

VPX754

Intel® Xeon™ SoC, PCIe Gen3,
3U VPX



VPX754

Key Features

- 3U VPX module Intel 5th Generation Xeon D-1577, D-1548 or D-1520 (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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The VPX754 is a processor module (VITA 46) for general purpose processing in demanding applications. Based on the Intel 5th generation Xeon 16-cores D-1577, 8-cores D-1548 or 4-cores D-1520 processor, 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 on board Flash, off-board 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 Front View

Block Diagram

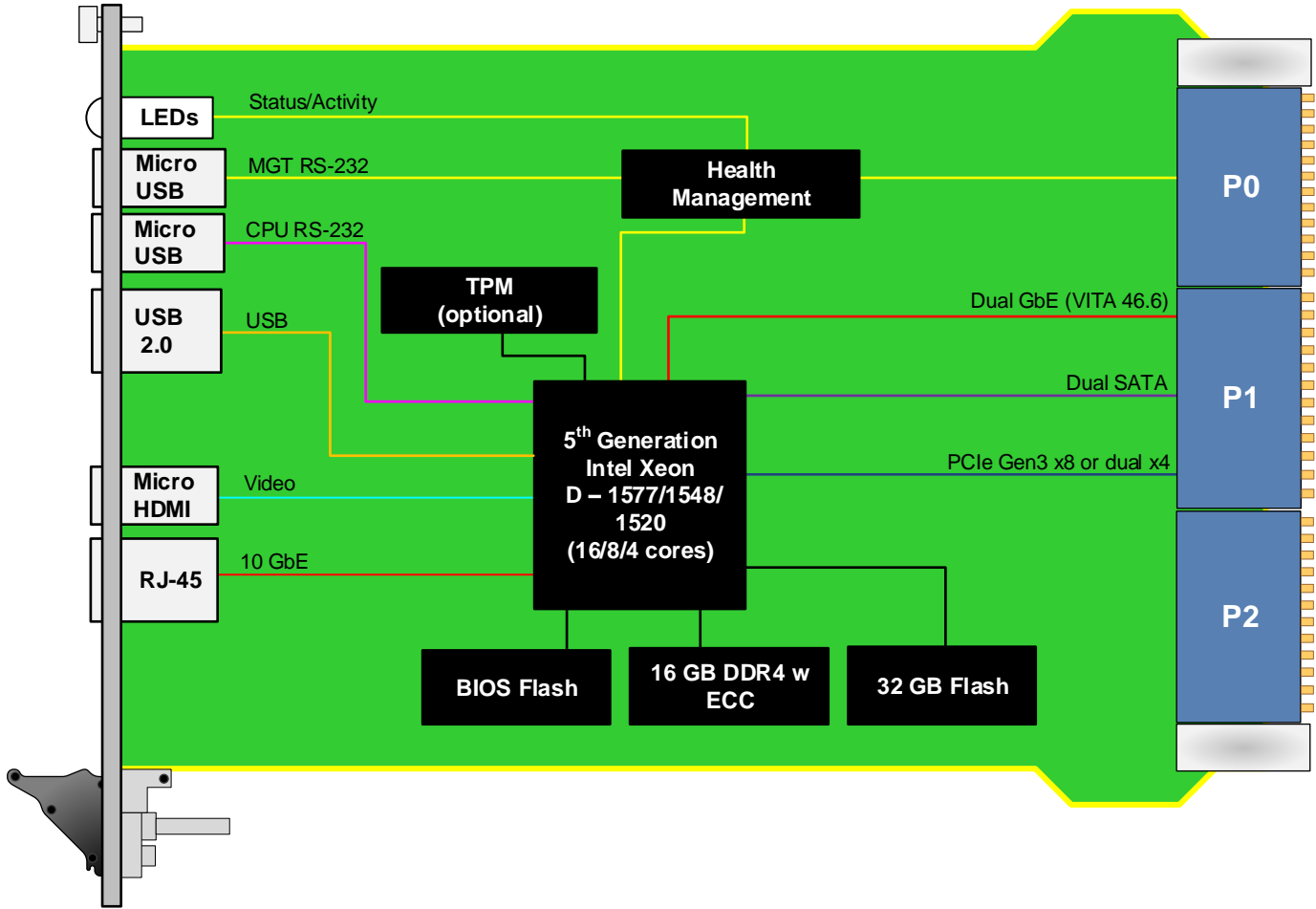


Figure 2: VPX754 Functional Block Diagram

Front Panel

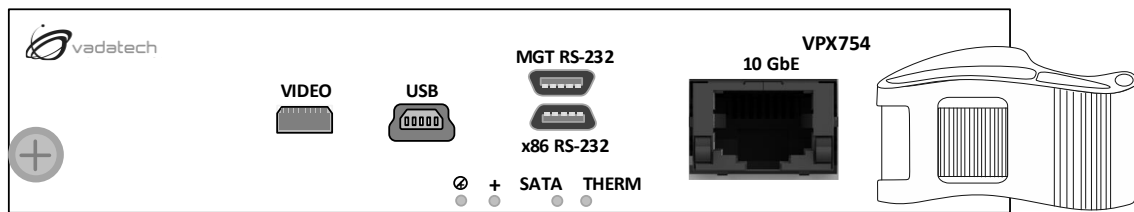


Figure 3: VPX754 Front Panel

Specifications

Architecture		
Physical	Dimensions 3U, 1" pitch	
Configuration		
Power	TBD W	
Processor	CPU Intel 5th Generation Xeon D-1577, D-1548 or D-1520	
	Memory DDR4 16 GB with ECC, Flash	
PCIe	Lanes Gen3 dual x4 or single x8	
Platform Control Hub (PCH)	Integrated	
	Memory BIOS flash	
Front Panel	10GbE 1x 10GbE via RJ-45	
	Video 1x micro HDMI	
	Micro USB RS-232 from CPU and RS-232 from Health Management	
	USB 1x USB 2.0	
	LEDs User defined by CPU and Health Management	
VPX Interfaces	Slot Profiles See ordering options	
	Rear IO	PCIe Gen3 x8 on P1, configurable as 1 x8 or 2 x4
		Dual SATA on P1 Dual GbE on P1
	Power Supplies On P0: VS1 = 12 V	
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 ISO9001:2000 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

VPX754 – AB0-000-GHJ

A = Processor 0 = 4C, 2.2 GHz, 6 MB LLC, Xeon D-1520 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	G = Applicable Slot Profiles 0 = 5 HP
B = Trusted Platform Manager (TPM) 0 = No TPM 1 = TPM fitted	H = Environmental 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

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 @ 6.4 GSPS 12-bits
- Dual DAC @ 12 GSPS 16-bits (AD9162 or AD9164)

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