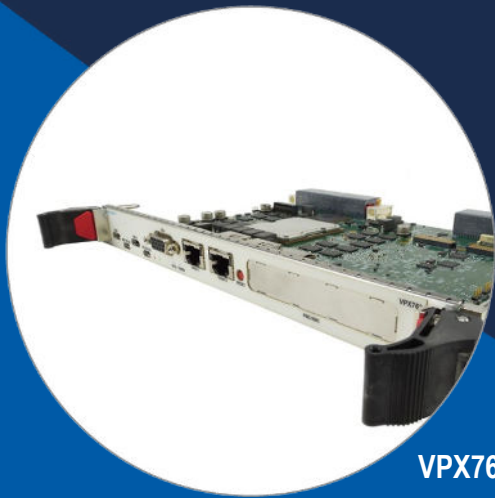


# VPX762

Intel® Xeon™ D SoC (Skylake-D),  
PCIe Gen3 and Dual 40GbE, 6U VPX



VPX762

## Key Features

- 6U VPX module Xeon-D SoC (Skylake-D) 6<sup>th</sup>-Generation
- D-2183IT (16 core @ 2.2 GHz Turbo 3 GHz) or D-2143IT (8 core @ 2.2 GHz Turbo 3 GHz)
- PCIe Gen3 x16 (bifurcation to dual x8 or quad x4)
- 64GB of DDR4 with ECC
- Dual 40GbE or four 10GbE/1GbE to rear
- Dual 10G-BaseT to the front
- Dual GbE to the rear
- Six SATA Ports to the rear
- M.2 NVMe SSD
- 64 GB SSD
- Front-panel video out via DB15
- Single XMC site with I/O expansion going to P5/P6 per VITA46.9 Pin Field P5W1-P64s+X12d+X8d
- Dual RS-232 Port
- Health Management through dedicated Processor

## Benefits

- High-density low-power System-on-Chip (SoC)
- Integrated Platform Controller Hub (PCH)
- 4 channels of 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

OpenVPX™



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# VPX762

The VPX762 is a processor module (VITA 46) for general purpose processing in demanding applications. Based on the Intel Xeon D-2183IT or D-2143IT processor, the efficient SoC design has low power consumption and integrated PCH technology.

The module provides dual 40GbE or four 10GbE/1GbE, PCIe Gen3 x16 (dual x8 or quad x4) on P1/P2, six SATA Ports, dual GbE and XMC I/O to the rear on P1/P2/P3/P5 and P6. It also provides Dual 100/1000/10Gbase-T 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 VPX762 provides four channels DDR4 (total of 64GB) with Error Correction Code (ECC), Flash for the OS, and an optional NVMe module. 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 (J6/J5) is routed to P5/P6 per VITA46.9 Pin Field P5w1-P64s+X12d+X8d. The XMC VPWR is +12V

The Health Management is one of the most sophisticated offered on the market with Server Management capabilities. It allows for Remote Management via ethernet, redirect of the video over IP to monitor the boot process remotely, Serial Over LAN (SOL), etc. It also meets Tier two support per VITA specification.

Linux and Windows are OS on the VPX762, 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.

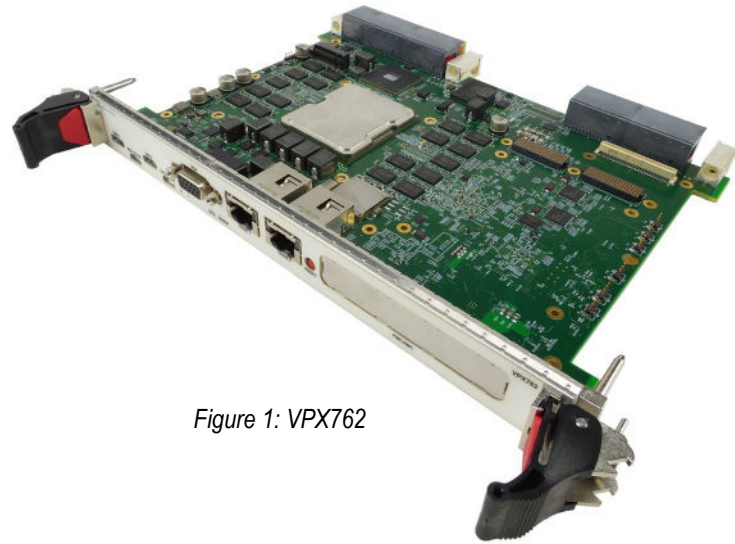


Figure 1: VPX762

# Block Diagram

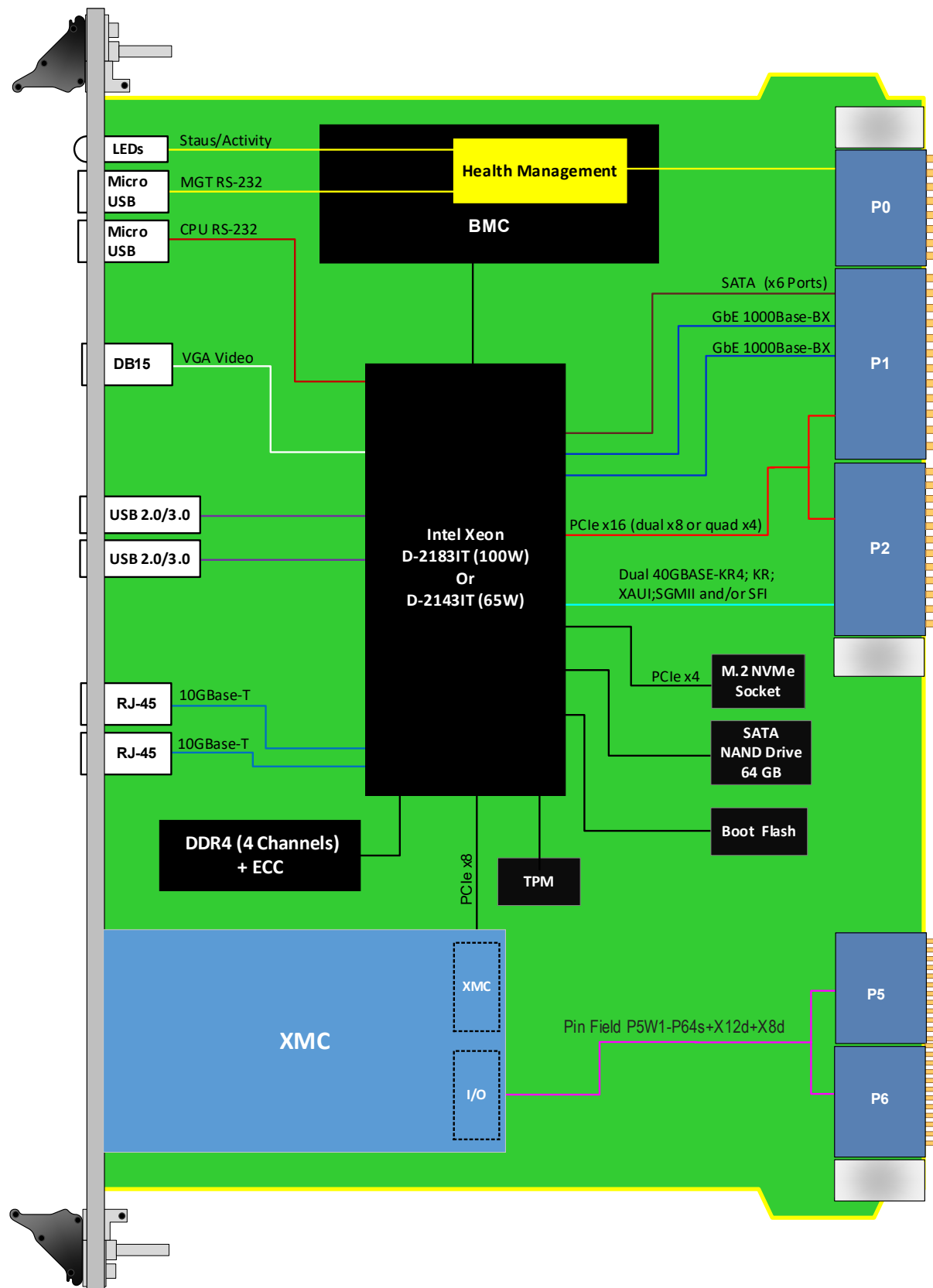


Figure 2: VPX762 Functional Block Diagram

# Pinout Block diagram

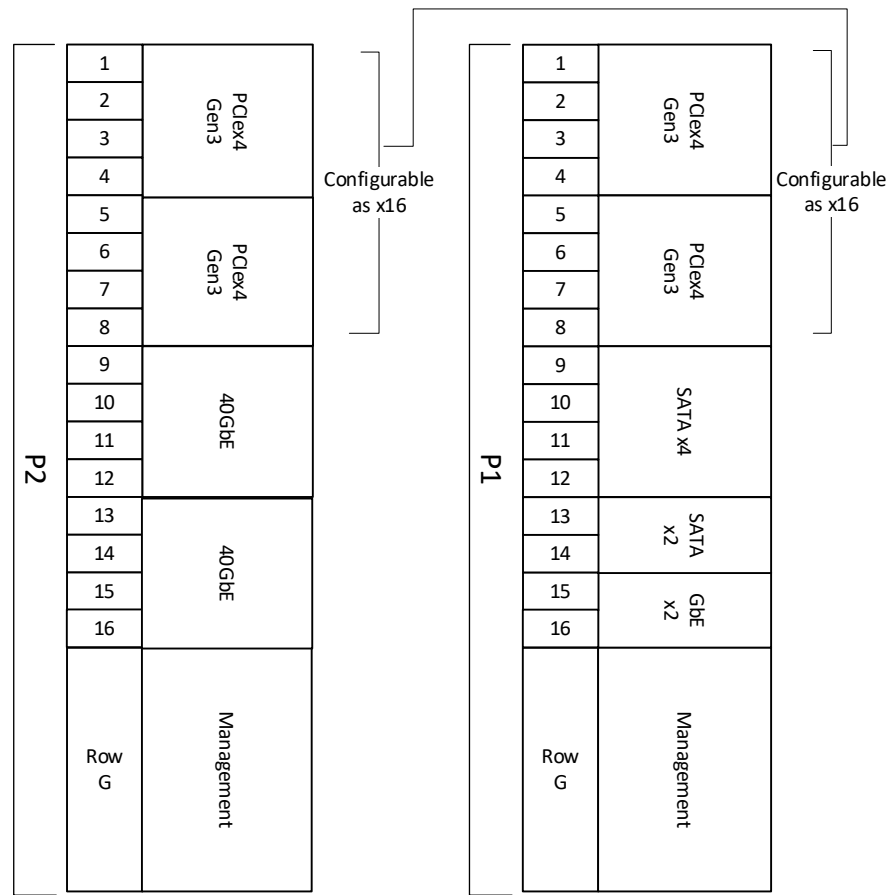


Figure 3: VPX762 Pinout Block Diagram to P1/P2

# Specifications

Architecture		
Physical	Dimensions	6U, 1" pitch
Configuration		
Power	VPX762	85W to 120W (CPU dependent)
Processor	CPU	Intel 6th Generation Xeon D-SoC
	Memory	Four banks of DDR4 with ECC
PCIe	Lanes	Gen3 x16 (bifurcation dual x8 or quad x4)
PCH		Integrated
	Memory	BIOS flash
Front Panel	10GbE	100/1000/10GbE via x 2 RJ-45
	Video	1x DB15
	Serial	CPU RS-232 via micro USB
	USB	2x USB 2.0/3.0
	Micro USB	RS-232 for Health Management
	LEDs	User defined by Health Management
On-board Interfaces		XMC site
VPX Interfaces	Slot Profiles	See <a href="#">Ordering Options</a>
	Rear IO	SATA (x6 Ports), GbE SerDes, Dual GbE and PCIe
		Dual 40GBASE-KR4, PCIe x16 (bifurcation dual x8 or quad x4) on P1/P2
	Power Supplies	Power +12V and +5V; XMC VPWR = +12V
Software	OS Support	Linux and Windows by default
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 <a href="#">VadaTech Terms and Conditions</a>

## 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

## VPX762 – ABC-DEF-GHJ

<b>A = Processor</b>	<b>D = Memory (four banks)</b>	<b>G = Applicable Slot Profile</b>
0 = Xeon D-2183IT 1 = Xeon D-2143IT	0 = 8 GB/bank (32 GB total) 1 = 16 GB/bank (64 GB total)	0 = 5 HP, VITA 48.1
<b>B = Trusted Platform Manager (TPM)</b>	<b>E = NVMe</b>	<b>H = Environmental</b>
0 = No TPM 1 = TPM	0 = No NVMe 1 = 1TB NVMe 2 = 2TB NVMe 3 = Reserved	See <a href="#">Environmental Specification</a>
<b>C = XMC Connectors</b>	<b>F = VPX Connector Type</b>	<b>J = Conformal Coating</b>
0 = VITA 42 1 = VITA 61	0 = Standard 50u Gold Rugged 1 = KVPX Connectors	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



VPX551

- Dual Kintex UltraScale™ XCKU115
- 16 GB of 64-bit wide DDR4 Memory to each FPGA
- Rear fibre I/O via VITA 66.5



VPX980

- Quad Core ARM Freescale processor @ 1 GHz per core
- One GB DDR3 memory with FRAM for log messages
- 32 GB of Flash, 8 GB of NAND Flash



VTX990

- One slot benchtop 6U VPX development platform
- P0 to P6 connectors are installed
- Variable fan speed control for front and rear

# 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

## VadaTech European Sales Office

VadaTech House, Bulls Copse Road, Southampton, SO40 9LR

Phone: +44 2380 016403

[info@vadatech.com](mailto:info@vadatech.com) | [www.vadatech.com](http://www.vadatech.com)

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