VPX752

Intel® Xeon™ SoC, PCIe Gen3 and 10GbE (XAUI), 6U VPX

VPX752

Key Features

- 6U VPX module Intel 5th Generation Xeon-D SoC
- PCIe Gen3 x16 (dual x8 or quad x4)
- Quad 10GbE XAUI
- Front-panel video out via DP with dual USB 3.0
- Dual front panel 100/1000/10G Ports
- Single XMC site with I/O expansion going to P5/P6
- Dual isolated RS-422/485 and a single RS-232 port
- Health Management through dedicated Processor

Benefits

- High-density low-power System-on-Chip (SoC)
- Integrated Platform Controller Hub (PCH)
- 32 GB DDR4 with Error Correction Code (ECC) for enhanced reliability, availability and serviceability
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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VPX752

The VPX752 is a processor module (VITA 46) for general purpose processing in demanding applications. Based on the Intel 5th generation Xeon-D processor, the efficient SoC design has low power consumption and integrated PCH technology.

The module provides quad 10GbE XAUI on P1 and PCIe Gen3 x16 (dual x8 or quad x4) on P2, together with quad GbE to P4. The GbE is software programmable on each port to run as 1000Base-TX or 1000Base-BX. It also provides Dual 100/1000/10G to the front panel, together with video out and dual USB 3.0 which can be used to implement a user interface for ease of maintenance.

The VPX752 provides 32 GB of DDR4 memory with ECC and Flash for the OS. The BIOS allows booting from onboard Flash, offboard SATA, PXE boot and USB. The module has a single XMC slot for additional I/O. The XMC I/O is routed to P5/P6.

The VPX752 has dual isolated RS-422/485 in addition to the single RS-232.

Linux OS is standard on the VPX752, consult VadaTech for other options.

The unit is available in a range of temperature and shock/vib specifications per ANSI/VITA 47, up to V3 and OS2.

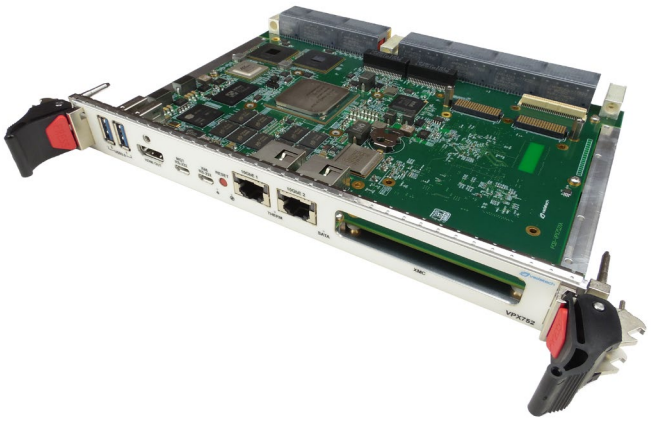

Figure 1: VPX752

Block Diagram

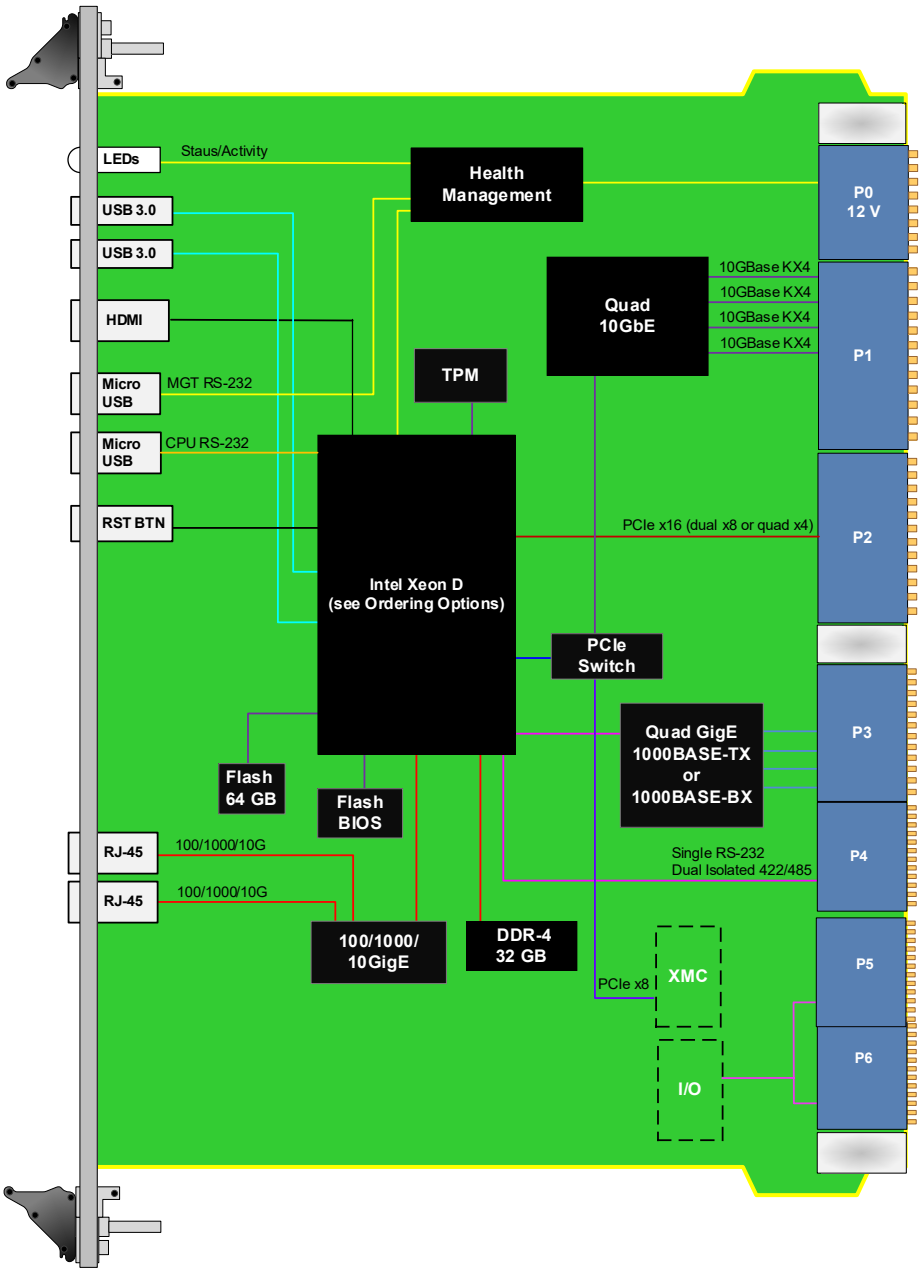

Figure 2: VPX752 Functional Block Diagram

Front Panel

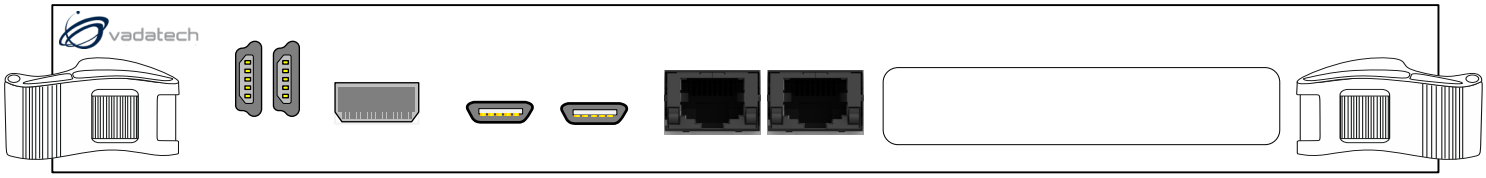

Figure 3: VPX752 Front Panel

Pinout Block Diagram

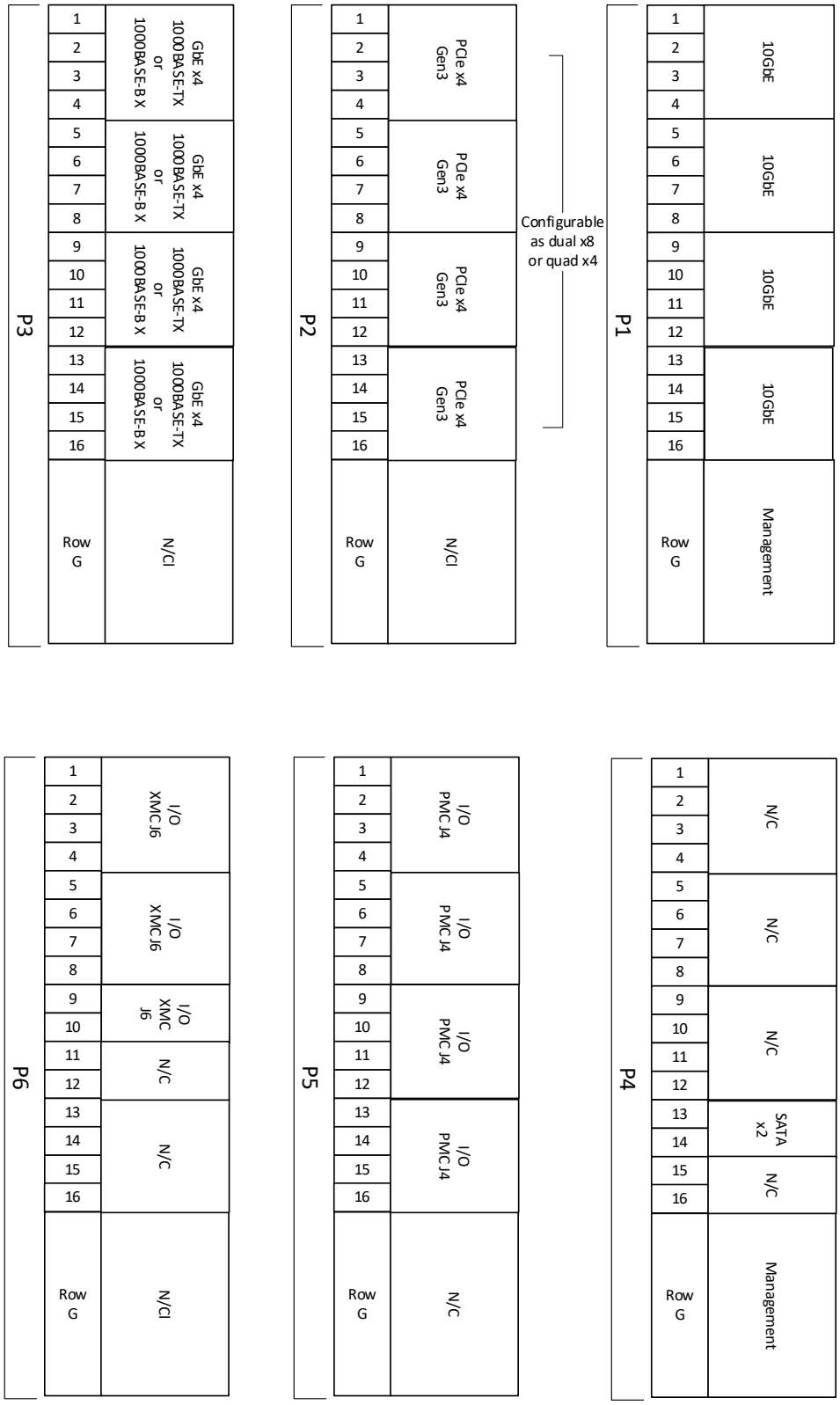

Figure 4: VPX752 Pinout Block Diagram

Specifications

Architecture		
Physical	**Dimensions**	6U, 1” pitch
Configuration		
Power	**VPX752**	85W (fastest CPU)
Processor	**CPU**	Intel 5th Generation Xeon D-1513N, D-1539, D-1548 or D-1577
	Memory	DDR4 32 GB with ECC, Flash
PCIe	**Lanes**	Gen3 x16 (dual x8 or quad x4)
PCH		Integrated
	Memory	BIOS flash
Front Panel	**10GbE**	Dual 100/1000/10GbE via x 2 RJ-45
	Video	1x DP (Display Port)
	Serial	CPU RS-232 via Micro USB
	USB	2x USB 3.0
	Micro USB	RS-232 from FPGA and RS-232 from Health Management
	LEDs	User defined by Health Management
Onboard Interfaces		XMC site
VPX Interfaces	**Slot Profiles**	See Ordering Options
	Rear IO	4x 10GbE KX4 on P1
		16x PCIe Gen3 (dual x8 or quad x4) on P2
		4x GbE on P3
		RS232/422/485 on P4
	Power Supplies	On P0: VS1 = 12V
Software	**OS Support**	Linux default, contact Sales for VxWorks and Windows support requirements
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 ISO9001:2015 and AS9100D 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

VPX752 – ABC-0E0-GHJ

A = Processor		G = Applicable Slot Profiles
0 = 4C, 1.6 GHz, 6 MB LLC, Xeon D-1513N 1 = Reserved 2 = 8C, 2 GHz, 12 MB LLC, Xeon D-1548 3 = 16C, 1.3 GHz, 24 MB LLC, Xeon D-1577 4 = 8C, 1.6 GHz, 12 MB LLC, Xeon D-1539		0 = 5 HP, VITA 48.1
B = Trusted Platform Manager (TPM)	**E = VPX Connector Type**	**H = Environmental**
0 = No Platform Manager 1 = Platform Manager	0 = Standard 50u Gold Rugged 1 = KVPX Connectors	See Environmental Specification
C = XMC Connectors		**J = Conformal Coating**
0 = VITA 42 1 = VITA 61		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Environmental Specification

	Air Cooled		Conduction Cooled		
Option H	**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

VPX516

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

VPX592

- 3U FPGA carrier for 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 12-bit @ 6.4 GSPS
- Dual DAC 16-bit @ 12 GSPS (AD9162 or AD9164)

Contact

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