

Herschel
SPIRE DPU AVM Test Summary Report

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1 DOCUMENTS

1.1 APPLICABLE DOCUMENTS

Document Reference	Name
AD1	SPIRE Instrument Description Document
AD2	Herschel/Planck Instrument Interface Document Part A
AD3	Herschel/Planck Instrument Interface Document Part B Instrument "SPIRE"
AD4	SPIRE DPU Subsystem Specification Document
AD5	SPIRE DPU Interface Control Document
AD6	FIRST Spacecraft to Instruments Transfer Layer Protocol
AD7	DPU/ICU Spacecraft Interface Test Plan
AD78	DPU/ICU On Board Software Product Assurance Plan
AD9	DPU/ICU P.A. Plan
AD10	DPU Test Plan

1.2 Reference documents

Reference Document	Name
RD1	CPU BOARD Test Procedure
RD2	I/F BOARD Test Procedure
RD3	DC/DC BOARD Test Procedure
RD4	MOTHER BOARD Test Procedure
RD5	CPU Board S/N 05 Test Report
RD6	I/F Board S/N 05 Test Report
RD7	DC/DC Converter S/N 03 Board Test Report
RD8	Mother- Board S/N 05 Test Report
RD9	SPIRE AVM Log-Book
RD10	DPU-BSW SOFTWARE REQUIREMENTS DOCUMENT
RD11	DPU-BSW SOFTWARE A.D. DOCUMENT
RD12	DPU OB SVVP/Acceptance Test Plan
RD13	DPU Basic SW Test Report
RD14	SPIRE OBS URD
RD15	SPIRE DPU OBS Test Report
RD16	SPIRE AVM DPU 1553B Test Report

2 Scope of the document

The purpose of this document is to report a summary of the results of the HW and SW tests carried out on the DPU AVM.

3 Hardware Tests Summary

The AVM DPU hardware tests were carried out at the manufacturer premises (Carlo Gavazzi Space: CGS) at single board level according to the procedures listed in RD1 to RD4 and the related test results are reported in RD5 to RD8. The tests were then carried out at CGS as far as the STD 1355 and 1553B interfaces were concerned with the boards integrated with the motherboard and with suitable connectors to the external simulators.

After the delivery the tests at integrated unit level went on at IFSI and the related hardware test results are reported in the DPU AVM Log-Book (RD9). In RD9 the metrological tests, the continuity checks and the bonding tests are reported.

4 Software Tests Summary

The SW tests of the basic software were carried out at CGS according to RD10 and RD11 and the results are reported in RD13. As the development and testing environment was not the same at CGS with respect to the IFSI environment, it was necessary for a SW expert of CGS to assist IFSI in the integration of the Boot SW with the Application SW and the various routines that interface with the CDMS in IFSI. The final AVM SW tests were carried out according to RD12 and the test results are reported in RD15 and RD16.

5 CONCLUSIONS

All the tests, both hardware and software carried out on the AVM DPU were successful and no NCR or waiver have to be reported.