PCI108

PCIe x4 Gen3 Carrier for XMC with Active Cooling

Key Features

- PCIe x4 Gen3 with re-timer to ensure performance
- Active cooling with on-board Health Management CPU
- Supports XMC power up to 70W
- RS-232 and JTAG access to the XMC module
- XMC I/O to the rear
- Support for VITA 42 and VITA 61

Benefits

- High bandwidth to XMC
- I/O interface to rear
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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The PCI108 is a PCIe Gen3 x4 XMC Carrier with active cooling. The module has on-board health management CPU that scans the XMC I2C bus to discover temperature sensors, then uses the temperature sensors to actively control the fan speed. If the XMC modules does not have any temperature sensors the user can set the fan speed manually via an easy-to-use menu accessible via RS-232.

The active cooling allows the XMC module to dissipate up to 70W.

The PCIe Gen3 lanes pass thru two connectors (the PCIe edge and the XMC) which impact the signal integrity of the signal. To compensate for any loss of signal the PCI108 has a PCIe Gen3 x4 re-timer. This will provide excellent signal integrity to the host as well as to the XMC module, allowing the module to run at full PCIe Gen3 rather than training down to PCIe Gen1/Gen2.

Further, the module provides easy access to the XMC JTAG signals as well as the on-board health management CPU RS-232 via I/O connector to the face-plate.

Module has ordering option per VITA 42 or VITA 62.

Block Diagram

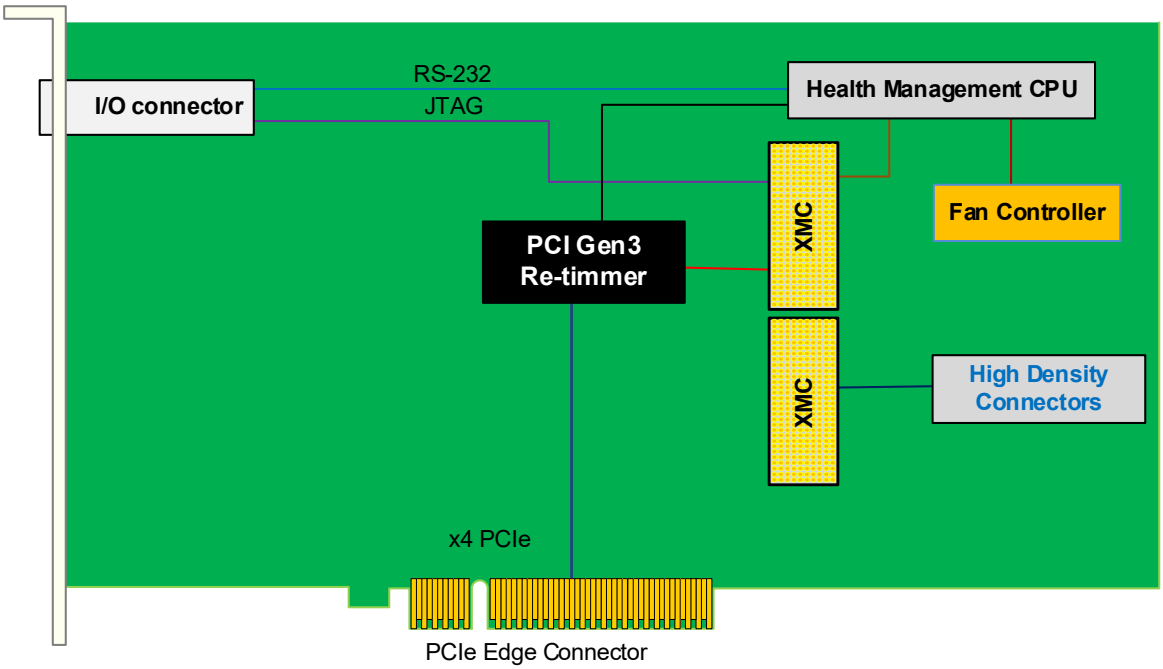

Figure 1: Functional block diagram

Specifications

Architecture		
Physical	**Dimensions**	Single Module
		Width: 4.36” (110.74 mm)
		Depth: 12.283” (311.98 mm)
Type	**PCI Carrier**	PCI Carrier for XMC
Standards		
PCIe	**Lanes**	x4 Gen3
Configuration		
Power	**PCI108**	~3W without the XMC; cooling XMC up to 70W (Application specific)
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +85°C
	Vibration	Operating 9.8 m/s^2 (1G), 5 to 500 Hz
	Shock	Operating 30Gs on each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	XMC JTAG
		XMC I/O
		CPU RS-232
	LEDs	Power OK
Software Support	**Operating System**	N/A
Other		
MTBF	MIL Hand book 217-F@ TBD hrs	
Certifications	Designed to meet FCC, CE and UL certifications, where applicable	
Standards	VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards	
Warranty	Two (2) years, see VadaTech Terms and Conditions	

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

Ordering Options

PCI108 – A00-000-0HJ

A = XMC Connector		
0 = VITA 42 1 = VITA 61		
		H = Temperature Range
		0 = Commercial (–5° to +55°C) 1 = Industrial (–20° to +70°C)
		J = Conformal Coating
		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Related Products

PCI123

- PCIe Gen3 (x16) Bus Expansion module
- Options for (1x) of x16 PCIe, (2x) of x4 PCIe or (4x) of x4 PCIe utilizing SFF-8644 connectors
- Allows the use of standard copper or fiber cabling

PCI592

- PCIe FPGA carrier for FMC+ per VITA 57
- Xilinx Kintex UltraScale™ XCKU115 FPGA
- Active cooling for FPGA and FMC+

PCI597

- Dual PCIe x16 to Xilinx UltraScale+™ VU13P FPGA
- 72 fiber transceivers egress ports
- Optical speed choice of 10G or 28G per link

Contact

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