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SPIRE On-Board Software

Configuration Report

Delivery Notes

Ref:	IFSI/OBS/RP/2004-001 <DeliveryNoteAppendix>
Rev:	4.0.0
Date:	30/10/2009
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SPIRE ON-BOARD SOFTWARE

CONFIGURATION REPORT

DELIVERY NOTES

Issue: 4.0.0

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1 Package content

This package contains a base release of the Spire On-Board Software with the related documentation and the related basic tools.

1.1 Content Listing

- 1 - Spire OBS revision 4.0.0, ICD14 ASCII Format
- 2 - Spire OBS revision 4.0.0, Tele-Commands Format.
- 3 - Spire OBS User Manual 4.0.0.
- 4 - SPIRE On-Board Software Configuration Report
- 5 - SPIRE On-Board Software Configuration Report Delivery Notes

1.2 Document application

This Delivery Notes is applicable to Spire Revision 4.0.0 - October-2009



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2 Package Structure

This chapter describes the package delivery in depth by its directory structure.

2.1 File Lists

- Spire_400.zip - *Archive containing for the following files:*
 - Result/* - *OBS Image in Telecommands*
 - See next paragraph
- SpireOBS_400.icd14 - *ICD14 image of the Spire OBS.*
- SPIRE_OBS_User_Manual_v4.0.0.08.pdf
- SPIRE_OBS_Conf_Report_Issue_4.0.0_01_.pdf
- SPIRE_OBS_DeliveryNotes.4.0.0_03_.pdf
- Spire_400_DELIVERY.zip - *Archive Container for the following files*
 - PMFULL.DMP - *Hex Binary of Program Memory*
 - spire_1_After.dmp - *C-Dump of compiled OBS*
 - SPIRE_NM.MAP - *Memory Map of compiled OBS*
 - SPIRE_FM.EXE - *The OBS*
 - com1553/* - *Directory containing Communication Library Source*
 - mmlib/* - *Directory containing Memory Management Library Source*
 - sources/* - *Directory containing OBS Source*
- SpireOBS_400.checksums - *Checksum calculated @IFSI*

2.1.1 RESULT Directory

- “DmPageTc00001.dm” to “DmPageTc02033.dm”
 - OBS Image in Telecommands¹.
Spire OBS Images is packed in compliance with the Boot Software Version 2 Specification.
Spire OBS Images is packed via the TCGEN tool provided by CGS.

¹ These are the Tele Commands uploading the OBS Image, those are 2147 files.
The image can be uploaded with a rate of 4TC/s, a delay of 250ms per TC
(SPIRE-IFS-DOC-001392 §4.1-step1.3).
The nominal requirements fits with this rate.



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3 Change Log:

Changes since previous OBS delivery : SPIRE 3.0.B.

3.1 Changes since previous version

See also the Document changer record in UM

1. Code restyling
 - a. Many MACRO redefinition inside new parenthesis
 - b. Automated Document updates
 - c. Change of naming convention for HK-DPU
 - d. Commenting in commonalities
 - e. Moving functions from “common” modules into dedicated TC-Functions modules
2. Code optimization
 - a. Common code absorbed between HW and SW VMs
 - b. Redundant argument removed from call interfaces [VM HW & SW]
 - c. Monitoring Task with fixed transition table
 - d. Monitoring Task with direct pointers
3. New Features
 - a. New HK parameters
 - b. New debug dump structure
 - c. New VM trace conditions
 - d. Peak-Up Sequencer able to handle SPEC Data
 - e. Peak-Up Sequencer debug telemetry structure
4. Minor Changes
 - a. SPIRE DPU \leftrightarrow DRCU ICD UPDATES
 - b. VM stop with ceiling for time to effect.
 - c. Monitoring task deletion of 3three time status, now with 2two time state.
 - d. Peak-Up Sequencer won't touch OBSMODE
 - e. Fixing Telecommand priority
 - f. Critical/noncritical Functions Fusion for HW/SW VMs
5. Major Changes
 - a. Autonomy function “Safe mode” recoding
 - b. Autonomy function context now configurable by RAL
 - c. Separating Monitoring System from Action Sequencing
 - d. Monitoring Task now sending events through VM_SVC
 - e. Monitoring Task now sending any event even if not yet served
 - f. Action Sequencer recalculate the right action by the collected transitions
 - g. Monitoring Task now with different State Management
 - h. Telecommand Sequencer now with different insulation schema
 - i. Table Lock now balanced in any execution flow.
6. IDE
 - a. Changes for CVS / SVN
 - b. Changes to MS Visual Studio 2008
 - c. Changing Development Environment Makefiles



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3.2 Fixed/Resolved/Closed SPR/SCR

See in the Document changer record in UM

Issue Type	Priority	Key	Title
SPR	Urgent	SPIRE-2103	Coding error managing the HIGH ans SUPER Priority TC.
SPR	Urgent	SPIRE-2070	Retries are not reset after transition from Warning or Fail states by the monitoring system
SPR	Normal	SPIRE-1975	Busy Table Event TM 1 8 not with same content in any branch
Action	Low	SPIRE-1867	SPIRE-1865 After SCR-1865 re-treset Stop-VM and Stop-MemoryDump
Action	Normal	SPIRE-1866	SPIRE-1865 SCR-1865 --> code size consideration
SCR	Urgent	SPIRE-1865	A TC to stop a running Autonomy Function (and related triggering monitoring service)
SPR	Normal	SPIRE-1864	In HK_Monitoring Sys the Digital Failure Values are in inverse Right/Left order than the Documentation.
SPR	High	SPIRE-1863	TC inhibition not confomant
SPR	Low	SPIRE-1847	Incorrect Bit Extension declared in HK_Out_of_Limit event.
SPR	Urgent	SPIRE-1841	Table remain locked
Action	Low	SPIRE-1789	SPIRE-990 Source Code analisys over the DPU/DRCU interaction
SCR	High	SPIRE-1786	Updates to the NHK report table
SPR	Normal	SPIRE-1697	In PeakUp procedure offsets are erroneous calculated.
SPR	High	SPIRE-1603	DPU crashed at the start of OD33 MTL activities
SPR	High	SPIRE-1602	Old SCAL VM Table found in the OBS RAM during OD28 SCAL PID Tests
SPR	Normal	SPIRE-1455	Unknown eventID/SID combinations
SPR	High	SPIRE-1453	Onboard monitoring system stops triggering after the first action for an anomaly
SPR	Normal	SPIRE-1102	The SCAL VM fails with a ERROR_VM_CallTableFault error
SPR	Normal	SPIRE-1004	SMEC selection table parameter has the wrong value when selection is not active
SCR	High	SPIRE-1002	New parameters for the NHK report



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Issue Type	Priority	Key	Title
SPR	Normal	SPIRE-1001	Peak-up command output not as expected
SCR	Normal	SPIRE-997	Allow continuous sampling during Chop/Flash operations
SPR	Low	SPIRE-990	Calling CIS in HWVM lead to NON CRITICAL Execution Windows.
SPR	High	SPIRE-958	Table Collision in Memory after Boot on SAFE-TABLE
SCR	Low	SPIRE-947	Need to track posible error on Table Management.
SCR	High	SPIRE-945	Set a maximum delay when killing a SW-vm
SPR	Normal	SPIRE-867	Nominal HK does not get restarted after stopping
SCR	Normal	SPIRE-764	TM(9,9) time verification packet should have the data field header flag set
SPR	Normal	SPIRE-666	The OBS checksums after PM patch are not as expected
SPR	Low	SPIRE-665	Small changes to OBS lead to large differences in ICD14 format images
		-	
SPR	Normal	SPIRE-657	Selection table parameters have incorrect values
SCR	Normal	SPIRE-655	Wrong DCU GetHK command ID in the critical HK report
SPR	Normal	SPIRE-654	Missing Unallocated Block Report
SCR	Normal	SPIRE-653	Abort Peakup command needed
SCR	Normal	SPIRE-652	How to disable nominal housekeeping packet generation in SAFE_MODE
SPR	Normal	SPIRE-651	Peak up TC produces ERROR_VM_CallTableFault_____ID event report
SPR	Normal	SPIRE-650	VM generates spurious events
SCR	Normal	SPIRE-647	The SMEC selection table should be included in the OBS
SCR	Normal	SPIRE-646	SDEX service - Need more informations
SPR	Normal	SPIRE-645	Packet type & subtype should be treated as 16-bit parameters in event report
SPR	High	SPIRE-643	Missing Event when stopping a VM.
SPR	High	SPIRE-642	Cannot set monitoring tables.
SPR	Normal	SPIRE-641	Event ID modified in TM packet
SPR	High	SPIRE-638	PEAK-UP Implementation Coding Error
SPR	High	SPIRE-636	Peak Mode DataMode TC Field must be passed to VM transparently
SCR	Normal	SPIRE-635	EVENTSTAT parameter to be replaced by SCUDCDCSTAT in critical HK report
SCR	Normal	SPIRE-622	Update to allow definition of SAFE Mode
SCR	Normal	SPIRE-608	VM parameters need to be defined and inserted in the Nominal HK Report
SPR	Normal	SPIRE-607	Missing Commmand IDs and parameters in HK reports need to be defined
SPR	Normal	SPIRE-585	Table becomes write locked

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