

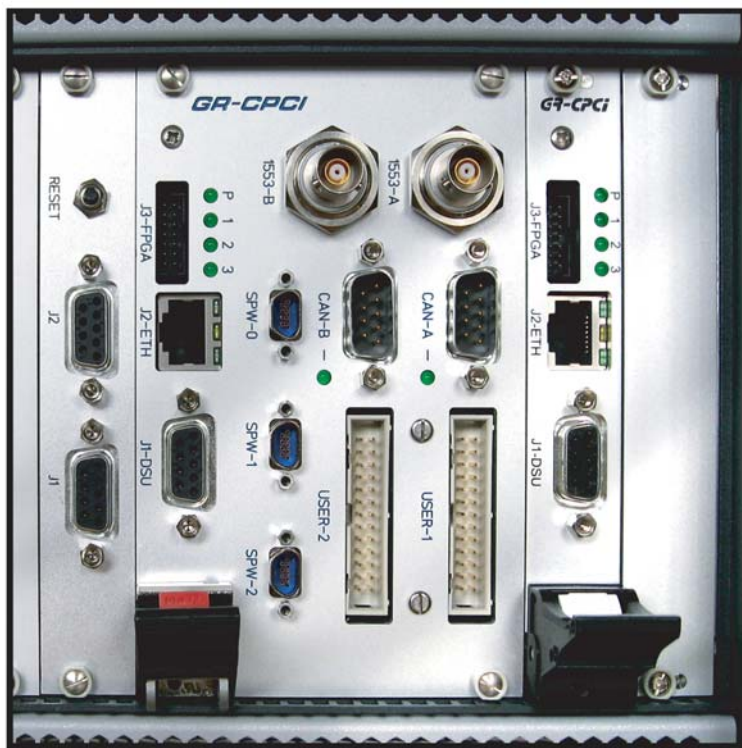
GR-RASTA

LEON2/3 Development System



Description

GR-RASTA is a development/evaluation system for LEON2 and LEON3 based spacecraft avionics. Processing is provided by the ATMEL AT697 LEON2 device, or by the LEON3 processor pre-programmed into either an Actel Axcelerator or a Xilinx Virtex FPGA. Interfaces such as SpaceWire, 1553B, CAN and CCSDS TM/TC are provided on separate FPGA boards. Communication between boards is done via the Compact PCI (cPCI) interface. The system is shipped ready to use in a cPCI crate together with cabling, documentation and demonstration software.



Specifications

- LEON2 processor using the ATMEL AT697 device (80 MHz) or pre-programmed Xilinx Virtex FPGA (60 MHz)
- LEON3 processor pre-programmed into Actel Axcelerator FPGA (25 MHz) or Xilinx Virtex FPGA (60 MHz)
- Peripheral Component Interconnect (PCI) 32 bit, 33 MHz
- Serial Debug Interface (RS232, SUB-D9 connector)
- 10/100 Mbps Ethernet interface (RJ45 connector)
- 3 x SpaceWire 200 Mbps link interfaces (LVDS, MDM9-S connectors)
- 2 x MIL-STD-1553B bus interfaces (Twinax BJT5 connectors)
- 2 x CAN 2.0 interfaces (ISO11898, SUB-D9 connectors)
- 2 x UART serial interfaces (RS232, SUB-D9 connectors)
- General purpose input/output connectors for up to 44 user defined I/Os
- CCSDS Telemetry and Telecommand interfaces (RS422, HD26 connector)
- JTAG connector for FPGA programming
- SRAM/SDRAM/FLASH PROM memory

RASTA Standard Configurations

	Interfaces		cPCI, Eth, DSU, JTAG		cPCI, Eth, DSU, JTAG		cPCI, Eth, DSU, JTAG		cPCI, Eth, DSU, JTAG		cPCI, Eth, DSU, JTAG		cPCI, Eth, DSU, JTAG		cPCI, Eth, DSU, JTAG		cPCI, Eth, DSU, JTAG		
	GR-CPCI-AT697	GR-CPCI-XC4V	GR-CPCI-AX200	GR-CPCI-XC4V	GR-CPCI-XC4V	GR-CPCI-XC4V	GR-CPCI-AX200	GR-CPCI-XC4V	GR-CPCI-AX200	GR-CPCI-XC4V	GR-CPCI-AX200	GR-CPCI-XC4V	GR-CPCI-AX200	GR-CPCI-XC4V	GR-CPCI-AX200	GR-CPCI-XC4V	GR-CPCI-AX200	GR-CPCI-XC4V	GR-CPCI-RS232
Processor	LEON2	LEON3	LEON3	LEON2	LEON3														
Slots	1 slot	1 slot	1 slot	4 slots	4 slots	4 slots	4 slots	2 slots	2 slots	2 slots	2 slots	2 slots	2 slots	2 slots	2 slots	2 slots	2 slots	2 slots	1 slot
GR-RASTA-101	X									X									X
GR-RASTA-102	X									X						X			X
GR-RASTA-103	X										X								X
GR-RASTA-104	X										X				X				X
GR-RASTA-105						X													X
GR-RASTA-106				X															X
GR-RASTA-107		X									X								X
GR-RASTA-108		X									X			X					X
GR-RASTA-109			X								X								X
GR-RASTA-110			X								X			X					X

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