

Part Number(s): 000566-01

Name	Part Number(s)	Qty	Sheet No.	Schematic No.
Item: Interface CCA Function: Interface CCA	000572-02	1	1->8	000022
The IFC(OSVU) provides an MDM serial interface. The IFC also provides temperature and power supply voltage monitoring. The MDM serial interface is used by the OSVU to provide camera control and pan/tilt commands to the PCU via the System Management (SM) General Purpose Computer (GPC). The IFC also has an 8 input analog MUX, 12 bit A/D converter and AD590 temperature transducers which provide voltage and temperature monitoring capability.				

Failure Mode: Loss of MDM interface

H/W Func. Screen Failures  
 Criticality: 3 1R

Mission Phase: Orbit

Cause(s): Interface CCA Loss of communication with MDM (OSVU)

Failure effect on unit/and item: 1. OSVU. Unable to use camera preset, image enhancement and FOV monitoring features of OSVU.  
 2. Interfacing Subsystems: No effect.  
 3. Mission: No effect.  
 4. Crew/Vehicle: No immediate effect. Subsequent failure of the standby equipment and the orbiter CCTV system could result in the loss of crew or vehicle. The MDM interface can be used to control the elbow camera and could fail in a position such that the RMS cannot be stowed if there is a full diameter payload in proximity of the elbow camera. This would preclude payload bay door closure if EVA and RMS jettison were unavailable.

Worst Case: Loss of ability to automatically control cameras for camera presets, image enhancement and FOV monitoring

Redundant Paths: A7 camera and PTU control panel  
 Standby OSVU in locker

Failure Detection: Camera and PTU automatic controls do not function  
 POST MDM Error message  
 TBD MDM Failure.  
 Runtime Error: FIFO Buffer, one or more:  
 217517 LOSS OF OSVS:MDM COMMUNICATIONS  
 217518 OSVS (MDM) FIFO ERROR  
 Runtime Error: Unexpected Interrupts, one or more:  
 217528 UNEXPECTED TRANSMIT INTERRUPT  
 217530 ECHOED DATA RECEIVED BUT S/W NOT IN ECHO MODE  
 217531 UNEXPECTED RECEIVE INTERRUPT  
 017532 FIFO FULL INTERRUPT  
 217533 UNEXPECTED FIFO EMPTY INTERRUPT  
 017534 FIFO HALF FULL INTERRUPT  
 217539 FIFO ERROR INTERRUPT  
 017540 CONTINUOUS INTERRUPTS BEING GENERATED  
 Runtime Error: Error Status  
 217535 MULTIPLE TRANSMITTER FRAMMING ERRORS  
 217536 MULTIPLE RECEIVER FRAMMING ERRORS  
 217537 MULTIPLE RECEIVER PARITY ERRORS  
 217538 MULTIPLE RECEIVER TYPE ERRORS

Corrective Action: Use the A7 panel to control cameras.

Time to Effect: immediate

Time to Correct: Minutes

Hazard/Remarks: Workaround. Use A7 panel to manually control cameras and PTU. This is 1R due to fact that the MDM interface can be used to control the elbow camera.

Approvals:

Functional Group	Name	Position	Telephone	Date Signed	Status
Engineer	Brule, Dave / Neptec	Design Engineer	613-599-7602 EX	15May98	Signed
Reliability	Elgin, David / Neptec	CSVS Systems Engineer	613-599-7603X2	21May98	Signed
Program Management Offi	Darlington, Tom / Neptec	Program Manager - CSVS	613-599-7603 EX	29May98	Signed
Customer, S & MA	Kokosz, Cheryl / JSC-NC	SR & QA Jeeves User - NASA	281-244-1954	09Sep98	Signed
Subsystem Manager	Glenn, Georga / JSC-ER	Customer - Subsystem Manager	(281) 423-151E	26Aug98	Signed
Technical Manager	Rock, John / JSC-MVS	NASA Program Manager	281-483-1264	25Sep98	Signed