

## PCIe Gen3 Module for PCIe Bus Expansion– PCI123

PCIe Gen3 Bus Expansion



### KEY FEATURES

- PCIe Gen3 (x16) Bus Expansion module
- Connects to root complex node board using up/down stream ports
- Options for (1x) of x16 PCIe, (2x) of x8 PCIe or (4x) of x4 PCIe utilizing SFF-8644 connectors
- Allows the use of standard copper or fiber cabling (mix of fiber/copper across the four ports is allowed)
- RoHS compliant

### Benefits of Choosing VadaTech

- PCIe Gen 3 Bus Expansion via 4x SFF-8644
- Standard copper or fiber cabling can be utilized
- Supports aggregate raw data rate of up to 128 Gbps
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company

The PCI123 is VadaTech's 3rd generation PCIe expansion module based on the PCI-SIG specification. The board is a high-speed bridge from the host PCIe bus to VadaTech's UTC006 PCIe Gen 3 x16 MCH.

The PCI123 allows expansion into up to four separate  $\mu$ TCA or ATCA systems independently. The PCIe expansion board supports an aggregate raw data rate of 128 Gbps, which can be partitioned as a single x16 link, dual x8 (64 Gbps each) or quad x4 (32 Gbps each) as required.

Standard copper or fiber cabling can be used with the PCI123. The board can support up to 500m connection over fiber.

*VadaTech can modify this product to meet special customer requirements. Contact us to discuss your application.*

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## INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and  $\mu$ TCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), 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.

## BLOCK DIAGRAM

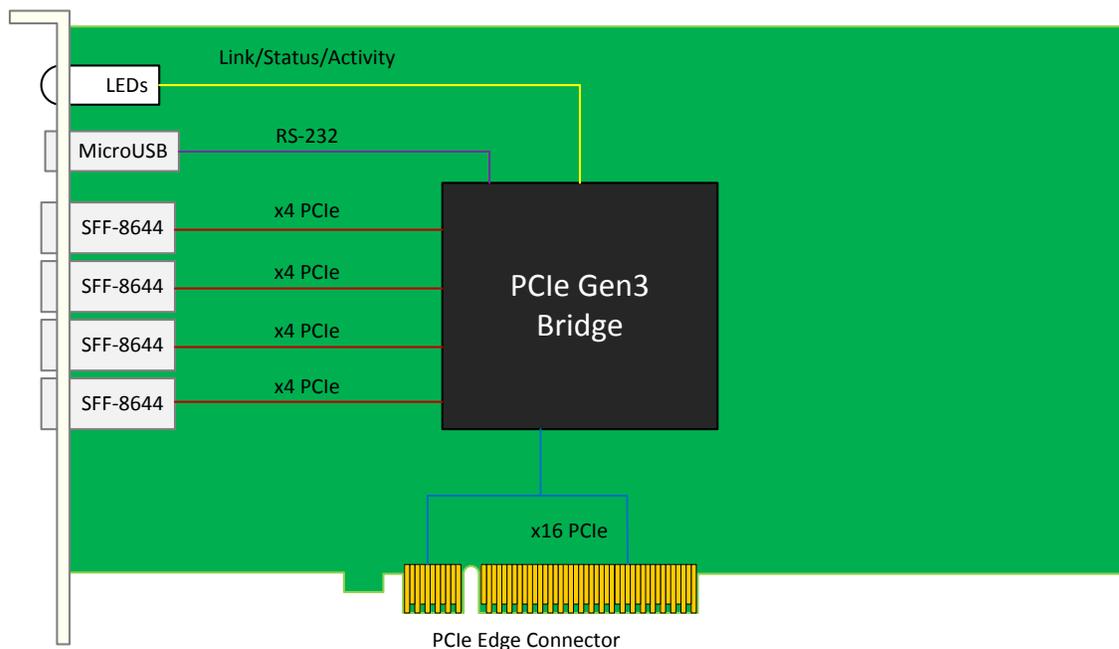


Figure 1: PCI123 Functional Block Diagram

## BUS EXPANSION EXAMPLE

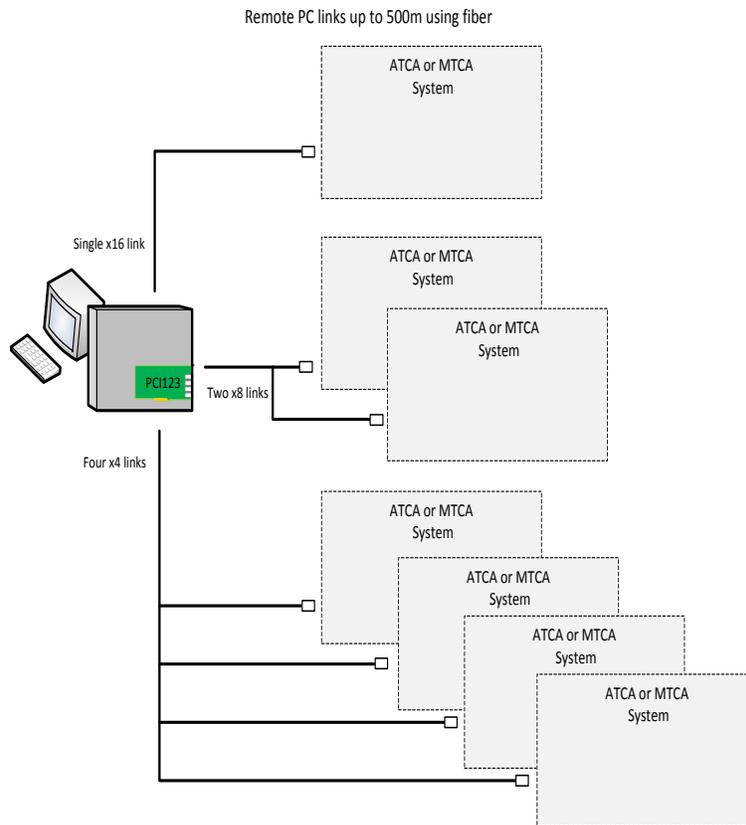


Figure 2: Example Showing Alternative Bus Expansion Configurations

## FRONT PANEL

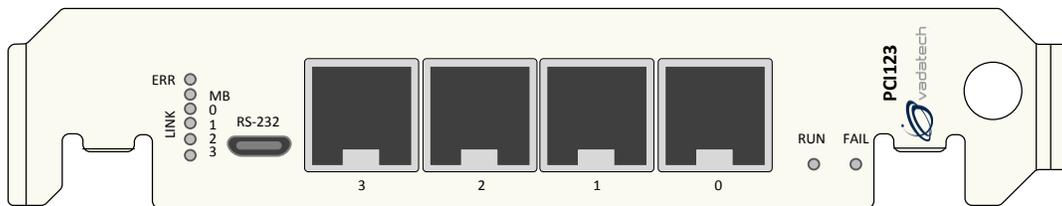


Figure 3: PCI123 Front Panel

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## SPECIFICATIONS

Architecture		
Physical	Dimensions	Single module Width: 4.2" (107 mm) Depth 7.8" (181.5 mm)
	Type	PCI Expansion Module PCI module for I/O bus expansion
Standards		
PCIe	Lanes	x16
Configuration		
Power	PCI123	~20W
Environmental	Temperature	Operating Temperature: -5° to 55°C (air flow > 400LFM) industrial and military versions also available (See <a href="#">environmental spec sheet</a> ) Storage Temperature: -40° to +85°C
	Vibration	Operating 9.8 m/s <sup>2</sup> (1.0 G), 5 to 500Hz
	Shock	30Gs on each axis
Front Panel	Relative Humidity	5 to 95 per cent, non-condensing
	Interface Connectors	Quad SFF-8644 Connectors RS-232 via MicroUSB
	LEDs	Activity, Link and Status
Software Support	Operating System	N/A
Conformal Coating		Humiseal 1A33 Polyurethane (Optional) Humiseal 1B31 Acrylic (Optional)
	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
Trademarks and Disclaimer		The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice



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## ORDERING OPTIONS

PCI123 – 000 – 000 – 0HJ

### H = Temperature Range

- 0 = Commercial (–5° to +55° C)
- 1 = Industrial (–20° to +70° C)
- 2 = Military (–40° to +85° C)

### J = Conformal Coating

- 0 = None
- 1 = Humiseal 1A33 Polyurethane
- 2 = Humiseal 1B31 Acrylic

## RELATED PRODUCTS



PCI107 PCI Carrier  
For AMC Modules



PCI900 PCI Video Driver



UTC006 MCH  
PCIe Expansion

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