

# VPX754

Intel® Xeon™ SoC, PCIe Gen3,  
3U VPX



VPX754

## Key Features

- 3U VPX module Intel® 5th Generation Xeon N, D-1539, D-1548 or D-1577 (Broadwell) System-on-Chip (SoC)
- PCIe Gen3 dual x4 or single x8
- Front-panel video out via micro HDMI
- Dual GbE Ports
- Dual SATA Gen3 Ports
- Health Management through dedicated Processor

## Benefits

- High-density low-power SoC
- Integrated Platform Controller Hub (PCH)
- 16 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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**OpenVPX™**



# VPX754

The VPX754 is a processor module (VITA 46) for general purpose processing in demanding applications. Based on the Intel® 5<sup>th</sup> generation Xeon 4-core, 8-core or 16-core Processors (Broadwell). The efficient SoC design has low power consumption and integrated PCH technology.

The module provides PCIe Gen3 dual x4 or single x8, dual GbE and SATA on P1. It also provides 10GbE to the front panel.

The VPX754 provides 16 GB of DDR4 memory with ECC and Flash for the OS. The BIOS allows booting from onboard Flash, offboard SATA, PXE boot and USB. A USB for extended storage or peripherals is provided to the front panel.

Linux OS is standard on the VPX754, 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: VPX754

# Block Diagram

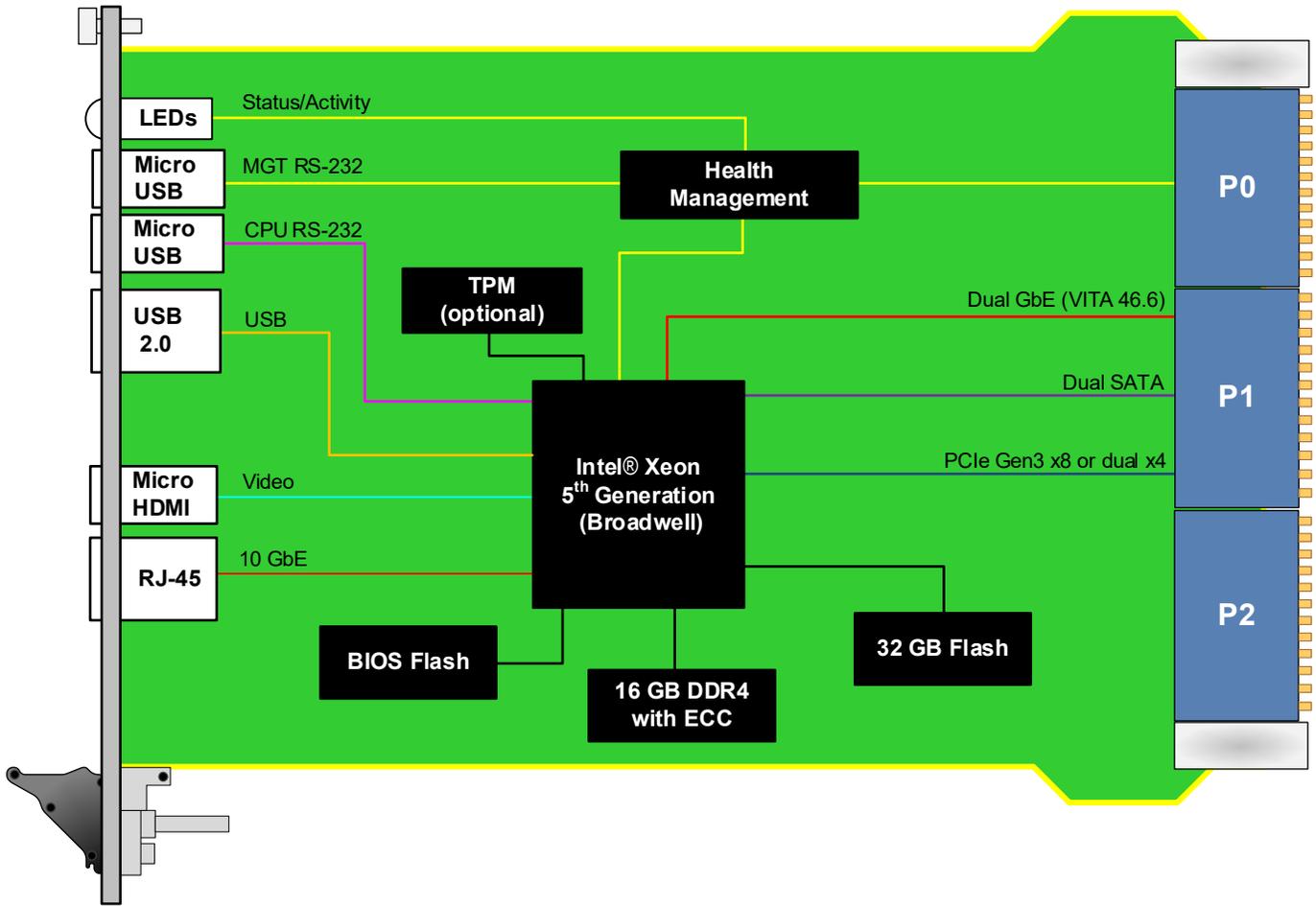


Figure 2: VPX754 Functional Block Diagram

# Front Panel

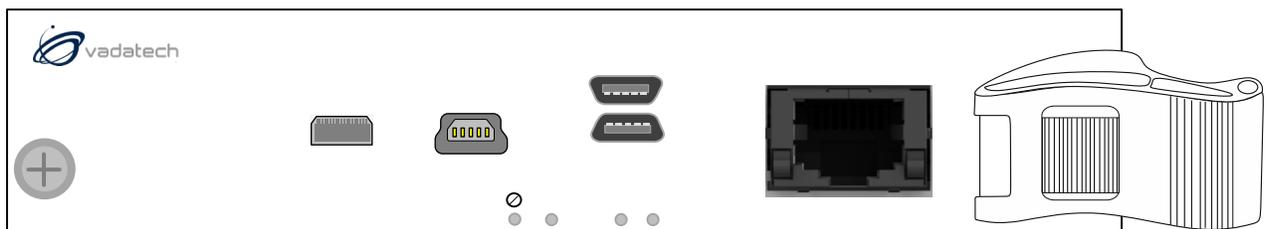


Figure 3: VPX754 Front Panel

# Pinout Block Diagram

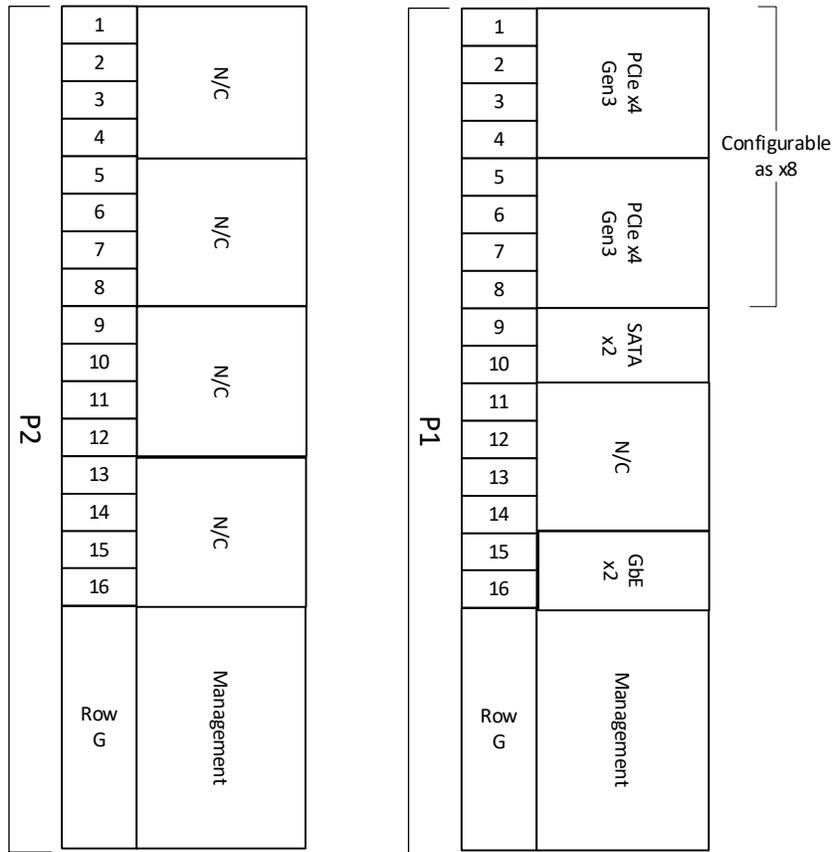


Figure 4: Pinout Block Diagram

# Specifications

<b>Architecture</b>		
<b>Physical</b>	<b>Dimensions</b>	3U, 1" pitch
<b>Configuration</b>		
<b>Power</b>	<b>VPX754</b>	~55W
<b>Processor</b>	<b>CPU</b>	Intel® 5th Generation Xeon D-1539, D-1548 or D-1577
	<b>Memory</b>	DDR4 16 GB with ECC, Flash
<b>PCIe</b>	<b>Lanes</b>	Gen3 dual x4 or single x8
	<b>Platform Control Hub (PCH)</b>	Integrated
<b>Front Panel</b>	<b>Memory</b>	BIOS flash
	<b>10GbE</b>	1x 10GbE via RJ-45
	<b>Video</b>	1x micro HDMI
	<b>Micro USB</b>	RS-232 from CPU and RS-232 from Health Management
<b>VPX Interfaces</b>	<b>USB</b>	1x USB 2.0
	<b>LEDs</b>	User defined by CPU and Health Management
	<b>Slot Profiles</b>	See <a href="#">Ordering Options</a>
	<b>Rear IO</b>	PCIe Gen3 x8 on P1, configurable as 1 x8 or 2 x4
		Dual SATA on P1
		Dual GbE on P1
	<b>Power Supplies</b>	On P0: VS1 = 12V
<b>Software</b>	<b>OS Support</b>	Linux default, contact Sales for VxWorks and Windows support requirements
<b>Other</b>		
<b>MTBF</b>		MIL Hand book 217-F@ TBD hrs
<b>Certifications</b>		Designed to meet FCC, CE and UL certifications, where applicable
<b>Standards</b>		VadaTech is certified to both the ISO9001:2015 and AS9100D standards
<b>Warranty</b>		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

## VPX754 – ABC-000-GHJ

<b>A = Processor</b> 0 = Reserved 1 = 8C, 2 GHz, 12 MB LLC, Xeon D-1548 2 = 16C, 1.3 GHz, 24 MB LLC, Xeon D-1577 3 = 8C, 1.6 GHz, 12 MB LLC, Xeon D-1539 4 = Reserved		<b>G = Applicable Slot Profiles</b> 0 = 5 HP, IEEE 1101
<b>B = Trusted Platform Manager (TPM)</b> 0 = No TPM 1 = TPM		<b>H = Environmental</b> See <a href="#">Environmental Specification</a>
<b>C = VPX Connector Type</b> 0 = Standard 50u Gold Rugged 1 = KVPX Connectors		<b>J = Conformal Coating</b> 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
<b>Operating Temperature</b>	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)
<b>Storage Temperature</b>	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)
<b>Operating Vibration</b>	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)
<b>Storage Vibration</b>	OS1* (20g)	OS1* (20g)	OS2* (40g)	OS2* (40g)	OS2* (40g)
<b>Humidity</b>	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

## 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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