

VPX645

NVMe HBA with RAID (0, 1, 5, 6, 10, 50 and 60), 3U VPX

Key Features

- 3U VPX NVMe Host Bus Adapter with Full support for RAID
- Dual Core ARM A15 RAID On Chip (ROC)
- On board 8 GB of DDR4 Memory with ECC
- Hardware Engine for RAID 5 and RAID 6 acceleration
- PCIe Gen3 x8 or x4
- Health Management through dedicated Processor

Benefits

- Multi-Terabit storage capacity in a 3U VPX form factor
- NVMe performance with full RAID support
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

OpenVPX™



vadatech
THE POWER OF VISION



VPX645

The VPX645 is full ROC Host Bus Adapter (HBA) which supports RAID level 0, 1, 5, 6, 10, 50 and 60. The module supports End-to-End CRC (ECRC) and Advanced Error Reporting (AER). The NVMe storage provides high speed and low latency read/write to the SSD devices.

The module has up to 16 NVMe storage devices and an additional 8 GB of DDR4 with ECC.

The VPX645 has PCIe Gen3 x8 or single x4 routed to the P1 connector.

The VPX645 is available in both air-cooled and rugged conduction-cooled versions. Please contact sales for details.

Block Diagram

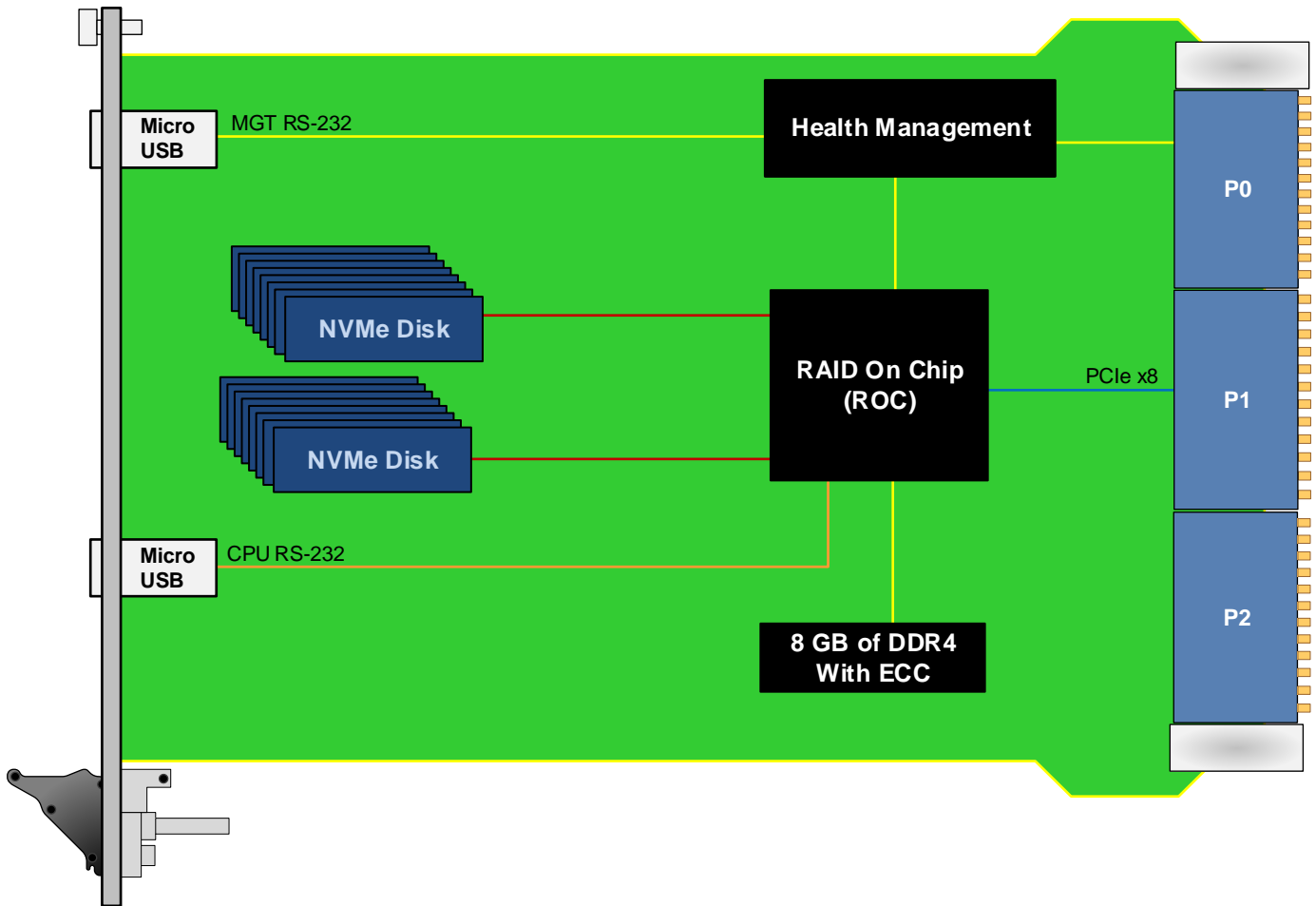


Figure 1: VPX645 Functional Block Diagram

Front Panel



Figure 2: VPX645 Front Panel

Specifications

Architecture	
Physical	Dimensions 3U, 1" Pitch
Type	VPX Storage NVMe SSD
Standards	
PCIe	Lanes Single x8 or single x4
Storage	SSD Up to 16 NVMe SSD
Configuration	
Power	VPX645 40 W with 8 TB of Storage
Front Panel	Micro USB RS-232 from CPU and RS-232 from Health Management
VPX Interfaces	Slot Profiles See ordering options
	Rear IO Dual Core ARM A15 RAID On Chip (ROC) PCIe Gen3 x8 or (optional x4)
Software Support	Operating System Linux, Windows, Solaris and VxWorks
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

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

VPX645 – AB0-000-GHJ

A = NVMe Storage capacity		G = Applicable Slot Profiles
0 = 4TB 1 = 8TB 2 = 16TB 3 = Reserved 4 = Reserved		0 = 5 HP
B = PCIe Interface		H = Environmental
0 = x4 to P1 1 = x8 to P1		See Environmental Specification Table below
		J = Conformal Coating
		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Environmental Specification

Option H	Air Cooled		Conduction Cooled		
	H = 0	H = 1	H = 2	H = 3	H = 4
Operating Temperature	AC1* (0°C to +55°C)	AC3* (-40°C to +70°C)	CC1* (0°C to +55°C)	CC3* (-40°C to +70°C)	CC4* (-40°C to +85°C)
Storage Temperature	C1* (-40°C to +85°C)	C3* (-50°C to +100°C)	C1* (-40°C to +85°C)	C3* (-50°C to +100°C)	C3* (-50°C to +100°C)
Operating Vibration	V2* (0.04 g2/Hz max)	V2* (0.04 g2/Hz max)	V3* (0.1 g2/Hz max)	V3* (0.1 g2/Hz max)	V3 (0.1 g2/Hz max)
Storage Vibration	OS1* (20g)	OS1* (20g)	OS2* (40g)	OS2* (40g)	OS2* (40g)
Humidity	95% non-condensing	95% non-condensing	95% non-condensing	95% non-condensing	95% non-condensing

Notes: *Nomenclature per ANSI/VITA 47. Contact local sales office for conduction cooled (H = 2, 3, 4)

Related Products

VPX592



- 3U FPGA carrier for FPGA Mezzanine Card (FMC) per VITA 46 and VITA 57
- Xilinx Kintex UltraScale™ XCKU115 FPGA
- High-performance clock jitter cleaner

VPX599



- Xilinx Kintex UltraScale™ XCKU115 FPGA
- Dual ADC @ 6.4 GSPS 12-bits
- Dual DAC @ 12 GSPS 16-bits (AD9162 or AD9164)

VPX516



- 3U FPGA carrier for FMC per VITA 46 and VITA 57
- Xilinx Virtex-7 690T FPGA in FFG-1761 package
- High-performance clock jitter cleaner

Contact

VadaTech Corporate Office

198 N. Gibson Road, Henderson, NV 89014
Phone: +1 702 896-3337 | Fax: +1 702 896-0332

Asia Pacific Sales Office

7 Floor, No. 2, Wenhua Street, Neihu District, Taipei 114, Taiwan
Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

info@vadatech.com | www.vadatech.com

Europe: EMCOMO Solutions AG

Industriestr. 10, 89231 Neu-Ulm, Germany
Phone: +49 731 8803510 | Fax: +49 731 88035129

vadatech@emcomo.de | www.emcomo.de

Choose VadaTech

We are technology leaders

- First-to-market silicon
- Constant innovation
- Open systems expertise

We commit to our customers

- Partnerships power innovation
- Collaborative approach
- Mutual success

We deliver complexity

- Complete signal chain
- System management
- Configurable solutions

We manufacture in-house

- Agile production
- Accelerated deployment
- AS9100 accredited



vadatech
THE POWER OF VISION

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.

© 2018 VadaTech Incorporated. All rights reserved.
DOC NO. 4FM737-12 REV 01 | VERSION 1.1- JUL/18