

Update CDMU SSMM COCOS Registers ground image from memory dump
File: H_FCP_OBS_1651.xls
Author: lstefanov-hp



Procedure Summary

Objectives

This Herschel OBSM nominal procedure is used to conduct the dump of the readable CDMU SSMM COCOS Registers. The procedure covers both CDMU SSMM COCOS A and B.

The CDMU SSMM COCOS Registers dump is commanded using TC(8,4,2,2) and the register contents is received on ground in TM(8,9,2,2) packets.

To be noted that for both register read and write activities, the access has to be done at Word level (32-bit access), with 32-bit address alignment.

The procedure uses a MOIS generated command sequence and not a command stack generated by OBSM.

Summary of Constraints

CDMU in Operational Mode

- MM Bank corresponding to POS 0 ON

- Only one 32-bit register may be accessed per dump command
- All transfers must be 32-bit transfers (N must be a multiple of 4)
- All transfers must 32-bit aligned

TCs(8,4,2,1/2) will fail if there is, on the same MM board, an ongoing:

- TC(8,4,2,3) Check Mass Memory;
- TC(8,4,2,4) Map Mass Memory;
- TC(8,4,2,5) Turn Bank ON/OFF;
- TC(8,4,2,6) Initialise Mass Memory.

Moreover TCs(8,4,2,1/2) will be delayed when there is an ongoing:

- TC(8,4,1,1) Copy Memory;
- TC(8,4,2,1) Load Mass Memory;
- TC(8,4,2,2) Dump Mass Memory.

Spacecraft Configuration

Start of Procedure

- CDMU in operational mode
- MM Bank corresponding to POS 0 ON

End of Procedure

- Same as start, except:
- CDMU SSMM COCOS Registers dump executed

Reference File(s)

Input Command Sequences

Output Command Sequences

- OFCP165E
- OFCP165G

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Referenced Displays

ANDs **GRDs** **SLDs**
 ZAZ2Z999
 ZAD2Z999

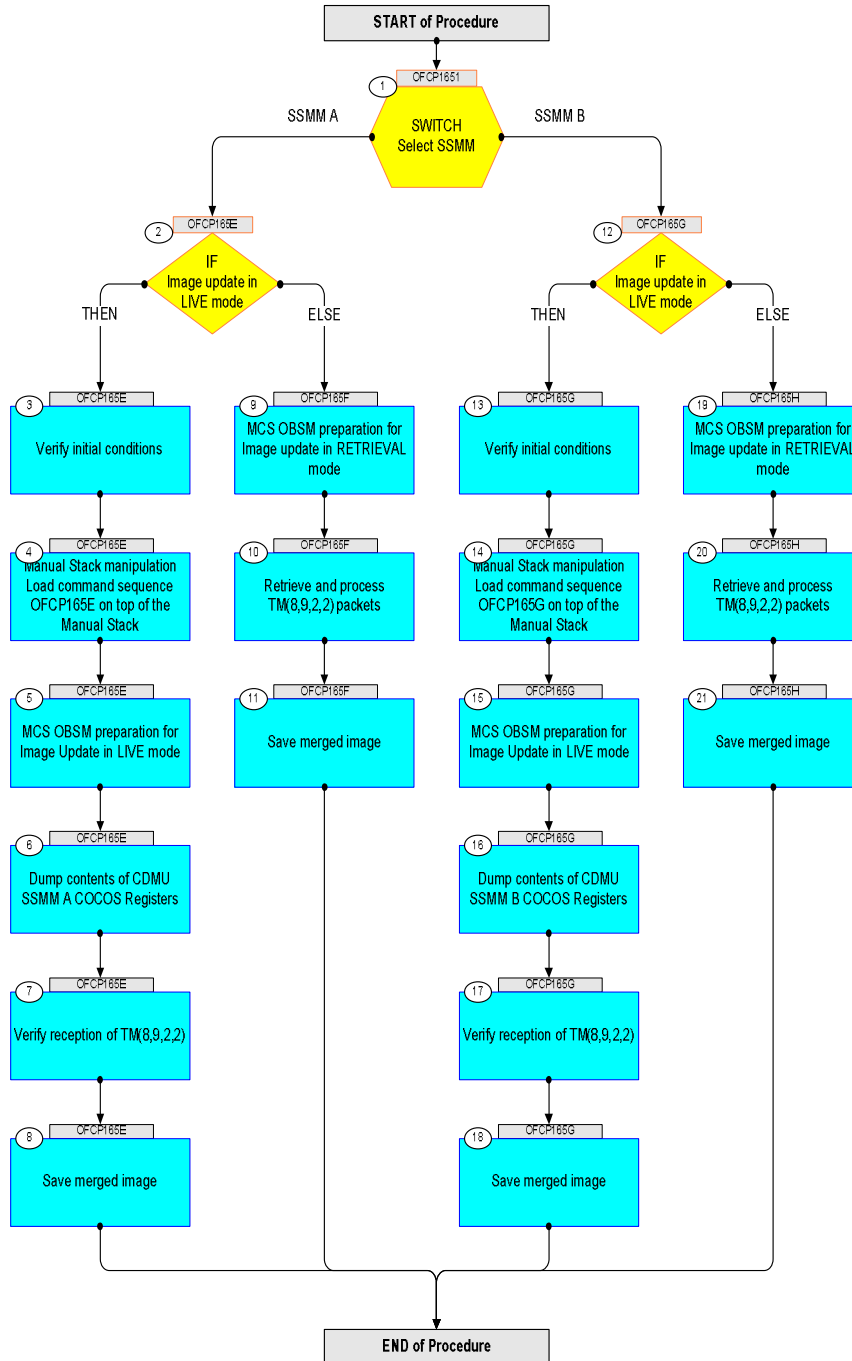
Configuration Control Information


DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
13/01/09	2	1	Created	lstefanov-hp	
30/03/09		2	1. steps 3.2, 7, 13.2 and 17 updated in line with DB for CDMS OBS v.3.8.2	lstefanov-hp	
10/04/09	2.3	3	1. removed 'Manual Dispatch' on all commands except the first one in each sequence	lstefanov-hp	

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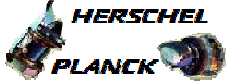

Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
Beginning of Procedure					
OFCP1651		TC Seq. Name : OFCP1651 (SSMM CocosReg Dmp) CDMU SSMM COCOS Registers Gnd image update via memory dump TimeTag Type: Sub Schedule ID: <input type="checkbox"/>			
1		SWITCH Select SSMM type: [Switch]		Next Step: SSMM A 2 SSMM B 12	
End of Sequence					
OFCP165E		TC Seq. Name : OFCP165E (SSMM CocosReg Dmp E) CDMU SSMM A COCOS Registers Gnd image update in LIVE mode TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>			
2		IF Image update in LIVE mode type: [If]		Next Step: THEN 3 ELSE 9	
3		Verify initial conditions		Next Step: 4	
		Check: - CDMU in Operational Mode - MM A/B banks power status - NO TC(8,4,2,3), TC(8,4,2,4), TC(8,4,2,5) or TC(8,4,2,6) ongoing Data Handling SOE to confirm CDMU mode			
3.1		Check: - MM A/B banks power status			
		Note: Following TM checks assume all MM A and B banks are ON			
		Verify Telemetry PWR_Sts_BankA0 DEECG160 = ON AND=ZAZ2Z999			
		Verify Telemetry PWR_Sts_BankA1 DEECH160 = ON AND=ZAZ2Z999			
		Verify Telemetry PWR_Sts_BankA2 DEECZ160 = ON AND=ZAZ2Z999			
		Verify Telemetry PWR_Sts_BankA3 DEECJ160 = ON AND=ZAZ2Z999			
		Verify Telemetry PWR_Sts_BankB0 DEECK160 = ON AND=ZAZ2Z999			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Verify Telemetry PWR_Sts_BankB1 DEECL160	= ON	AND=ZAZ2Z999	
		Verify Telemetry PWR_Sts_BankB2 DEECM160	= ON	AND=ZAZ2Z999	
		Verify Telemetry PWR_Sts_BankB3 DEECN160	= ON	AND=ZAZ2Z999	
3.2		Check: - NO TC(8,4,2,3), TC(8,4,2,4), TC(8,4,2,5)or TC(8,4,2,6) ongoing			
		Verify Telemetry TC_8-4-2-3_x DEE0J161	= FALSE	AND=ZAD2Z999	
		Verify Telemetry TC_8-4-2-4_x DEE0K161	= FALSE	AND=ZAD2Z999	
		Verify Telemetry TC_8-4-2-5_x DEE0L161	= FALSE	AND=ZAD2Z999	
		Verify Telemetry TC_8-4-2-6_x DEE0M161	= FALSE	AND=ZAD2Z999	
4		Manual Stack manipulation Load command sequence OFCP165E on top of the Manual Stack		Next Step: 5	
4.1		Sequence data FP: N/A TT: N/A			
5		MCS OBSM preparation for Image Update in LIVE mode		Next Step: 6	
		Note: It is assumed that the OBSM application is already running and the OBSM Desktop is displayed on the MCS client. Starting the OBSM application is not covered by the current procedure.			
5.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the OBSM Desktop . From the Image menu, select Update . The 'Image Catalog' window opens.			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
6.2		CPU Interface (CpuIf) Module			
		CpuIf Configuration Register [CpuIf_CR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		CpuIf Interrupt Configuration Register 0 [CpuIf_ICR0]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		CpuIf Interrupt Configuration Register 1 [CpuIf_ICR1]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		CpuIf Interrupt Configuration Register 2 [CpuIf_ICR2]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
6.3		Interrupt Controller (IC) Module			
		IC I/O Configuration Register [IC_IOCR]:			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PWT Clock Configuration Register [PWTA_CLK]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PWT Packet Delay Configuration Register [PWTA_DELAY]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
6.6		Packet Wire Transmitter B (PWT B) Module			
		PWT Output Configuration Register [PWTB_OUT]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PWT Clock Configuration Register [PWTB_CLK]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PWT Packet Delay Configuration Register [PWTB_DELAY]:			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
6.7		PI Bus Master (PIM A) Module			
		PIM Status Register [PIM_SR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Munit Parameter Register (Bank0) [PIM_MPR(Bank0)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Munit Parameter Register (Bank1) [PIM_MPR(Bank1)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Munit Parameter Register (Bank2) [PIM_MPR(Bank2)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Munit Parameter Register (Bank3) [PIM_MPR(Bank3)]:			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address Low (Bank3) [PIM_MAL(Bank3)]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address High (Bank3) [PIM_MAH(Bank3)]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM SDRAM Mode Register [PIM_SDM]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM SDRAM Refresh Rate Register [PIM_SDRR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM SDRAM Configuration Register [PIM_SDC]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM SDRAM Scrubbing Configuration Register [PIM_ScuCNFR]:			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Configuration Register [PIM_CR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
6.8		SpaceWire A (SPW A) Module			
		SPW Configuration Register [SPWA_CR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		SPW SSEPPL Configuration Register [SPWA_SCR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		SPW Status Register [SPWA_SR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		SPW SSEPPL Status Register [SPWA_SSR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
6.9		SpaceWire B (SPW B) Module			
		SPW Configuration Register [SPWB_CR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		SPW SSEPPL Configuration Register [SPWB_SCR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		SPW Status Register [SPWB_SR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		SPW SSEPPL Status Register [SPWB_SSR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
7		Verify reception of TM(8,9,2,2)		Next Step: 8	
		Note: A TM(8,9,2,2) packet will be received for each mass memory dump command uplinked.			
		Verify Packet Reception Mass Memory Dump Packet Mnemonic : MassMemDmp APID : 16 Type : 8 Subtype : 9 PI1 : PI2 :			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
7.1		Check OBSM dump packet processing			
		Check that the OBSM is processing the incoming memory dump packets.			
8		Save merged image		Next Step: END	
		Save merged image with current ID .			
End of Sequence					
OFCP165F <i>TC Seq. Name :OFCP165F (SSMMA CocosReg Dmp F)</i> CDMU SSMM A COCOS Registers Gnd image update in Retrieval mode <i>TimeTag Type:</i> <i>Sub Schedule ID:</i> <input type="checkbox"/>					
9		MCS OBSM preparation for Image update in RETRIEVAL mode		Next Step: 10	
		Note: It is assumed that the OBSM application is already running and the OBSM Desktop is displayed on the MCS client. Starting the OBSM application is not covered by the current procedure.			
9.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the OBSM Desktop . From the Image menu, select Update . The 'Image Catalog' window opens.			
9.2		Select image to be updated			
		Select the image to be updated for the memory device SSMMA . The 'Image UPDATE' window opens.			
9.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons.			

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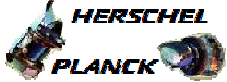

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
10		Retrieve and process TM(8,9,2,2) packets		Next Step: 11	
		Use the STEP button to retrieve and process the TM(8,9,2,2) packets, packet by packet and starting from the time shown in the packet time field.			
		OR			
		Use the PLAY button to retrieve and process the TM(8,9,2,2) packets in automated mode. Pressing the PLAY button, the display will start to retrieve and process packets, starting from the time shown in the packet time field. This processing will stop automatically when a packet is received which creation time is greater than the one contained in the end time field.			
11		Save merged image		Next Step: END	
		Save merged image with new ID .			
End of Sequence					
	OFCP165G	TC Seq. Name : OFCP165G (SSMMB CocosReg Dmp G) CDMU SSMM B COCOS Registers Gnd image update in LIVE mode TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>			
12		IF Image update in LIVE mode type: [If]		Next Step: THEN 13 ELSE 19	
13		Verify initial conditions		Next Step: 14	
		Check: - CDMU in Operational Mode - MM A/B banks power status - NO TC(8,4,2,3), TC(8,4,2,4), TC(8,4,2,5) or TC(8,4,2,6) ongoing			
		Data Handling SOE to confirm CDMU mode			
13.1		Check: - MM A/B banks power status			
		Note: Following TM checks assume all MM A and B banks are ON			
		Verify Telemetry PWR_Sts_BankA0 DEECG160 = ON		AND=ZAZ2Z999	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Verify Telemetry PWR_Sts_BankA1 DEECH160	= ON	AND=ZAZ2Z999	
		Verify Telemetry PWR_Sts_BankA2 DEECZ160	= ON	AND=ZAZ2Z999	
		Verify Telemetry PWR_Sts_BankA3 DEECJ160	= ON	AND=ZAZ2Z999	
		Verify Telemetry PWR_Sts_BankB0 DEECK160	= ON	AND=ZAZ2Z999	
		Verify Telemetry PWR_Sts_BankB1 DEECL160	= ON	AND=ZAZ2Z999	
		Verify Telemetry PWR_Sts_BankB2 DEECM160	= ON	AND=ZAZ2Z999	
		Verify Telemetry PWR_Sts_BankB3 DEECN160	= ON	AND=ZAZ2Z999	
13.2		Check: - NO TC(8,4,2,3), TC(8,4,2,4), TC(8,4,2,5)or TC(8,4,2,6) ongoing			
		Verify Telemetry TC_8-4-2-3_x DEE0J161	= FALSE	AND=ZAD22999	
		Verify Telemetry TC_8-4-2-4_x DEE0K161	= FALSE	AND=ZAD22999	
		Verify Telemetry TC_8-4-2-5_x DEE0L161	= FALSE	AND=ZAD22999	
		Verify Telemetry TC_8-4-2-6_x DEE0M161	= FALSE	AND=ZAD22999	
14		Manual Stack manipulation Load command sequence OFCP165G on top of the Manual Stack		Next Step: 15	
14.1		Sequence data FP: N/A TT: N/A			
15		MCS OBSM preparation for Image Update in LIVE mode		Next Step: 16	
		Note: It is assumed that the OBSM application is already running and the OBSM Desktop is displayed on the MCS client. Starting the OBSM application is not covered by the current procedure.			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
15.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the <i>OBSM Desktop</i> . From the Image menu, select Update . The 'Image Catalog' window opens.			
15.2		Select image to be updated			
		Select the image to be updated for the memory device SSMMB . The 'Image UPDATE' window opens.			
15.3		Start dump TM processing			
		In LIVE mode, processing of incoming real-time telemetry starts automatically after the image selection.			
16		Dump contents of CDMU SSMM B COCOS Registers		Next Step: 17	
		Uplink the DC802160 memory dump commands with ARM-GO			
		Note: The commands have Delta Release time. All TCs will be dispatched by ARM-GO .			
		Note: A TM(8,9,2,2) packet will be received for each memory dump command uplinked.			
		Verify Packet Reception Mass Memory Dump Packet Mnemonic : MassMemDmp APID : 16 Type : 8 Subtype : 9 PI1 : PI2 :			
16.1		Alarm Signal Generator (ASG) Module			
		ASG Alarm Mask Register [ASG_AMR]:			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
16.3		Interrupt Controller (IC) Module			
		IC I/O Configuration Register [IC_IOCRR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		IC I/O Status Register [IC_IOSRR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		IC Output Register [IC_OR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
16.4		1553 Interface A (M1553A) Module			
		M1553 Configuration Register [M5A_Conf]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		M1553 Status Register [M5A_Stat]:			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
16.5		Packet Wire Transmitter A (PWT A) Module			
		PWT Output Configuration Register [PWT_A_OUT]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PWT Clock Configuration Register [PWT_A_CLK]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PWT Packet Delay Configuration Register [PWT_A_DELAY]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
16.6		Packet Wire Transmitter B (PWT B) Module			
		PWT Output Configuration Register [PWT_B_OUT]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PWT Clock Configuration Register [PWT_B_CLK]:			

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	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PWT Packet Delay Configuration Register [PWTB_DELAY]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
16.7		PI Bus Master (PIM A) Module			
		PIM Status Register [PIM_SR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Munit Parameter Register (Bank0) [PIM_MPR(Bank0)]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Munit Parameter Register (Bank1) [PIM_MPR(Bank1)]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Munit Parameter Register (Bank2) [PIM_MPR(Bank2)]:			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Parameter Register (Bank3) [PIM_MPR(Bank3)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address Low (Bank0) [PIM_MAL(Bank0)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address High (Bank0) [PIM_MAH(Bank0)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address Low (Bank1) [PIM_MAL(Bank1)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address High (Bank1) [PIM_MAH(Bank1)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address Low (Bank2) [PIM_MAL(Bank2)]:			

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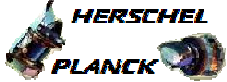

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address High (Bank2) [PIM_MAH(Bank2)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address Low (Bank3) [PIM_MAL(Bank3)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM MUnit Address High (Bank3) [PIM_MAH(Bank3)]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM SDRAM Mode Register [PIM_SDM]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM SDRAM Refresh Rate Register [PIM_SDRR]:			
	ET=+ UT=+00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM SDRAM Configuration Register [PIM_SDC]:			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM SDRAM Scrubbing Configuration Register [PIM_ScuCNFR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		PIM Configuration Register [PIM_CR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
16.8		SpaceWire A (SPW A) Module			
		SPW Configuration Register [SPWA_CR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		SPW SSEPPL Configuration Register [SPWA_SCR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	
		SPW Status Register [SPWA_SR]:			
	ET+= UT+=00.00.04	Execute Telecommand DumpMassMem Command Parameter(s) : SRC DH023160 LEN DH006160 Subsch. ID : 10 Det. descr. : Dump Mass Memory	DC802160	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Verify Packet Reception Mass Memory Dump Packet Mnemonic : MassMemDmp APID : 16 Type : 8 Subtype : 9 PI1 : PI2 :			
17.1		Check OBSM dump packet processing			
		Check that the OBSM is processing the incoming memory dump packets.			
18		Save merged image		Next Step: END	
		Save merged image with current ID .			
End of Sequence					
OFCP165H		TC Seq. Name : OFCP165H (SSMMB CocosReg Dmp H) CDMU SSMM B COCOS Registers Gnd image update in Retrieval mode TimeTag Type: Sub Schedule ID: <input type="checkbox"/>			
19		MCS OBSM preparation for Image update in RETRIEVAL mode		Next Step: 20	
		Note: It is assumed that the OBSM application is already running and the OBSM Desktop is displayed on the MCS client. Starting the OBSM application is not covered by the current procedure.			
19.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the OBSM Desktop . From the Image menu, select Update . The 'Image Catalog' window opens.			
19.2		Select image to be updated			
		Select the image to be updated for the memory device SSMMB . The 'Image UPDATE' window opens.			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
19.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons.			
20		Retrieve and process TM(8,9,2,2) packets		Next Step: 21	
		Use the STEP button to retrieve and process the TM(8,9,2,2) packets, packet by packet and starting from the time shown in the packet time field.			
		OR			
		Use the PLAY button to retrieve and process the TM(8,9,2,2) packets in automated mode. Pressing the PLAY button, the display will start to retrieve and process packets, starting from the time shown in the packet time field. This processing will stop automatically when a packet is received which creation time is greater than the one contained in the end time field.			
21		Save merged image		Next Step: END	
		Save merged image with new ID .			
End of Sequence					
End of Procedure					