	32	UINT	
SUBSECONDS		0	4294967295	0	96	32	UINT	

CFS CFE_TIME_SUB_ADJUST

This command adjusts the Spacecraft Time Correlation Factor (STCF) by subtracting the specified value. The new STCF takes effect immediately upon execution of this command.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	



CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	12	56	8	UINT
SECONDS		0	4294967295	0	64	32	UINT
MICROSECONDS		0	4294967295	0	96	32	UINT

CFS CFE_TIME_SUB_DELAY

This command is used to factor out a known, predictable latency between the Time Server and a particular Time Client. The correction is applied (subtracted) to the current time calculation for Time Clients, so this command has no meaning for Time Servers. Each Time Client can have a unique latency setting. The latency value is a positive number of seconds and microseconds that represent the deviation from the time maintained by the Time Server. Note that it is unimaginable that the seconds value will ever be anything but zero.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6149	0	65535	6149	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	
SECONDS		0	4294967295	0	64	32	UINT	
MICROSECONDS		0	4294967295	0	96	32	UINT	

CFS CS_CANCEL_ONESHOT

Cancels a one shot calculation that is already in progress.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	

CFS CS_DISABLE_ALL_CS

Disables all background checking

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification	0	65535	6303	0	16	UINT	

**Id Value: 6303**

CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT

CFS CS_DISABLE_APPS

Disable the App table background checksumming

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	35	56	8	UINT	

CFS CS_DISABLE_CFECORE

Disables background checking on the cFE core code segment

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	

CFS CS_DISABLE_EEPROM

Disable the Eeprom table background checksumming

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	



CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	15	56	8	UINT

CFS CS_DISABLE_ENTRY_EEPROM

Disable the Eeprom entry background checksumming

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	19	56	8	UINT	
ENTRYID	EntryID to perform a command on.	0	4294967295	0	64	32	UINT	

CFS CS_DISABLE_ENTRY_MEMORY

Disable the Memory entry background checksumming

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	26	56	8	UINT	
ENTRYID	EntryID to perform a command on.	0	4294967295	0	64	32	UINT	

CFS CS_DISABLE_MEMORY

Disable the Memory table background checksumming

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	



	CCSDS_CHECKSUM	Checksum	0	255	0	40	0	UINT
CCSDS_FC	CCSDS Command Function Code		0	255	22	56	8	UINT

CFS CS_DISABLE_NAME_APP

Disable background checking of the app

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	39	56	8	UINT	
NAME	App name to perform a command on.			default	64	160	STRING	

CFS CS_DISABLE_NAME_TABLE

Disable background checking of the table

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	33	56	8	UINT	
NAME	Table name to perform a command on.			default	64	304	STRING	

CFS CS_DISABLE_OS

Disables background checking on the OS code segment code segment

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	



CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT
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CFS CS_DISABLE_TABLES

Disable the Tables table background checksumming

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	29	56	8	UINT	

CFS CS_ENABLE_ALL_CS

Allows CS to continue background checking

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	

CFS CS_ENABLE_APPS

Allow the App table to checksummed in the background

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	34	56	8	UINT	

CFS CS_ENABLE_CFECORE



Enables background checking on the cFE core code segment

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	

CFS CS_ENABLE_EEPROM

Allow the Eeprom table to checksummed in the background

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	14	56	8	UINT	

CFS CS_ENABLE_ENTRY_EEPROM

Allow the Eeprom entry to checksummed in the background

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	18	56	8	UINT	
ENTRYID	EntryID to perform a command on.	0	4294967295	0	64	32	UINT	

CFS CS_ENABLE_ENTRY_MEMORY

Allow the Memory entry to checksummed in the background

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units



CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	25	56	8	UINT
ENTRYID	EntryID to perform a command on.	0	4294967295	0	64	32	UINT

CFS CS_ENABLE_MEMORY

Allow the Memory table to checksummed in the background

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	21	56	8	UINT	

CFS CS_ENABLE_NAME_APP

Allow the app to checksummed in the background

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	38	56	8	UINT	
NAME	App name to perform a command on.			default	64	160	STRING	

CFS CS_ENABLE_NAME_TABLE

Allow the table to checksummed in the background

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
	CCSDS Packet							



CCSDS_STREAMID	Identification Id Value: 6303	0	65535	6303	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	32	56	8	UINT
NAME	Table name to perform a command on.		default	64	304	STRING	

CFS CS_ENABLE_OS

Enables background checking on the OS code segment

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	

CFS CS_ENABLE_TABLES

Allow the Tables table to checksummed in the background

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	28	56	8	UINT	

CFS CS_GET_ENTRY_ID_EEPROM

Gets the Entry ID of an Eeprom address to use in subsequent commands.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet	0	65535	49152	16	16	UINT	



CCSDS_SEQUENCE	Sequence Control	0	00000	49152	10	10	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	20	56	8	UINT
ADDRESS	Address to get the ID for.	0	4294967295	0	64	32	UINT

CFS CS_GET_ENTRY_ID_MEMORY

Gets the Entry ID of a Memory address to use in subsequent commands.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	27	56	8	UINT	
ADDRESS	Address to get the ID for.	0	4294967295	0	64	32	UINT	

CFS CS_NOOP

Implements the Noop command that insures the CS task is alive

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS CS_ONESHOT

Computes a checksum on the command specified address and size of memory at the command specified rate. This command spawns a child task to complete the checksum.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	



CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT
ADDRESS	Address to start checksum.	0	4294967295	0	64	32	UINT
SIZE	Number of bytes to checksum.	0	4294967295	0	96	32	UINT
MAXBYTESPERCYCLE	Max Number of bytes to compute per cycle. Value of Zero to use platform config value.	0	4294967295	0	128	32	UINT

CFS CS_RECOMPUTE_BASELINE_APP

Recompute the baseline checksum of the app and use that value as the new baseline. This command spawns a child task to do the recompute.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	37	56	8	UINT	
NAME	App name to perform a command on.			default	64	160	STRING	

CFS CS_RECOMPUTE_BASELINE_CFECORE

Recomputes the baseline checksum of the cFE core and use the new value as the baseline.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	

CFS CS_RECOMPUTE_BASELINE_EEPROM

Recompute the baseline checksum of the Eeprom table entry and use that value as the new baseline. This command spawns a child task to do the recompute.

Item Name	Description	Min	Max	Default	Bit	Bit	Data	Units



Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	17	56	8	UINT	
ENTRYID	EntryID to perform a command on.	0	4294967295	0	64	32	UINT	

CFS CS_RECOMPUTE_BASELINE_MEMORY

Recompute the baseline checksum of the Memory table entry and use that value as the new baseline. This command spawns a child task to do the recompute.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	24	56	8	UINT	
ENTRYID	EntryID to perform a command on.	0	4294967295	0	64	32	UINT	

CFS CS_RECOMPUTE_BASELINE_OS

Recomputes the baseline checksum of the OS code segment and use the new value as the baseline.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	13	56	8	UINT	

CFS CS_RECOMPUTE_BASELINE_TABLE

Recompute the baseline checksum of the table and use that value as the new baseline. This command spawns a child task to do the recompute.



Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	31	56	8	UINT	
NAME	Table name to perform a command on.			default	64	304	STRING	

CFS CS_REPORT_BASELINE_APP

Reports the baseline checksum of the app that has already been calculated.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	36	56	8	UINT	
NAME	App name to perform a command on.			default	64	160	STRING	

CFS CS_REPORT_BASELINE_CFECORE

Reports the baseline checksum of the cFE core that has already been calculated.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	

CFS CS_REPORT_BASELINE_EEPROM

Reports the baseline checksum of the Eeprom table entry that has already been calculated.

Item Name	Description	Min	Max	Default	Bit	Bit	Data	Units



Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	16	56	8	UINT	
ENTRYID	EntryID to perform a command on.	0	4294967295	0	64	32	UINT	

CFS CS_REPORT_BASELINE_MEMORY

Reports the baseline checksum of the Memory table entry that has already been calculated.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	23	56	8	UINT	
ENTRYID	EntryID to perform a command on.	0	4294967295	0	64	32	UINT	

CFS CS_REPORT_BASELINE_OS

Reports the baseline checksum of the OS code segment that has already been calculated.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	12	56	8	UINT	

CFS CS_REPORT_BASELINE_TABLE

Reports the baseline checksum of the table that has already been calculated.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units



CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	30	56	8	UINT
NAME	Table name to perform a command on.			default	64	304	STRING

CFS CS_RESET

Resets the CS housekeeping counters

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6303	0	65535	6303	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS DS_ADD_MID

This command will change the Message ID selection for an unused Packet Filter Table entry to the indicated value.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	16	56	8	UINT	
MESSAGEID	Message ID to add to Packet Filter Table.	0	65535	0	64	16	UINT	

CFS DS_CLOSE_ALL

This command will close all open Destination Files. NOTE: Using this command may incur a performance hit based upon the number and size of the files being closed.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
	CCSDS Packet							



CCSDS_STREAMID	Identification Id Value: 6331	0	65535	6331	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	17	56	8	UINT

CFS DS_CLOSE_FILE

This command will close the indicated Destination File.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	14	56	8	UINT	
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	64	16	UINT	

CFS DS_GET_FILE_INFO

This command will send the DS File Info Packet.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	15	56	8	UINT	

CFS DS_NOOP

This command will increment the command execution counter and send an event containing the version number of the application. The command is often used as a general test for application 'aliveness'.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification	0	65535	6331	0	16	UINT	



Id Value: 6331							
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT

CFS DS_RESET

This command will set the following housekeeping counters to zero: Command Execution Counter (\$sc_\$cpu_DS_CMDPC) Command Error Counter (\$sc_\$cpu_DS_CMDEC) Ignored Packet Counter (\$sc_\$cpu_DS_IgnoredPktCnt) Filtered Packet Counter (\$sc_\$cpu_DS_FilteredPktCnt) Passed Packet Counter (\$sc_\$cpu_DS_PassedPktCnt) File Access Counter (\$sc_\$cpu_DS_FileWriteCnt) File Access Error Counter (\$sc_\$cpu_DS_FileWriteErrCnt) Destination Table Load Counter (\$sc_\$cpu_DS_DestLoadCnt) Filter Table Load Counter (\$sc_\$cpu_DS_FilterLoadCnt) Destination Table Ptr Error Counter (\$sc_\$cpu_DS_DestPtrErrCnt) Filter Table Ptr Error Counter (\$sc_\$cpu_DS_FilterPtrErrCnt)

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS DS_SET_APP_STATE

This command will modify the Ena/Dis State selection for the DS application. No packets are stored while DS is disabled.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	
ENABLESTATE	Application enable/disable state.	0	65535	0	64	16	UINT	

CFS DS_SET_DEST_AGE

This command will modify the max file age selection for the indicated entry in the Destination File



Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	12	56	8	UINT	
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	64	16	UINT	
MAXFILEAGE	Max file age (seconds).	0	4294967295	0	80	32	UINT	

CFS DS_SET_DEST_BASE

This command will modify the Basename portion of the filename for the indicated entry in the Destination File Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	64	16	UINT	
BASENAME	Base portion of filename.			default	80	0	STRING	

CFS DS_SET_DEST_COUNT

This command will modify the sequence count value for the indicated entry in the Destination File Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	13	56	8	UINT	
FILETABLEINDEX	Index into Destination	0	65535	0	64	16	UINT	



FILETABLEINDEX	File Table.	0	00000	0	04	10	UINT
SEQUENCECOUNT	Sequence count portion of filename.	0	4294967295	0	80	32	UINT

CFS DS_SET_DEST_EXT

This command will modify the Extension portion of the filename for the indicated entry in the Destination File Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	64	16	UINT	
EXTENSION	Extension portion of filename.			default	80	64	STRING	

CFS DS_SET_DEST_PATH

This command will modify the Pathname portion of the filename for the indicated entry in the Destination File Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	64	16	UINT	
PATHNAME	Path portion of filename.			default	80	0	STRING	

CFS DS_SET_DEST_SIZE

This command will modify the max file size selection for the indicated entry in the Destination File Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	



CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	64	16	UINT
MAXFILESIZE	Max file size (bytes) before re-open.	0	4294967295	0	80	32	UINT

CFS DS_SET_DEST_STATE

This command will modify the Ena/Dis State selection for the indicated entry in the Destination File Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	64	16	UINT	
ENABLESTATE	File enable/disable state.	0	65535	0	80	16	UINT	

CFS DS_SET_DEST_TYPE

This command will modify the Filename Type selection for the indicated entry in the Destination File Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	64	16	UINT	
FILENAMETYPE	Filename type - count vs time.	0	65535	0	80	16	UINT	



CFS DS_SET_FILTER_FILE

This command will modify the Destination File selection for the indicated entry in the Packet Filter Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	
MESSAGEID	Message ID of existing entry in Packet Filter Table.	0	65535	0	64	16	UINT	
FILTERPARMSINDEX	Index into FilterParms Array.	0	65535	0	80	16	UINT	
FILETABLEINDEX	Index into Destination File Table.	0	65535	0	96	16	UINT	

CFS DS_SET_FILTER_PARMS

This command will modify the Algorithm Parameters for the indicated entry in the Packet Filter Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	
MESSAGEID	Message ID of existing entry in Packet Filter Table.	0	65535	0	64	16	UINT	
FILTERPARMSINDEX	Index into FilterParms Array.	0	65535	0	80	16	UINT	

CFS DS_SET_FILTER_TYPE

This command will modify the Filter Type selection for the indicated entry in the Packet Filter Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6331	0	65535	6331	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
MESSAGEID	Message ID of existing entry in Packet Filter Table.	0	65535	0	64	16	UINT	
FILTERPARMSINDEX	Index into FilterParms Array.	0	65535	0	80	16	UINT	
FILTERTYPE	Filter type (packet count or time).	0	65535	0	96	16	UINT	



CFS FM_CONCAT

This command concatenates two source files into the target file. Sources must both be existing files and target must not exist. Sources and target may be on different file systems. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but copying the first source file to the target file and then appending the second source file to the target file will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	
SOURCE1	Source 1 filename.			default	64	512	STRING	
SOURCE2	Source 2 filename.			default	576	512	STRING	
TARGET	Target filename.			default	1088	512	STRING	

CFS FM_COPY

This command copies the source file to the target file. The source must be an existing file and the target must not be a directory name. If the Overwrite command argument is TRUE, then the target may be an existing file, provided that the file is closed. If the Overwrite command argument is FALSE, then the target must not exist. The source and target may be on different file systems. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but copying the file will be performed by a lower priority child task. As such, the command result for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	
OVERWRITE	Allow overwrite.	0	65535	0	64	16	UINT	
SOURCE	Source filename.			default	80	512	STRING	
TARGET	Target filename.			default	592	512	STRING	

CFS FM_CREATE_DIR

This command creates the source directory. Source must be a valid directory name that does not



exist.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	12	56	8	UINT	
DIRECTORY	Directory name.			default	64	512	STRING	

CFS FM_DECOMPRESS

This command invokes a CFE function to decompress the source file into the target file. Source must be an existing file and target must not exist. Source and target may be on different file systems. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but decompressing the source file into the target file will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	
SOURCE	Source filename.			default	64	512	STRING	
TARGET	Target filename.			default	576	512	STRING	

CFS FM_DELETE

This command deletes the source file. Source must be an existing file that is not open.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	



FILENAME	Delete filename.	default	64	512	STRING
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CFS FM_DELETE_ALL

This command deletes all files in the source directory. Source must be an existing directory. Open files and sub-directories are not deleted. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but reading the directory and deleting each file will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	
DIRECTORY	Directory name.			default	64	512	STRING	

CFS FM_DELETE_DIR

This command deletes the source directory, it does not delete the contents of the directory. Source must be a valid directory name that exists.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	13	56	8	UINT	
DIRECTORY	Directory name.			default	64	512	STRING	

CFS FM_DELETE_INT

This is a special version of the FM_DELETE_CC command for use when the command is sent by another application, rather than from the ground. This version of the command will not generate a success event, nor will the command increment the command success counter. The intent is to avoid confusion resulting from telemetry representing the results of delete commands sent by other applications and those sent from the ground. Refer to FM_DELETE_CC command for use details.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	



CCSDS_SEQUENCE	Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	18	56	8	UINT
FILENAME	Delete filename.			default	64	512	STRING

CFS FM_GET_DIR_FILE

This command writes a listing of the contents of the source directory to the target file. If the target filename buffer is empty, then the default target filename FM_DIR_LIST_FILE_DEFNAME is used. The command will overwrite a previous copy of the target file, if one exists. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but reading the directory will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	14	56	8	UINT	
DIRECTORY	Directory name.			default	64	512	STRING	
FILENAME	Filename.			default	576	512	STRING	
GETSIZETIMEMODE	Option to query size, time, and mode of files (CPU intensive).	0	255	0	1088	8	UINT	

CFS FM_GET_DIR_PKT

This command creates a telemetry packet FM_DirListPkt_t that contains a listing of the entries in the specified directory. Since the packet will likely hold fewer entries than will be possible in a directory, the command also provides an index argument to define which entry in the directory is the first entry reported in the telemetry packet. After reading the directory list and skipping entries until reaching the index of the first entry reported, the remaining entries in the packet are filled sequentially until either the packet is full or until there are no more entries in the directory. The first entry index is zero based - thus, when the first entry index is zero the first directory entry will be the first packet entry. The number of entries per packet FM_DIR_LIST_PKT_ENTRIES is a platform configuration definition. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but reading the directory will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	



CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	15	56	8	UINT
DIRECTORY	Directory name.			default	64	512	STRING
DIRLISTOFFSET	Index of 1st dir entry to put in packet.	0	4294967295	0	576	32	UINT
GETSIZETIMEMODE	Option to query size, time, and mode of files (CPU intensive).	0	255	0	608	8	UINT

CFS FM_GET_FILE_INFO

This command creates an FM file information telemetry packet for the source file. The file information packet includes status that indicates whether source is a file that is open or closed, a directory, or does not exist. The file information data also includes a CRC, file size, last modify time and the source name. Because of the possibility that this command might take a very long time to complete, command argument validation will be done immediately but collecting the status data and calculating the CRC will be performed by a lower priority child task. As such, the return value for this function only refers to the result of command argument verification and being able to place the command on the child task interface queue.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	
FILENAME	Filename.			default	64	512	STRING	
FILEINFOCRC	File info CRC method.	0	4294967295	0	576	32	UINT	

CFS FM_GET_FREE_SPACE

This command queries the amount of free space for each of the enabled entries in the file system free space table. The data is then placed in a telemetry packet and sent to ground.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	16	56	8	UINT	



CFS FM_GET_OPEN_FILES

This command creates an FM open files telemetry packet. The open files packet includes the number of open files and for each open file, the name of the file and the name of the application that has the file opened.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT	

CFS FM_MOVE

This command moves the source file to the target file. The source must be an existing file and the target must not be a directory name. If the Overwrite command argument is TRUE, then the target may be an existing file, provided that the file is closed. If the Overwrite command argument is FALSE, then the target must not exist. Source and target must both be on the same file system. The move command does not actually move any file data. The command modifies the file system directory structure to create a different file entry for the same file data. If the user wishes to move a file across file systems, he must first copy the file and then delete the original.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	
OVERWRITE	Allow overwrite.	0	65535	0	64	16	UINT	
SOURCE	Source filename.			default	80	512	STRING	
TARGET	Target filename.			default	592	512	STRING	

CFS FM_NOOP

This command performs no operation other than to generate an informational event that also contains software version data. The command is most often used as a general aliveness test by demonstrating that the application can receive commands and generate telemetry.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	



CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT

CFS FM_RENAME

This command renames the source file to the target file. Source must be an existing file and target must not exist. Source and target must both be on the same file system. The rename command does not actually move any file data. The command modifies the file system directory structure to create a different file entry for the same file data. If the user wishes to rename a file across file systems, he must first copy the file and then delete the original.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
SOURCE	Source filename.			default	64	512	STRING	
TARGET	Target filename.			default	576	512	STRING	

CFS FM_RESET

This command resets the following housekeeping telemetry: Command success counter /FM_CMDPC Command error counter /FM_CMDEC Command warning counter /FM_WarnCtr Child cmd success counter /FM_ChildCMDPC Child cmd error counter /FM_ChildCMDEC Child cmd warning counter /FM_ChildWarnCtr

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS FM_SET_FILE_PERM

This command sets the permissions for a file. This is a direct interface to OS_chmod in the OSAL. OS_chmod accepts a uint32 to set the file's mode. The mode value also contains the type of file (regular or directory, etc) so care should be taken to not change the file type from regular to directory or vice-versa. Examples for a regular file:

Item Name	Description	Min	Max	Default	Bit	Bit	Data	Units
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Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	19	56	8	UINT	
FILENAME	File name of the permissions to set.			default	64	512	STRING	
MODE	Permissions, passed directly to OS_chmod.	0	4294967295	0	576	32	UINT	

CFS FM_SET_TABLE_STATE

This command enables or disables a single entry in the FM file system free space table. Only table entries that are currently enabled or disabled may be modified by command. Unused table entries cannot be modified.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6284	0	65535	6284	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	17	56	8	UINT	
TABLEENTRYINDEX	Table entry index.	0	4294967295	0	64	32	UINT	
TABLEENTRYSTATE	New table entry state.	0	4294967295	0	96	32	UINT	

CFS HK_NOOP

This command will increment the command execution counter and send an event containing the version number of the application

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6298	0	65535	6298	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	



CFS HK_RESET

This command resets the following counters within the HK housekeeping telemetry: Command Execution Counter (\$sc_\$cpu_HK_CMDPC)Command Error Counter (\$sc_\$cpu_HK_CMDEC)Combined Packets Sent Counter (\$sc_\$cpu_HK_CmbPktSent)Missing Data Counter (\$sc_\$cpu_HK_MissDataCtr)

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6298	0	65535	6298	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS HS_DISABLE_ALIVENESS

Disables the Aliveness Indicator UART output

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	

CFS HS_DISABLE_APPMON

Disables the Applications Monitor

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	

CFS HS_DISABLE_CPUHOG



Disables the CPU Hogging Indicator Event Message

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT	

CFS HS_DISABLE_EVENTMON

Disables the Events Monitor

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	

CFS HS_ENABLE_ALIVENESS

Enables the Aliveness Indicator UART output

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	

CFS HS_ENABLE_APPMON

Enables the Applications Monitor

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification	0	65535	6318	0	16	UINT	



Id Value: 6318							
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT

CFS HS_ENABLE_CPUHOG

Enables the CPU Hogging Indicator Event Message

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	

CFS HS_ENABLE_EVENTMON

Enables the Events Monitor

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	

CFS HS_NOOP

Implements the Noop command that insures the HS task is alive

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	



CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT

CFS HS_RESET

Resets the HS housekeeping counters

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS HS_RESET_RESETS_PERFORMED

Resets the count of HS performed resets maintained by HS

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	

CFS HS_SET_MAX_RESETS

Sets the max allowable count of processor resets to the provided value

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6318	0	65535	6318	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	
MAXRESETS		0	65535	0	64	16	UINT	



CFS LC_NOOP

Implements the Noop command that insures the LC task is alive

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6308	0	65535	6308	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS LC_RESET

Resets the LC housekeeping counters

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6308	0	65535	6308	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS LC_RESET_AP_STATS

Resets actionpoint statistics

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6308	0	65535	6308	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	
APNUMBER	Which actionpoint(s) to change.	0	65535	0	64	16	UINT	
PADDING	Structure padding.	0	65535	0	80	16	UINT	



CFS LC_RESET_WP_STATS

Resets watchpoint statistics

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6308	0	65535	6308	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	
WPNUMBER	Which watchpoint(s) to change.	0	65535	0	64	16	UINT	
PADDING	Structure padding.	0	65535	0	80	16	UINT	

CFS LC_SET_AP_PERMOFF

Set the specified actionpoint's state to LC_APSTATE_PERMOFF

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6308	0	65535	6308	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
APNUMBER	Which actionpoint to change.	0	65535	0	64	16	UINT	
PADDING	Structure padding.	0	65535	0	80	16	UINT	

CFS LC_SET_AP_STATE

Set actionpoint state

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6308	0	65535	6308	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	



APNUMBER	Which actionpoint(s) to change.	0	65535	0	64	16	UINT
NEWAPSTATE	New actionpoint state.	0	65535	0	80	16	UINT

CFS LC_SET_LC_STATE

Sets the operational state of the LC application

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6308	0	65535	6308	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	
NEWLCSTATE	New LC application state.	0	65535	0	64	16	UINT	
PADDING	Structure padding.	0	65535	0	80	16	UINT	

CFS MD_JAM_DWELL

This command inserts the specified dwell parameters (dwell address, dwell field length, and delay count) into the specified table, at the specified index.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6288	0	65535	6288	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
TABLEID	Table Id: 1..MD_NUM_DWELL_TABLES.	0	65535	0	64	16	UINT	
ENTRYID	Address index: 1..MD_DWELL_TABLE_SIZE.	0	65535	0	80	16	UINT	
FIELDLENGTH	Length of Dwell Field : 0, 1, 2, or 4.	0	65535	0	96	16	UINT	
DWELLDELAY	Dwell Delay (number of task wakeup calls before following dwell).	0	65535	0	112	16	UINT	
DWELLADDRESS_OFFSET	Optional offset that is used as the absolute address if the SymName string is NUL (Parent: Dwell Address in CFS_SymAddr_t format.)	0	4294967295	0	128	32	UINT	
DWELLADDRESS_SYMNAME	Optional offset that is used as the absolute address if the SymName string is NUL (Parent: Dwell Address in CFS_SymAddr_t format.)	0	160	8	UINT			
	Array Bit Size: 512							



CFS MD_NOOP

This command increments the MD application's valid command execution counter.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6288	0	65535	6288	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS MD_RESET_CNTRS

This command resets the following counters within the Memory Dwell housekeeping telemetry:
Command Execution Counter (\$sc_\$cpu_MD_CMDPC)Command Error Counter
(\$sc_\$cpu_MD_CMDEC)

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6288	0	65535	6288	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS MD_START_DWELL

This command sets the Enabled flag(s) associated with the Dwell Table(s) that have been designated by the command's TableMask argument.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6288	0	65535	6288	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	
TABLEMASK	0x0001=TBL1 bit, 0x0002=TBL2 bit,0x0004=TBL3 bit,0x0008=TBL4 enable bit, etc.	0	65535	0	64	16	UINT	



CFS MD_STOP_DWELL

This command clears the Enabled flag(s) associated with the Dwell Table(s) that have been designated by the command's TableMask argument.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6288	0	65535	6288	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	
TABLEMASK	0x0001=TBL1 bit, 0x0002=TBL2 bit,0x0004=TBL3 bit,0x0008=TBL4 enable bit, etc.	0	65535	0	64	16	UINT	

CFS MM_DISABLE_EEPROM_WRITE

Disables writing to a specified EEPROM bank

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	12	56	8	UINT	
BANK	EEPROM bank number to write-disable.	0	4294967295	0	64	32	UINT	

CFS MM_DUMP_IN_EVENT

Dumps up to MM_MAX_DUMP_INEVENT_BYTES of memory in an event message

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	



CCSDS_FC	Checksum CCSDS Command Function Code	0	255	7	56	8	UINT
MEMTYPE	Memory dump type.	0	255	0	64	8	UINT
NUMOFBYTES	Number of bytes to be dumped.	0	255	0	72	8	UINT
PADDING	Structure padding. Optional offset that is used as the absolute address if the	0	65535	0	80	16	UINT
SRCSYMADDRESS_OFFSET	SymName string is NUL. (Parent: Symbolic source address.)	0	4294967295	0	96	32	UINT
SRCSYMADDRESS_SYMNAME	Symbol name string. (Parent: Symbolic source address.)			default	128	512	STRING

CFS_MM_DUMP_MEM_TO_FILE

Dumps the input number of bytes from processor memory to a file

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	
MEMTYPE	Memory dump type.	0	255	0	64	8	UINT	
PADDING	Structure padding.			11	72	8	UINT	



		Array Bit Size:	24								
NUMOFBYTES	Number of bytes to be dumped.	0	4294967295	0	96	32	UINT				
SRCSYMADDRESS_OFFSET	Optional offset that is used as the absolute address if the SymName string is NUL. (Parent: Symbol plus optional offset.)	SymName	0	4294967295	0	128	32	UINT			
SRCSYMADDRESS_SYMNAME	Symbol name string. (Parent: Symbol plus optional offset.)				default	160	512	STRING			
FILENAME	Name of memory dump file.				default	672	512	STRING			

CFS MM_ENABLE_EEPROM_WRITE

Enables writing to a specified EEPROM bank

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT	
BANK	EEPROM bank number to write-enable.	0	4294967295	0	64	32	UINT	

CFS MM_FILL_MEM

Reprograms processor memory with the fill pattern contained within the command message

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	



CCSDS_SEQUENCE	CCSDS Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT
MEMTYPE	Memory type.	0	255	0	64	8	UINT
PADDING	Structure padding.			0	72	8	UINT
	Array Bit Size:						
NUMOFBYTES	Number of bytes to fill.	0	4294967295	0	96	32	UINT
FILLPATTERN	Fill pattern to use.	0	4294967295	0	128	32	UINT
	Optional offset that is used as the absolute address if the						
DESTSYMADDRESS_OFFSET	SymName string is NUL. (Parent: Symbol plus optional offset.)	0	4294967295	0	160	32	UINT
DESTSYMADDRESS_SYMNAME	Symbol name string. (Parent: Symbol plus optional offset.)			default	192	512	STRING

CFS_MM_LOAD_MEM_FROM_FILE

Reprograms processor memory with the data contained within the given input file

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	
FILENAME	Name of memory load file.			default	64	512	STRING	



CFS MM_LOAD_MEM_WID

Reprogram processor memory with input data. Loads up to MM_MAX_UNINTERRUPTABLE_DATA data bytes into RAM with interrupts disabled

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
NUMOFBYTES	Number of bytes to be loaded.	0	255	0	64	8	UINT	
PADDING	Structure padding. Array Bit Size: 24			0	72	8	UINT	
CRC	Data check value. Optional offset that is used as the absolute address if the	0	4294967295	0	96	32	UINT	
DESTSYMADDRESS_OFFSET	SymName string is NUL. (Parent: Symbolic destination load address.)	0	4294967295	0	128	32	UINT	
DESTSYMADDRESS_SYMNAME	Symbolic destination load address.) Data to be loaded.			default	160	512	STRING	
DATAARRAY	Array Bit 1600			0	672	8	UINT	



Size:

CFS MM_LOOKUP_SYM

Queries the system symbol table and reports the resolved address in telemetry and an informational event message

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	
SYMNAME	Symbol name string.			default	64	512	STRING	

CFS MM_NOOP

Implements the Noop command that insures the MM task is alive

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS MM_PEEK

Reads 8,16, or 32 bits of data from any given input address

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	



CCSDS_CHECKSUM	Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT
DATASIZE	Size of the data to be read.	0	255	0	64	8	UINT
MEMTYPE	Memory type to peek data from.	0	255	0	72	8	UINT
PADDING	Structure padding.			0	80	8	UINT
	Array Bit 16 Size:						
	Optional offset that is used as the absolute address if the						
SRCSYMADDRESS_OFFSET	SymName string is NUL. (Parent: Symbolic source peek address.)	0	4294967295	0	96	32	UINT
SRCSYMADDRESS_SYMNAME	Symbol name string. (Parent: Symbolic source peek address.)			default	128	512	STRING

CFS MM_POKE

Writes 8, 16, or 32 bits of data to any memory address

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification	0	65535	6280	0	16	UINT	
	Id Value: 6280							
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	



DATASIZE	Size of the data to be written.	0	255	0	64	8	UINT
MEMTYPE	Memory type to poke data to.	0	255	0	72	8	UINT
PADDING	Structure padding. Array Bit Size:	16		80	8	UINT	
DATA	Data to be written. Optional offset that is used as the absolute address if the SymName string is NUL.	0	4294967295	0	96	32	UINT
DESTSYMADDRESS_OFFSET	(Parent: Symbolic destination poke address.)	0	4294967295	0	128	32	UINT
DESTSYMADDRESS_SYMNAME	Symbolic destination poke address.)			default	160	512	STRING

CFS MM_RESET

Resets the MM housekeeping counters

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6280	0	65535	6280	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS MM_SYMTBL_TO_FILE

Saves the system symbol table to a file that can be transferred to the ground

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification	0	65535	6280	0	16	UINT	



Id Value: 6280							
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT
FILENAME	Name of symbol dump file.		default	64	512	STRING	

CFS SCH_DISABLE

This command disables a single activity in the Schedule Definition Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6293	0	65535	6293	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	
SLOTNUMBER	Slot Number of Activity whose state is to change.	0	65535	0	64	16	UINT	
ENTRYNUMBER	Entry Number of Activity whose state is to change.	0	65535	0	80	16	UINT	

CFS SCH_DISABLE_GROUP

This command disables a single group and/or a collection of Multi-Group Activities in the Schedule Definition Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6293	0	65535	6293	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	
GROUPDATA	Group and Multi-Group Identifiers.	0	4294967295	0	64	32	UINT	

CFS SCH_ENABLE

This command enables a single activity in the Schedule Definition Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6293	0	65535	6293	0	16	UINT	



CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT
SLOTNUMBER	Slot Number of Activity whose state is to change.	0	65535	0	64	16	UINT
ENTRYNUMBER	Entry Number of Activity whose state is to change.	0	65535	0	80	16	UINT

CFS SCH_ENABLE_GROUP

This command enables a single group and/or a collection of Multi-Group Activities in the Schedule Definition Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6293	0	65535	6293	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
GROUPDATA	Group and Multi-Group Identifiers.	0	4294967295	0	64	32	UINT	

CFS SCH_ENABLE_SYNC

This command allows the operator to enable processing and synchronization of the Major Frame Signal to the processing of the Schedule Definition Table.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6293	0	65535	6293	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	

CFS SCH_NOOP

This command performs no other function than to increment the command execution counter. The command may be used to verify general aliveness of the Scheduler Application.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_PACKET	CCSDS Packet							



CCSDS_STREAMID	Identification Id Value: 6293	0	65535	6293	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT

CFS SCH_RESET

This command resets the following counters within the Scheduler housekeeping telemetry:

Command Execution Counter (\$sc_\$cpu_SCH_CMDPC) Command Error Counter
(\$sc_\$cpu_SCH_CMDEC) Schedule Activities Success Counter (\$sc_\$cpu_SCH_ActSuccessCtr)
Schedule Activities Failure Counter (\$sc_\$cpu_SCH_ActFailCtr) Schedule Slots Processed Counter
(\$sc_\$cpu_SCH_SlotProcCtr) Schedule Skipping Slots Counter
(\$sc_\$cpu_SCH_SlotSkipCtr) Multiple Schedule Slots Processed Counter
(\$sc_\$cpu_SCH_MultSlotCtr) Awoke in Same Slot Counter (\$sc_\$cpu_SCH_SameSlotCtr)
Corrupted Table Data Counter (\$sc_\$cpu_SCH_BadTblDataCtr) Table Loads Successfully Verified Counter
(\$sc_\$cpu_SCH_TblPassVerifyCtr) Table Loads Unsuccessfully Verified Counter
(\$sc_\$cpu_SCH_TblFailVerifyCtr) Valid Major Frames Received Counter
(\$sc_\$cpu_SCH_ValidMajorFrameCtr) Missed Major Frames Received Counter
(\$sc_\$cpu_SCH_MissedMajorFrameCtr) Unexpected Major Frames Received Counter
(\$sc_\$cpu_SCH_UnexpectedMajorFrameCtr)

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6293	0	65535	6293	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	

CFS SCH_SEND_DIAG_TLM

This command generates and sends the Scheduler Application's Diagnostic Telemetry packet.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6293	0	65535	6293	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	



CFS SC_APPEND_ATS

Adds contents of the Append table to the specified ATS table

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	11	56	8	UINT	
ATSID	The ID of the ATS to append to, 1 = ATS_A, 2 = ATS_B.	0	65535	0	64	16	UINT	

CFS SC_CONTINUE_ATS_ON_FAILURE

Sets the flag which specifies whether or not to continue processing an ATS if one of the commands in the ATS fails checksum validation before being sent out.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	10	56	8	UINT	
CONTINUESTATE	TRUE or FALSE, to continue ATS after a failure.	0	65535	0	64	16	UINT	

CFS SC_DISABLE_RTS

Disables the specified RTS

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	6	56	8	UINT	
RTSID	The ID of the RTS to start, 1 through SC_NUMBER_OF_RTS.	0	65535	0	64	16	UINT	

CFS SC_DISABLE_RTSGRP

The enable state for an RTS may be ENABLED or DISABLED. This command sets the enable state for the specified group of RTS to DISABLED.

Item Name	Description	Min	Max	Default	Bit	Bit	Data	Units
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Item Name	Description	Min	Max	Default	Offset	Size	Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	15	56	8	UINT	
FIRSTRTSID	ID of the first RTS to act on, 1 through SC_NUMBER_OF_RTS.	0	65535	0	64	16	UINT	
LASTRTSID	ID of the last RTS to act on, 1 through SC_NUMBER_OF_RTS.	0	65535	0	80	16	UINT	

CFS SC_ENABLE_RTS

Enables the specified RTS

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	7	56	8	UINT	
RTSID	The ID of the RTS to start, 1 through SC_NUMBER_OF_RTS.	0	65535	0	64	16	UINT	

CFS SC_ENABLE_RTSGRP

The enable state for an RTS may be ENABLED or DISABLED. This command sets the enable state for the specified group of RTS to ENABLED.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	16	56	8	UINT	
FIRSTRTSID	ID of the first RTS to act on, 1 through SC_NUMBER_OF_RTS.	0	65535	0	64	16	UINT	
LASTRTSID	ID of the last RTS to act on, 1 through SC_NUMBER_OF_RTS.	0	65535	0	80	16	UINT	

CFS SC_JUMP_ATS



Moves the 'current time' pointer in the ATS to another time

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	9	56	8	UINT	
NEWTIME	the time to 'jump' to	0	4294967295	0	64	32	UINT	

CFS SC_MANAGE_TABLE

This command signals a need for the host application (SC) to allow cFE Table Services to manage the specified table. For loadable tables, this command indicates that a table update is available. For dump only tables, this command indicates that cFE Table Services wants to dump the table data. In either case, the host application must call the table manage API function so that the pending function can be executed within the context of the host.

CFS SC_NOOP

Implements the Noop command that insures the SC app is alive

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	0	56	8	UINT	

CFS SC_RESET_COUNTERS

Resets the SC housekeeping counters

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	1	56	8	UINT	



CFS SC_START_ATS

Starts the specified ATS

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	2	56	8	UINT	
ATSID	The ID of the ATS to start, 1 = ATS_A, 2 = ATS_B.	0	65535	0	64	16	UINT	

CFS SC_START_RTS

Starts the specified RTS

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	4	56	8	UINT	
RTSID	The ID of the RTS to start, 1 through SC_NUMBER_OF_RTS.	0	65535	0	64	16	UINT	

CFS SC_START_RTSGRP

The load state for an RTS may be LOADED or NOT LOADED. The enable state for an RTS may be ENABLED or DISABLED. The run state for an RTS may be STARTED or STOPPED. This command STARTS each RTS in the specified group that is currently LOADED, ENABLED and STOPPED.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	13	56	8	UINT	
FIRSTRTSID	ID of the first RTS to act on, 1 through SC_NUMBER_OF_RTS.	0	65535	0	64	16	UINT	
LASTRTSID	ID of the last RTS to act on, 1 through SC_NUMBER_OF_RTS.	0	65535	0	80	16	UINT	



CFS SC_STOP_ATS

Stops the specified ATS

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	3	56	8	UINT	

CFS SC_STOP_RTS

Stops the specified RTS

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	5	56	8	UINT	
RTSID	The ID of the RTS to start, 1 through SC_NUMBER_OF_RTS.	0	65535	0	64	16	UINT	

CFS SC_STOP_RTSGRP

The load state for an RTS may be LOADED or NOT LOADED. The enable state for an RTS may be ENABLED or DISABLED. The run state for an RTS may be STARTED or STOPPED. This command STOPS each RTS in the specified group that is currently STARTED.

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	14	56	8	UINT	
FIRSTRTSID	ID of the first RTS to act on, 1 through SC_NUMBER_OF_RTS.	0	65535	0	64	16	UINT	
LASTRTSID	ID of the last RTS to act on, 1 through SC_NUMBER_OF_RTS.	0	65535	0	80	16	UINT	



CFS SC_SWITCH_ATS

Switches the running ATS and the ATS no running

Item Name	Description	Min	Max	Default	Bit Offset	Bit Size	Data Type	Units
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 6313	0	65535	6313	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	0	65535	49152	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	0	65535	1	32	16	UINT	
CCSDS_CHECKSUM	CCSDS Command Checksum	0	255	0	48	8	UINT	
CCSDS_FC	CCSDS Command Function Code	0	255	8	56	8	UINT	

Telemetry Packets

CFS CFE_ES_HKPACKET

Executive Services Housekeeping Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2048	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
CMDCOUNTER	The ES Application Command Counter.	96	8	UINT	
ERRCOUNTER	The ES Application Command Error Counter.	104	8	UINT	
CFECORECHECKSUM	Checksum of cFE Core Code.	112	16	UINT	
CFEMAJORVERSION	Major Version Number of cFE.	128	8	UINT	
CFE_MINORVERSION	Minor Version Number of cFE.	136	8	UINT	
CFEREVISION	Sub-Minor Version Number of cFE.	144	8	UINT	
CFEMISSIONREVISION	Mission Version Number of cFE.	152	8	UINT	
OSALMAJORVERSION	OS Abstraction Layer Major Version Number.	160	8	UINT	
OSALMINORVERSION	OS Abstraction Layer Minor Version Number.	168	8	UINT	
OSALREVISION	OS Abstraction Layer Revision Number.	176	8	UINT	



OSALMISSIONREVISION	OS Abstraction Layer Mission Revision Number.	184	8	UINT
SYSLOGBYTESUSED	Total number of bytes used in system log.	192	32	UINT
SYSLOGSIZE	Total size of the system log.	224	32	UINT
SYSLOGENTRIES	Number of entries in the system log.	256	32	UINT
SYSLOGMODE	Write/Overwrite Mode.	288	32	UINT
ERLOGINDEX	Current index of the ER Log (wraps around).	320	32	UINT
ERLOGENTRIES	Number of entries made in the ER Log since the power on.	352	32	UINT
REGISTEREDCOREAPPS	Number of Applications registered with ES.	384	32	UINT
REGISTEREDEXTERNALAPPS	Number of Applications registered with ES.	416	32	UINT
REGISTEREDTASKS	Number of Tasks (main AND child tasks) registered with ES.	448	32	UINT
REGISTEREDLIBS	Number of Libraries registered with ES.	480	32	UINT
RESETTYPE	Reset type (PROCESSOR or POWERON).	512	32	UINT
RESETSUBTYPE	Reset Sub Type.	544	32	UINT
PROCESSORRESETS	Number of processor resets since last power on.	576	32	UINT
MAXPROCESSORRESETS	Max processor resets before a power on is done.	608	32	UINT
BOOTSOURCE	Boot source (as provided from BSP).	640	32	UINT
PERFSTATE	Current state of Performance Analyzer.	672	32	UINT
PERFMODE	Current mode of Performance Analyzer.	704	32	UINT
PERFTRIGGERCOUNT	Number of Times Performance Analyzer has Triggered.	736	32	UINT
PERFFILTERMASK	Current Setting of Performance Analyzer Filter Masks. Array Bit Size: 128	768	32	UINT
PERFTRIGGERMASK	Current Setting of Performance Analyzer Trigger Masks. Array Bit Size: 128	896	32	UINT
PERFDATASTART	Identifies First Stored Entry in Performance Analyzer Log.	1024	32	UINT
PERFDATAEND	Identifies Last Stored Entry in Performance Analyzer Log.	1056	32	UINT
PERFDATACOUNT	Number of Entries Put Into the Performance Analyzer Log.	1088	32	UINT
PERFDATATOWRITE	Number of Performance Analyzer Log Entries Left to be Written to Log Dump File.	1120	32	UINT
HEAPBYTESFREE	Number of free bytes remaining in the OS heap.	1152	32	UINT
HEAPBLOCKSFREE	Number of free blocks remaining in the OS heap.	1184	32	UINT
HEAPMAXBLOCKSIZE	Number of bytes in the largest free block.	1216	32	UINT

CFS CFE_ES_ONEAPPTLM

Single Application Information Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	



RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2059	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT
APPINFO_APPID	Application ID for this Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	96	32	UINT
APPINFO_TYPE	The type of App: CORE or EXTERNAL. (Parent: For more information, see CFE_ES_AppInfo_t.)	128	32	UINT
APPINFO_NAME	The Registered Name of the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	160	160	STRING
APPINFO_ENTRYPOINT	The Entry Point label for the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	320	160	STRING
APPINFO_FILENAME	The Filename of the file containing the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	480	512	STRING
APPINFO_STACKSIZE	The Stack Size of the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	992	32	UINT
APPINFO_MODULEID	The ID of the Loadable Module for the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	1024	32	UINT
APPINFO_ADDRESSESAREVALID	Indicates that the Code, Data, and BSS addresses/sizes are valid. (Parent: For more information, see CFE_ES_AppInfo_t.)	1056	32	UINT
APPINFO_CODEADDRESS	The Address of the Application Code Segment. (Parent: For more information, see CFE_ES_AppInfo_t.)	1088	32	UINT
APPINFO_CODESIZE	The Code Size of the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	1120	32	UINT
APPINFO_DATAADDRESS	The Address of the Application Data Segment. (Parent: For more information, see CFE_ES_AppInfo_t.)	1152	32	UINT
APPINFO_DATASIZE	The Data Size of the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	1184	32	UINT
APPINFO_BSSADDRESS	The Address of the Application BSS Segment. (Parent: For more information, see CFE_ES_AppInfo_t.)	1216	32	UINT
APPINFO_BSSSIZE	The BSS Size of the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	1248	32	UINT
APPINFO_STARTADDRESS	The Start Address of the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	1280	32	UINT
APPINFO_EXCEPTIONACTION	What should occur if Application has an exception (Restart Application OR Restart Processor). (Parent: For more information, see CFE_ES_AppInfo_t.)	1312	16	UINT
APPINFO_PRIORITY	The Priority of the Application. (Parent: For more information, see CFE_ES_AppInfo_t.)	1328	16	UINT
APPINFO_MAINTASKID	The Application's Main Task ID. (Parent: For more information, see CFE_ES_AppInfo_t.)	1344	32	UINT
APPINFO_EXECUTIONCOUNTER	The Application's Main Task Execution Counter. (Parent: For more information, see CFE_ES_AppInfo_t.)	1376	32	UINT
APPINFO_MAINTASKNAME	The Application's Main Task ID. (Parent: For more information, see CFE_ES_AppInfo_t.) Number of Child tasks for an App. (Parent: For	1408	160	STRING



APPINFO_NUMOFCHELTASKS	Number of child tasks for all APP. (For details, see CFE_ES_AppInfo_t.)	1568	32	UINT
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CFS CFE_ES_POOLSTATSLM

Memory Pool Statistics Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2064	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
POOLHANDLE	Handle of memory pool whose stats are being telemetered.	96	32	UINT	
POOLSTATS_POOLSIZE	Size of Memory Pool (in bytes). (Parent: For more info, see CFE_ES_MemPoolStats_t.)	128	32	UINT	
POOLSTATS_NUMBLOCKSREQUESTED	Number of times a memory block has been allocated. (Parent: For more info, see CFE_ES_MemPoolStats_t.)	160	32	UINT	
POOLSTATS_CHECKERRCTR	Number of errors detected when freeing a memory block. (Parent: For more info, see CFE_ES_MemPoolStats_t.)	192	32	UINT	
POOLSTATS_NUMFREEBYTES	Number of bytes never allocated to a block. (Parent: For more info, see CFE_ES_MemPoolStats_t.)	224	32	UINT	
POOLSTATS_BLOCKSTATS	Contains stats on each block size. (Parent: For more info, see CFE_ES_MemPoolStats_t.)	256	96	UINT	
	Array Bit Size: 1632				

CFS CFE_ES_SHELLPACKET

OS Shell Output Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read	0	0	DERIVED	



	Conversion: ReceivedTimeFormattedConversion				
RECEIVED_COUNT	COSMOS packet received count	0	0	DERIVED	
	Read Conversion: ReceivedCountConversion				
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2063	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
SHELLOUTPUT	ASCII text string containing output from OS Shell that was received in response to an OS Shell Command.	96	8	UINT	
	Array Bit Size: 512				

CFS CFE_EVS_PACKET

Event Message Telemetry Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2056	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
PACKETID_APPNAME	Application name. (Parent: Event packet information.)	96	160	STRING	
PACKETID_EVENTID	Numerical event identifier. (Parent: Event packet information.)	256	16	UINT	
PACKETID_EVENTTYPE	Numerical event type identifier. (Parent: Event packet information.)	272	16	UINT	
PACKETID_SPACECRAFTID	Spacecraft identifier. (Parent: Event packet information.)	288	32	UINT	
PACKETID_PROCESSORID	Numerical processor identifier. (Parent: Event packet information.)	320	32	UINT	
MESSAGE	Event message string.	352	976	STRING	
SPARE1	Structure padding.	1328	8	UINT	
SPARE2	Structure padding.	1336	8	UINT	

CFS CFE_EVS_TLMPKT



Event Services Housekeeping Telemetry Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2049	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
COMMANDCOUNTER	EVS Command Counter.	96	8	UINT	
COMMANDERRCOUNTER	EVS Command Error Counter.	104	8	UINT	
MESSAGEFORMATMODE	Event message format mode (short/long).	112	8	UINT	
MESSAGETRUNCCOUNTER	Event message truncation counter.	120	8	UINT	
UNREGISTEREDAPPCOUNTER	Unregistered application message send counter.	128	8	UINT	
OUTPUTPORT	Output port mask.	136	8	UINT	
LOGFULLFLAG	Local event log full flag.	144	8	UINT	
LOGMODE	Local event logging mode (overwrite/discard).	152	8	UINT	
MESSAGSEND COUNTER	Event message send counter.	160	16	UINT	
LOGOVERFLOW COUNTER	Local event log overflow counter.	176	16	UINT	
LOGENABLED	Current event log enable/disable state.	192	8	UINT	
SPARE1	Padding for 32 bit boundary.	200	8	UINT	
SPARE2	Padding for 32 bit boundary.	208	8	UINT	
SPARE3	Padding for 32 bit boundary.	216	8	UINT	
APPDATA	Array of registered application table data. Array Bit Size: 2048	224	64	UINT	

CFS CFE_SB_HKMSG

Software Bus task housekeeping Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	



RECEIVED_COUNT	Read Conversion: ReceivedCountConversion	0	0	DERIVED
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2051	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT
COMMANDCNT	Count of valid commands received.	96	8	UINT
CMDERRCNT	Count of invalid commands received.	104	8	UINT
NOSUBSCRIBERSCNT	Count pkts sent with no subscribers.	112	8	UINT
MSGSENDERRCNT	Count of message send errors.	120	8	UINT
MSGRECEIVEERRCNT	Count of message receive errors.	128	8	UINT
INTERNALERRCNT	Count of queue read or write errors.	136	8	UINT
CREATEPIPEERRCNT	Count of errors in create pipe API.	144	8	UINT
SUBSCRIBEERRCNT	Count of errors in subscribe API.	152	8	UINT
SPARE	Spare Byte.	160	8	UINT
DUPSUBSCRIPTIONSCNT	Count of duplicate subscriptions.	168	8	UINT
SPARE2ALIGN	Spare bytes to ensure alignment.	176	8	UINT
PIPEOVERFLOWERRCNT	Array Bit Size: 16			
MSGLIMERRCNT	Count of pipe overflow errors.	192	16	UINT
MEMPOOLHANDLE	Count of msg id to pipe errors.	208	16	UINT
MEMINUSE	Handle to SB's Memory Pool.	224	32	UINT
UNMARKEDMEM	Memory in use. cfg param CFE_SB_BUF_MEMORY_BYTES minus Peak Memory in use	256	32	UINT
		288	32	UINT

CFS CFE_SB_PREVSUBMSG

SB Previous Subscriptions Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2061	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
PKTSEGMENT	Pkt number(starts at 1) in the series.	96	32	UINT	
TOTALSEGMENTS	Total number of pkts needed to complete the request.	128	32	UINT	



ENTRIES	Number of entries in the pkt.	160	32	UINT
ENTRY	Array of CFE_SB_SubEntries_t entries. Array Bit Size: 800	192	40	UINT

CFS CFE_SB_STATMSG

SB Statistics Telemetry Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2058	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
MSGIDSINUSE	Current number of MsgIds with a destination.	96	32	UINT	
PEAKMSGIDSINUSE	Peak number of MsgIds with a destination.	128	32	UINT	
MAXMSGIDSALLOWED	cFE Cfg Param CFE_SB_MAX_MSG_IDS	160	32	UINT	
PIPESINUSE	Number of pipes currently in use.	192	32	UINT	
PEAKPIPESINUSE	Peak number of pipes since last reboot.	224	32	UINT	
MAXPIPESALLOWED	cFE Cfg Param CFE_SB_MAX_PIPES	256	32	UINT	
MEMINUSE	Memory bytes currently in use for SB msg transfers.	288	32	UINT	
PEAKMEMINUSE	Peak memory bytes in use for SB msg transfers.	320	32	UINT	
MAXMEMALLOWED	cFE Cfg Param CFE_SB_BUFSIZE_MEMORY_BYTES	352	32	UINT	
SUBSCRIPTIONSINUSE	Number of current subscriptions.	384	32	UINT	
PEAKSUBSCRIPTIONSINUSE	Peak number of subscriptions.	416	32	UINT	
MAXSUBSCRIPTIONSALLOWED	product of CFE_SB_MAX_MSG_IDS and CFE_SB_MAX_DEST_PER_PKT	448	32	UINT	
SBBUFFERSINUSE	Number of SB message buffers currently in use.	480	32	UINT	
PEAKSBBUFFERSINUSE	Max number of SB message buffers in use.	512	32	UINT	
MAXPIPEDEPTHALLOWED	cFE Cfg Param CFE_SB_MAX_PIPE_DEPTH	544	32	UINT	
PIPEDEPTHSTATS	Pipe Depth Statistics CFE_SB_PipeDepthStats_t. Array Bit Size: 192	576	64	UINT	

CFS CFE_SB_SUBRPTMSG

SB Subscription Report Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
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RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2062	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
SUBTYPE	Subscription or Unsubscription.	96	8	UINT	
MSGID	MsgId subscribed or unsubscribe to.	104	16	UINT	
QOS_PRIORITY	Specify high(1) or low(0) message priority for off-board routing, currently unused. (Parent: Quality of Service, used only for interprocessor communication.)	120	8	UINT	
QOS_RELIABILITY	Specify high(1) or low(0) message transfer reliability for off-board routing, currently unused. (Parent: Quality of Service, used only for interprocessor communication.)	128	8	UINT	
PIPE	Destination pipe id to send above msg id.	136	8	UINT	

CFS CFE_TBL_HKPACKET

Table Services Housekeeping Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2052	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
CMDCOUNTER	Count of valid commands received.	96	8	UINT	
ERRCOUNTER	Count of invalid commands received.	104	8	UINT	



NUMTABLES	Number of Tables Registered.	112	16	UINT
NUMLOADPENDING	Number of Tables pending on Applications for their update.	128	16	UINT
VALIDATIONCTR	Number of completed table validations.	144	16	UINT
LASTVALCRC	Data Integrity Value computed for last table validated.	160	32	UINT
LASTVALSTATUS	Returned status from validation function for last table validated.	192	32	INT
ACTIVEBUFFER	Indicator of whether table buffer validated was 0=Inactive, 1=Active.	224	8	UINT
LASTVALTABLENAME	Name of last table validated.	232	304	STRING
SUCCESSVALCTR	Total number of successful table validations.	536	8	UINT
FAILEDVALCTR	Total number of unsuccessful table validations.	544	8	UINT
NUMVALREQUESTS	Number of times Table Services has requested validations from Apps.	552	8	UINT
NUMFREESHAREDBUFS	Number of free Shared Working Buffers.	560	8	UINT
BYTEALIGNPAD1	Spare byte to ensure longword alignment.	568	8	UINT
MEMPOOLHANDLE	Handle to TBL's memory pool.	576	32	UINT
LASTUPDATETIME_SECONDS	Number of seconds since epoch. (Parent: Time of last table update.)	608	32	UINT
LASTUPDATETIME_SUBSECONDS	Number of subseconds since epoch (LSB = $2^{(-32)}$ seconds). (Parent: Time of last table update.)	640	32	UINT
LASTUPDATEDTBL	Name of the last table updated.	672	304	STRING
LASTFILELOADED	Path and Name of last table image file loaded.	976	512	STRING
LASTFILEDUMPED	Path and Name of last file dumped to.	1488	512	STRING
LASTTABLELOADED	Name of the last table loaded.	2000	304	STRING

CFS CFE_TBL_TBLREGPACKET

Table Registry Info Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units	Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED		%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED		
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED		
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2060	0	16	UINT		
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT		
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT		
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT		
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT		
SIZE	Size, in bytes, of Table.	96	32	UINT		
CRC	Most recently calculated CRC of Table.	128	32	UINT		
ACTIVEBUFFERADDR	Address of Active Buffer.	160	32	UINT		
INACTIVEBUFFERADDR	Address of Inactive Buffer.	192	32	UINT		
VALIDATIONELINCDTP	Ptr to Owner App's function that validates tbl	224	32	UINT		



VALIDATION UNITS	contents.	44	32	UINT
TIMEOFLASTUPDATE_SECONDS	Number of seconds since epoch. (Parent: Time when Table was last updated.)	256	32	UINT
TIMEOFLASTUPDATE_SUBSECONDS	Number of subseconds since epoch (LSB = $2^{(-32)}$ seconds). (Parent: Time when Table was last updated.)	288	32	UINT
FILECREATETIMESECS	File creation time from last file loaded into table.	320	32	UINT
FILECREATETIMESUBSECS	File creation time from last file loaded into table.	352	32	UINT
TABLELOADEDONCE	Flag indicating whether table has been loaded once or not.	384	8	UINT
LOADPENDING	Flag indicating an inactive buffer is ready to be copied.	392	8	UINT
DUMPONLY	Flag indicating Table is NOT to be loaded.	400	8	UINT
DBLBUFFERED	Flag indicating Table has a dedicated inactive buffer.	408	8	UINT
NAME	Processor specific table name.	416	304	STRING
LASTFILELOADED	Filename of last file loaded into table.	720	512	STRING
OWNERAPPNAME	Name of owning application.	1232	160	STRING
CRITICAL	Indicates whether table is Critical or not.	1392	8	UINT
BYTEALIGN4	Spare byte to maintain byte alignment.	1400	8	UINT

CFS CFE_TIME_DIAGPACKET

Time Services Diagnostics Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2054	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
ATTONEMET_SECONDS	Number of seconds since epoch. (Parent: MET at time of tone.)	96	32	UINT	
ATTONEMET_SUBSECONDS	Number of subseconds since epoch (LSB = $2^{(-32)}$ seconds). (Parent: MET at time of tone.)	128	32	UINT	
ATTONESTCF_SECONDS	Number of seconds since epoch. (Parent: STCF at time of tone.)	160	32	UINT	
ATTONESTCF_SUBSECONDS	Number of subseconds since epoch (LSB = $2^{(-32)}$ seconds). (Parent: STCF at time of tone.)	192	32	UINT	
ATTONEDELAY_SECONDS	Number of seconds since epoch. (Parent: Adjustment for slow tone detection.)	224	32	UINT	
ATTONEDELAY_SUBSECONDS	Number of subseconds since epoch (LSB = $2^{(-32)}$ seconds). (Parent: Adjustment for slow tone)	256	32	UINT	



	detection.)				
ATTONELATCH_SECONDS	Number of seconds since epoch. (Parent: Local clock latched at time of tone.)	288	32	UINT	
ATTONELATCH_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: Local clock latched at time of tone.)	320	32	UINT	
ATTONELEAPS	Leap Seconds at time of tone.	352	16	INT	
CLOCKSTATEAPI	Clock state as per API.	368	16	INT	
TIMESINCTONE_SECONDS	Number of seconds since epoch. (Parent: Time elapsed since the tone.)	384	32	UINT	
TIMESINCTONE_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: Time elapsed since the tone.)	416	32	UINT	
CURRENTLATCH_SECONDS	Number of seconds since epoch. (Parent: Local clock latched just 'now'.)	448	32	UINT	
CURRENTLATCH_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: Local clock latched just 'now'.)	480	32	UINT	
CURRENTMET_SECONDS	Number of seconds since epoch. (Parent: MET at this instant.)	512	32	UINT	
CURRENTMET_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: MET at this instant.)	544	32	UINT	
CURRENTTAI_SECONDS	Number of seconds since epoch. (Parent: TAI at this instant.)	576	32	UINT	
CURRENTTAI_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: TAI at this instant.)	608	32	UINT	
CURRENTUTC_SECONDS	Number of seconds since epoch. (Parent: UTC at this instant.)	640	32	UINT	
CURRENTUTC_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: UTC at this instant.)	672	32	UINT	
CLOCKSETSTATE	Time has been 'set'.	704	16	INT	
CLOCKFLYSTATE	Current fly-wheel state.	720	16	INT	
CLOCKSOURCE	Internal vs external, etc.	736	16	INT	
CLOCKSIGNAL	Primary vs redundant, etc.	752	16	INT	
SERVERFLYSTATE	Used by clients only.	768	16	INT	
FORCED2FLY	Commanded into fly-wheel.	784	16	INT	
CLOCKSTATEFLAGS	Clock State Flags.	800	16	UINT	
ONETIMEADIRECTION	One time STCF adjustment direction (Add = 1, Sub = 2).	816	16	INT	
ONEHZDIRECTION	1Hz STCF adjustment direction	832	16	INT	
DELAYDIRECTION	Client latency adjustment direction.	848	16	INT	
ONETIMEADJUST_SECONDS	Number of seconds since epoch. (Parent: Previous one-time STCF adjustment.)	864	32	UINT	
ONETIMEADJUST_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: Previous one-time STCF adjustment.)	896	32	UINT	
ONEHZADJUST_SECONDS	Number of seconds since epoch. (Parent: Current 1Hz STCF adjustment.)	928	32	UINT	
ONEHZADJUST_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: Current 1Hz STCF adjustment.)	960	32	UINT	
TONESIGNALLATCH_SECONDS	Number of seconds since epoch. (Parent: Local Clock latched at most recent tone signal.)	992	32	UINT	
TONESIGNALLATCH_SUBSECONDS	Number of subseconds since epoch (LSB = 2^(-32) seconds). (Parent: Local Clock latched at most recent tone signal.)	1024	32	UINT	
TONEDATALATCH_SECONDS	Number of seconds since epoch. (Parent: Local Clock latched at arrival of tone data.)	1056	32	UINT	



TONEDATALATCH_SUBSECONDS	Number of subseconds since epoch (LSB = $2^{(-32)}$ seconds). (Parent: Local Clock latched at arrival of tone data.)	1088	32	UINT
TONEMATCHCOUNT	Tone signal / data verification count.	1120	32	UINT
TONEMATCHERRORS	Tone signal / data verification error count.	1152	32	UINT
TONESIGNALCOUNT	Tone signal detected SB message count.	1184	32	UINT
TONEDATACOUNT	Time at the tone data SB message count.	1216	32	UINT
TONEINTCOUNT	Tone signal ISR execution count.	1248	32	UINT
TONEINTERRORS	Tone signal ISR error count.	1280	32	UINT
TONETASKCOUNT	Tone task execution count.	1312	32	UINT
VERSIONCOUNT	Count of mods to time at tone reference data (version).	1344	32	UINT
LOCALINTCOUNT	Local 1Hz ISR execution count.	1376	32	UINT
LOCALTASKCOUNT	Local 1Hz task execution count.	1408	32	UINT
VIRTUALMET	Software MET.	1440	32	UINT
MINELAPSED	Min tone signal / data pkt arrival window (Sub-seconds).	1472	32	UINT
MAXELAPSED	Max tone signal / data pkt arrival window (Sub-seconds).	1504	32	UINT
MAXLOCALCLOCK_SECONDS	Number of seconds since epoch. (Parent: Max local clock value before rollover.)	1536	32	UINT
MAXLOCALCLOCK_SUBSECONDS	Number of subseconds since epoch (LSB = $2^{(-32)}$ seconds). (Parent: Max local clock value before rollover.)	1568	32	UINT
TONEOVERLIMIT	Max between tone signal interrupts.	1600	32	UINT
TONEUNDERLIMIT	Min between tone signal interrupts.	1632	32	UINT
DATASTORESTATUS	Data Store status (preserved across processor reset).	1664	32	UINT

CFS CFE_TIME_HKPACKET

Time Services Housekeeping Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units	Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED		%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED		
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED		
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2053	0	16	UINT		
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT		
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT		
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT		
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT		
CMDCOUNTER	Time Command Execution Counter.	96	8	UINT		
ERRCOUNTER	Time Command Error Counter.	104	8	UINT		
CLOCKSTATEFLAGS	State Flags.	112	16	UINT		



CLOCKSTATEAPI	API State.	128	16	INT
LEAPSECONDS	Current Leaps Seconds.	144	16	INT
SECONDSMET	Current MET (seconds).	160	32	UINT
SUBSECSMET	Current MET (sub-seconds).	192	32	UINT
SECONDSSTCF	Current STCF (seconds).	224	32	UINT
SUBSECSSSTCF	Current STCF (sub-seconds).	256	32	UINT
SECONDS1HZADJ	Current 1 Hz SCTF adjustment (seconds).	288	32	UINT
SUBSECS1HZADJ	Current 1 Hz SCTF adjustment (sub-seconds).	320	32	UINT
SECONDSDELAY	Current 1 Hz SCTF Delay (seconds).	352	32	UINT
SUBSECSDELAY	Current 1 Hz SCTF Delay (sub-seconds).	384	32	UINT

CFS CF_HKPACKET

CF Application housekeeping Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2224	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
CMDCOUNTER	Count of valid commands received.	96	16	UINT	
ERRCOUNTER	Count of invalid commands received.	112	16	UINT	
APP_WAKEUPFORFILEPROC	(Parent:)	128	32	UINT	
APP_ENGINECYCLEDOWNLOAD	(Parent:)	160	32	UINT	
APP_MEMINUSE	(Parent:)	192	32	UINT	
APP_PEAKMEMINUSE	(Parent:)	224	32	UINT	
APP_LOWMEMORYMARK	(Parent:)	256	32	UINT	
APP_MAXMEMNEEDED	(Parent:)	288	32	UINT	
APP_MEMALLOCATED	(Parent:)	320	32	UINT	
APP_BUFFERPOOLHANDLE	(Parent:)	352	32	UINT	
APP_QNODESALLOCATED	(Parent:)	384	32	UINT	
APP_QNODESDEALLOCATED	(Parent:)	416	32	UINT	
APP_PDUSRECEIVED	(Parent:)	448	32	UINT	
APP_PDUSREJECTED	(Parent:)	480	32	UINT	
APP_TOTALINPROGTRANS	(Parent:)	512	32	UINT	
APP_TOTALFAILEDTRANS	(Parent:)	544	32	UINT	
APP_TOTALABANDONTRANS	(Parent:)	576	32	UINT	
APP_TOTALSUCCESSTRANS	(Parent:)	608	32	UINT	
APP_TOTALCOMPLETEDTRANS	(Parent:)	640	32	UINT	
APP_LASTFAILEDTRANS	(Parent:)	672	160	STRING	



AUTOSUSPEND_ENFLAG	(Parent:)	832	32	UINT
AUTOSUSPEND_LOWFREEMARK	(Parent:)	864	32	UINT
COND_POSACKNUM	(Parent:)	896	8	UINT
COND_FILESTOREREJNUM	(Parent:)	904	8	UINT
COND_FILECHECKSUMNUM	(Parent:)	912	8	UINT
COND_FILESIZENUM	(Parent:)	920	8	UINT
COND_NAKLIMITNUM	(Parent:)	928	8	UINT
COND_INACTIVENUM	(Parent:)	936	8	UINT
COND_SUSPENDNUM	(Parent:)	944	8	UINT
COND_CANCELNUM	(Parent:)	952	8	UINT
ENG_FLIGHTEENGINEENTITYID	(Parent:)	960	128	STRING
ENG_FLAGS	(Parent:)	1088	32	UINT
ENG_MACHINESALLOCATED	(Parent:)	1120	32	UINT
ENG_MACHINESDEALLOCATED	(Parent:)	1152	32	UINT
ENG_SPARE	Array Bit Size: 24	1184	8	UINT
UP_METACOUNT	(Parent:)	1208	32	UINT
UP_UPLINKACTIVEQFILECNT	(Parent:)	1240	32	UINT
UP_SUCCESSCOUNTER	(Parent:)	1272	32	UINT
UP_FAILEDCOUNTER	(Parent:)	1304	32	UINT
UP_LASTFILEUPLINKED	(Parent:)	1336	512	STRING
CHAN	Array Bit Size: 832	1848	416	UINT

CFS CF_TRANSPACKET

CF Application Single Transaction Status Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2225	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
ENG_TRANSLEN	(Parent:)	96	8	UINT	
ENG_TRANSVAL	(Parent:)	104	8	UINT	
ENG_NAKS	(Parent:)	112	8	UINT	
ENG_PARTLEN	(Parent:)	120	8	UINT	
ENG_PARTVAL	(Parent:)	128	8	UINT	
ENG_PHASE	(Parent:)	136	8	UINT	



ENG_SPARE1	(Parent:)	144	8	UINT
ENG_SPARE2	(Parent:)	152	8	UINT
ENG_FLAGS	(Parent:)	160	32	UINT
ENG_TRANSNUM	(Parent:)	192	32	UINT
ENG_ATTEMPTS	(Parent:)	224	32	UINT
ENG_CONDCODE	(Parent:)	256	32	UINT
ENG_DELICODE	(Parent:)	288	32	UINT
ENG_FDOFFSET	(Parent:)	320	32	UINT
ENG_FDLENGTH	(Parent:)	352	32	UINT
ENG_CHECKSUM	(Parent:)	384	32	UINT
ENG_FINALSTAT	(Parent:)	416	32	UINT
ENG_FILESIZE	(Parent:)	448	32	UINT
ENG_RCVDFILESIZE	(Parent:)	480	32	UINT
ENG_ROLE	(Parent:)	512	32	UINT
ENG_STATE	(Parent:)	544	32	UINT
ENG_STARTTIME	(Parent:)	576	32	UINT
ENG_SRCFILE	(Parent:)	608	512	STRING
ENG_DSTFILE	(Parent:)	1120	512	STRING
ENG_TMPFILE	(Parent:)	1632	512	STRING
APP_STATUS	(Parent:)	2144	32	UINT
APP_CONDCODE	(Parent:)	2176	32	UINT
APP_PRIORITY	(Parent:)	2208	32	UINT
APP_CLASS	(Parent:)	2240	32	UINT
APP_CHANNUM	(Parent:)	2272	32	UINT
APP_SOURCE	(Parent:)	2304	32	UINT
APP_NODETYPE	(Parent:)	2336	32	UINT
APP_TRANSNUM	(Parent:)	2368	32	UINT
APP_SRCCENTITYID	(Parent:)	2400	128	STRING
APP_SRCFILE	(Parent:)	2528	512	STRING
APP_DSTFILE	(Parent:)	3040	512	STRING

CFS CS_HKPACKET

Housekeeping Packet Structure

Item Name	Description	Bit Offset	Bit Size	Data Type	Units	Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED		%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED		
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED		
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2212	0	16	UINT		
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT		
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT		
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT		
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT		



CMDCOUNTER	CS Application Command Counter.	96	8	UINT
CMDERRCOUNTER	CS Application Command Error Counter.	104	8	UINT
CHECKSUMSTATE	CS Application global checksum state.	112	8	UINT
EEPROMCSSTATE	CS Eeprom table checksum stat e.	120	8	UINT
MEMORYCSSTATE	CS Memory table checksum state.	128	8	UINT
APPCSSTATE	CS App table checksum state.	136	8	UINT
TABLESCSSTATE	CS Tables table checksum stat e.	144	8	UINT
OSCSSTATE	OS code segment checksum state.	152	8	UINT
CFECORECSSTATE	cFE Core code segment checksum stat e	160	8	UINT
RECOMPUTEINPROGRESS	CS 'Recompute In Progress' flag.	168	8	UINT
ONESHOTINPROGRESS	CS 'OneShot In Progress' flag.	176	8	UINT
FILLER8	8 bit padding	184	8	UINT
EEPROMCSERRCOUNTER	Eeprom miscompare counte r.	192	16	UINT
MEMORYCSERRCOUNTER	Memory miscompare counter.	208	16	UINT
APPCSERRCOUNTER	App miscompare counter.	224	16	UINT
TABLESCSERRCOUNTER	Tables miscompare counter.	240	16	UINT
CFECORECSERRCOUNTER	cFE core miscompare counter	256	16	UINT
OSCSERRCOUNTER	OS code segment miscopmare counter.	272	16	UINT
CURRENTCSTABLE	Current table being checksummed.	288	16	UINT
CURRENTENTRYINTABLE	Current entry ID in the table being checksummed.	304	16	UINT
EEPROMBASELINE	Baseline checksum for all of Eeprom.	320	32	UINT
OSBASELINE	Baseline checksum for the OS code segment.	352	32	UINT
CFECOREBASELINE	Baseline checksum for the cFE core.	384	32	UINT
LASTONESHOTADDRESS	Address used in last one shot checksum command.	416	32	UINT
LASTONESHOTSIZE	Size used in the last one shot checksum command.	448	32	UINT
LASTONESHOTMAXBYTESPERCYCLE	Max bytes per cycle for last one shot checksum command.	480	32	UINT
LASTONESHOTCHECKSUM	Checksum of the last one shot checksum command.	512	32	UINT
PASSCOUNTER	Number of times CS has passed through all of its tables.	544	32	UINT

CFS DS_FILEINFOPKT

DS application file info packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2233	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	



CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT
FILEINFO	Current state of destination files. Array Bit Size: 2688	96	168	UINT

CFS DS_HKPACKET

DS application housekeeping packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2232	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
CMDACCEPTEDCOUNTER	Count of valid commands received.	96	8	UINT	
CMDREJECTEDCOUNTER	Count of invalid commands received.	104	8	UINT	
DESTTBLOADCOUNTER	Count of destination file table loads.	112	8	UINT	
DESTTBERRCOUNTER	Count of failed attempts to get table data pointer.	120	8	UINT	
FILTERTBLOADCOUNTER	Count of packet filter table loads.	128	8	UINT	
FILTERTBERRCOUNTER	Count of failed attempts to get table data pointer.	136	8	UINT	
APPENABLESTATE	Application enable/disable state.	144	8	UINT	
SPARE8	Structure alignment padding.	152	8	UINT	
FILEWRITECOUNTER	Count of good destination file writes.	160	16	UINT	
FILEWRITERRCOUNTER	Count of bad destination file writes.	176	16	UINT	
FILEUPDATECOUNTER	Count of good updates to secondary header.	192	16	UINT	
FILEUPDATEERRCOUNTER	Count of bad updates to secondary header.	208	16	UINT	
DISABLEDPKT COUNTER	Count of packets discarded (DS was disabled).	224	32	UINT	
IGNOREDPKT COUNTER	Count of packets discarded. Incoming packets will be discarded when:.	256	32	UINT	
FILTEREDPKTCOUNTER	Count of packets discarded (failed filter test).	288	32	UINT	
PASSEDPKT COUNTER	Count of packets that passed filter test.	320	32	UINT	
FILTERTBLFILENAME	Name of filter table file.	352	512	STRING	

CFS FM_DIRLISTPKT

Get Directory Listing telemetry packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
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RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2188	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
DIRNAME	Directory Name.	96	512	STRING	
TOTALFILES	Number of files in the directory.	608	32	UINT	
PACKETFILES	Number of files in this packet.	640	32	UINT	
FIRSTFILE	Index into directory files of first packet file.	672	32	UINT	
FILELIST	Directory listing file data. Array Bit Size: 2080	704	104	UINT	

CFS FM_FILEINFOPKT

Get File Info telemetry packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2187	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
FILESTATUS	Status indicating whether the file is open or closed.	96	8	UINT	
SPARE	Structure padding. Array Bit Size: 16	104	8	UINT	
CRC	CRC value if computed.	120	32	UINT	



FILESIZE	File Size.	152	32	UINT
LASTMODIFIEDTIME	Last Modification Time of File.	184	32	UINT
MODE	Mode of the file (Permissions).	216	32	UINT
FILENAME	Name of File.	248	512	STRING

CFS FM_FREESPACEPKT

Get Free Space telemetry packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2190	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
FILESYS	Array of file system free space entries. Array Bit Size: 576	96	72	UINT	

CFS FM_HOUSEKEEPINGPKT

Housekeeping telemetry packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2186	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header	80	16	UINT	



CCSDS_SUBSECS	(subseconds)	00	10	UINT
COMMANDCOUNTER	Application command counter.	96	8	UINT
COMMANDERRCOUNTER	Application command error counter.	104	8	UINT
SPARE	Placeholder for unused command warning counter.	112	8	UINT
NUMOPENFILES	Number of open files in the system.	120	8	UINT
CHILDCMDCOUNTER	Child task command counter.	128	8	UINT
CHILDCMDERRCOUNTER	Child task command error counter.	136	8	UINT
CHILDCMDWARNCOUNTER	Child task command warning counter.	144	8	UINT
CHILDQUEUECOUNT	Number of pending commands in queue.	152	8	UINT
CHILDCURRENTCC	Command code currently executing.	160	8	UINT
CHILDPREVIOUSCC	Command code previously executed.	168	8	UINT

CFS FM_OPENFILESPKT

Get Open Files telemetry packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2189	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
NUMOPENFILES	Number of files opened via cFE.	96	32	UINT	
OPENFILESLIST	List of files opened via cFE. Array Bit Size: 800	128	16	UINT	

CFS HK_HKPACKET

HK Application housekeeping Packet

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	



RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2203	0	16	UINT
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT
CMDCOUNTER	Count of valid commands received.	96	8	UINT
ERRCOUNTER	Count of invalid commands received.	104	8	UINT
PADDING	Padding to force 32 bit alignment.	112	16	UINT
COMBINEDPACKETSSENT	Count of combined tlm pkts sent.	128	16	UINT
MISSINGDATACTR	Number of times missing data was detected.	144	16	UINT
MEMPOOLHANDLE	Memory pool handle used to get mempool diags.	160	32	UINT

CFS HS_HKPACKET

Housekeeping Packet Structure

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2221	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
CMDCOUNT	HS Application Command Counter.	96	8	UINT	
CMDERRCOUNT	HS Application Command Error Counter.	104	8	UINT	
CURRENTAPPMONSTATE	Status of HS Application Monitor.	112	8	UINT	
CURRENTEVENTMONSTATE	Status of HS Event Monitor.	120	8	UINT	
CURRENTALIVENESSSTATE	Status of HS Aliveness Indicator.	128	8	UINT	
CURRENTCPUHOGSTATE	Status of HS Hogging Indicator.	136	8	UINT	
STATUSFLAGS	Internal HS Error States.	144	8	UINT	
SPAREBYTES	Alignment Spares.	152	8	UINT	
RESETSPERFORMED	HS Performed Processor Reset Count.	160	16	UINT	
MAXRESETS	HS Maximum Processor Reset Count.	176	16	UINT	
EVENTSMONITOREDCOUNT	Total count of Event Messages Monitored by the Events Monitor.	192	32	UINT	
INVALIDEVENTMONCOUNT	Total count of Invalid Event Monitors Monitored by the Events Monitor.	224	32	UINT	



APPMONENABLES	Enable states of App Monitor Entries. Array Bit Size: 64	256	32	UINT
MSGACTEXEC	Number of Software Bus Message Actions Executed.	320	32	UINT
UTILCPUAVG	Current CPU Utilization Average.	352	32	UINT
UTILCPUPEAK	Current CPU Utilization Peak.	384	32	UINT

CFS LC_HKPACKET

Housekeeping Packet Structure

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2215	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
CMDCOUNT	LC Application Command Counter.	96	8	UINT	
CMDERRCOUNT	LC Application Command Error Counter.	104	8	UINT	
CURRENTLCSTATE	Current LC application operating state.	112	8	UINT	
PAD8		120	8	UINT	
WPRESULTS	Packed watchpoint results data, 2 bits per watchpoint. Array Bit Size: 384	128	8	UINT	
APRESULTS	Packed actionpoint results data, 4 bits per actionpoint. Array Bit Size: 736	512	8	UINT	
PASSIVERTSEXECOUNT	Total count of RTS sequences not initiated because the LC state is set to LC_STATE_PASSIVE.	1248	16	UINT	
WPSINUSE	How many watchpoints are currently in effect.	1264	16	UINT	
ACTIVEAPS	How many actionpoints are currently active.	1280	16	UINT	
PAD16		1296	16	UINT	
APSAMPLECOUNT	Total count of Actionpoints sampled.	1312	32	UINT	
MONITOREDMSGCOUNT	Total count of messages monitored for watchpoints.	1344	32	UINT	
RTSEXECCOUNT	Total count of RTS sequences initiated.	1376	32	UINT	

CFS MD_DWELLPKT



Memory Dwell Telemetry Packet format

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2193	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
TABLEID	TableId from 1 to MD_NUM_DWELL_TABLES.	96	8	UINT	
ADDRCOUNT	Number of addresses being sent - 1..MD_DWELL_TABLE_SIZE valid.	104	8	UINT	
BYTECOUNT	Number of bytes of dwell data contained in packet.	112	16	UINT	
RATE	Number of counts between packet sends. Dwell data (number of bytes varies up to MD_DWELL_TABLE_SIZE *4).	128	32	UINT	
DATA	Array Bit Size: 800	160	8	UINT	

CFS MD_HKTLML

Memory Dwell HK Telemetry format

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2192	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	



INVALIDCMDCNTR	Count of invalid commands received.	96	8	UINT
VALIDCMDCNTR	Count of valid commands received.	104	8	UINT
DWELLENABLEDMASK	Each bit in bit mask enables a table 0x0001=TBL1 enable bit,0x0002=TBL2 enable bit, 0x0004=TBL3 enable bit,0x0008=TBL4 enable bit, etc.	112	16	UINT
DWELLTBLADDRCOUNT	Number of dwell addresses in table. Array Bit Size: 64	128	16	UINT
NUMWAITSPERPKT	Number of delay counts in table. Array Bit Size: 64	192	16	UINT
BYTECOUNT	Number of bytes of data specified by table. Array Bit Size: 64	256	16	UINT
DWELLPKTOFFSET	Current write offset within dwell pkt data region. Array Bit Size: 64	320	16	UINT
DWELLTBLENTRY	Next dwell table entry to be processed. Array Bit Size: 64	384	16	UINT
COUNTDOWN	Current value of countdown timer. Array Bit Size: 64	448	16	UINT

CFS MM_HKPACKET

Housekeeping Packet Structure

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2183	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
CMDCOUNTER	MM Application Command Counter.	96	8	UINT	
ERRCOUNTER	MM Application Command Error Counter.	104	8	UINT	
LASTACTION	Last command action executed.	112	8	UINT	
MEMTYPE	Memory type for last command.	120	8	UINT	
ADDRESS	Fully resolved address used for last command.	128	32	UINT	
DATAVALUE	Last command data value -- may be fill pattern or peek/poke value.	160	32	UINT	
BYTESPROCESSED	Bytes processed for last command.	192	32	UINT	
FILE_NAME	Name of the data file used for last command,	224	512	STRING	



TELEMAVIC

where applicable.

224 312 STRING

CFS SCH_DIAGPACKET

Scheduler Diagnostic Telemetry format

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2200	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
ENTRYSTATES	States of each Schedule Entry. Array Bit Size: 1024	96	16	UINT	
MSGIDS	Message ID of msg associated with each entry. Array Bit Size: 8000	1120	16	UINT	

CFS SCH_HKPACKET

Scheduler HK Telemetry format

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2199	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	



CMDCOUNTER	Command Counter.	96	8	UINT
ERRCOUNTER	Command Error Counter.	104	8	UINT
SYNCTOMET	Status indicating whether slots are synched to MET.	112	8	UINT
MAJORFRAMESOURCE	Major Frame Signal source identifier.	120	8	UINT
SCHEDULEACTIVITYSUCCESSCOUNT	Number of successfully performed activities.	128	32	UINT
SCHEDULEACTIVITYFAILURECOUNT	Number of unsuccessful activities attempted.	160	32	UINT
SLOTPROCESSEDCOUNT	Total # of Schedule Slots (Minor Frames) Processed.	192	32	UINT
SKIPPEDSLOTSCOUNT	Number of times that slots were skipped.	224	16	UINT
MULTIPLESLOTSCOUNT	Number of times that multiple slots processed.	240	16	UINT
SAMESLOTCOUNT	# of times SCH woke up in the same slot as last time	256	16	UINT
BADTABLEDATACOUNT	# of times corrupted table entries were processed	272	16	UINT
TABLEVERIFYSUCCESSCOUNT	# of times table loads successfully verified	288	16	UINT
TABLEVERIFYFAILURECOUNT	# of times table loads unsuccessfully verified	304	16	UINT
TABLEPASSCOUNT	# of times Schedule Table has been processed	320	32	UINT
VALIDMAJORFRAMECOUNT	# of valid Major Frame tones received	352	32	UINT
MISSEDMAJORFRAMECOUNT	# of missing Major Frame tones	384	32	UINT
UNEXPECTEDMAJORFRAMECOUNT	# of unexpected Major Frame tones	416	32	UINT
MINORFRAMESINCETONE	# of Minor Frames since last Major Frame tone	448	16	UINT
NEXTSLOTNUMBER	Next Minor Frame to be processed.	464	16	UINT
LASTSYNCMETSLOT	Slot number where Time Sync last occurred.	480	16	UINT
IGNOREMAJORFRAME	Major Frame too noisy to trust.	496	8	UINT
UNEXPECTEDMAJORFRAME	Most Recent Major Frame signal was unexpected.	504	8	UINT

CFS SC_HKTLM

Housekeeping Packet Structure

Item Name	Description	Bit Offset	Bit Size	Data Type	Units Format
RECEIVED_TIMESECONDS	COSMOS Received Time (UTC, Floating point, Unix epoch) Read Conversion: ReceivedTimeSecondsConversion	0	0	DERIVED	%0.6f
RECEIVED_TIMEFORMATTED	COSMOS Received Time (Local time zone, Formatted string) Read Conversion: ReceivedTimeFormattedConversion	0	0	DERIVED	
RECEIVED_COUNT	COSMOS packet received count Read Conversion: ReceivedCountConversion	0	0	DERIVED	
CCSDS_STREAMID	CCSDS Packet Identification Id Value: 2218	0	16	UINT	
CCSDS_SEQUENCE	CCSDS Packet Sequence Control	16	16	UINT	
CCSDS_LENGTH	CCSDS Packet Data Length	32	16	UINT	
CCSDS_SECONDS	CCSDS Telemetry Secondary Header (seconds)	48	32	UINT	
CCSDS_SUBSECS	CCSDS Telemetry Secondary Header (subseconds)	80	16	UINT	
ATSNUMBER	current ATS number 1 = ATS A, 2 = ATS B	96	8	UINT	
ATPSTATE	current ATP state valid values are: 2 = IDLE, 5 = EXECUTING In the event of ATS execution failure (ats command fails checksum), the ATS execution	104	8	UINT	
CONTINUATEONFAILURE		112	8	UINT	



CONTINUATION OF TABLE 1					
	will continue if this flag is set to TRUE and will stop if this flag is set to FALSE.	112	8	UINT	
CMDERRCTR	Counts Request Errors.	120	8	UINT	
CMDCTR	Counts Ground Requests.	128	8	UINT	
PADDING8		136	8	UINT	
SWITCHPENDFLAG	is an ats switch pending? 0 = NO, 1 = YES This means that the ATS switch is waiting until a safe time	144	16	UINT	
NUMRTSACTIVE	number of RTSs currently active	160	16	UINT	
RTSNRNUMBER	next RTS number	176	16	UINT	
RTSACTIVECTR	Increments when an RTS is started without error.	192	16	UINT	
RTSACTIVEERRCTR	Increments when an attempt to start an RTS fails.	208	16	UINT	
ATSCMDCTR	Total ATS cmd cnter counts commands sent by the ATS.	224	16	UINT	
ATSCMDERRCTR	Total ATS cmd Error ctr command errors in the ATS.	240	16	UINT	
RTSCMDCTR	Counts TOTAL rts cmds that were sent out from ALL active RTSs.	256	16	UINT	
RTSCMDERRCTR	Counts TOTAL number of errs from ALL RTSs that are active.	272	16	UINT	
LASTATSERRSEQ	Last ATS Errant Sequence Num Values: 1 or 2.	288	16	UINT	
LASTATSERRCMD	Last ATS Errant Command Num.	304	16	UINT	
LASTRTSERRSEQ	Last RTS Errant Sequence Num.	320	16	UINT	
LASTRTSERRCMD	The OFFSET in the RTS buffer of the command that had an error It will be a WORD value i.e. 1st command had an error, this value would be 0, if the 2nd command started at int8 10 in the buffer, this value would be 5.	336	16	UINT	
APPENDCMDARG	ATS selection argument from most recent Append ATS command.	352	16	UINT	
APPENDENTRYCOUNT	Number of cmd entries in current Append ATS table.	368	16	UINT	
APPENDBYTECOUNT	Size of cmd entries in current Append ATS table.	384	16	UINT	
APPENDLOADCOUNT	Total number of Append ATS table loads.	400	16	UINT	
ATPCMDNUMBER	current command number	416	32	UINT	
ATPFREEBYTES	Free Bytes in each ATS.	448	32	UINT	
NEXTRTSTIME	Array Bit Size: 64	512	32	UINT	
NEXTATSTIME	next RTS cmd Absolute Time	544	32	UINT	
	Next ATS Command Time (seconds).				
RTSEXECUTINGSTATUS	RTS executing status bit map where each uint16 represents 16 RTS numbers. Note: array index numbers and bit numbers use base zero indexing, but RTS numbers use base one indexing. Thus, the LSB (bit zero) of uint16 array index zero represents RTS number 1, and bit one of uint16 array index zero represents RTS number 2, etc. If an RTS is IDLE, then the corresponding bit is zero. If an RTS is EXECUTING, then the corresponding bit is one.	576	16	UINT	
	Array Bit Size: 80				
RTSDISABLEDSTATUS	RTS disabled status bit map where each uint16 represents 16 RTS numbers. Note: array index numbers and bit numbers use base zero indexing, but RTS numbers use base one indexing. Thus, the LSB (bit zero) of uint16 array index zero represents RTS number 1, and bit one of uint16 array index zero represents RTS number 2, etc. If an RTS is ENABLED, then the corresponding bit	656	16	UINT	



is zero. If an RTS is DISABLED, then the corresponding bit is one.

Array Bit Size: 80
