VPX754

Intel® Xeon™ SoC, 3U VPX, PCIe Gen3

VPX754

Key Features

- 3U VPX module Intel 5th Generation Xeon D-1577, D-1548 or D-1520 (Broadwell) SoC

- PCIe Gen3 dual x4 or single x8

- Front-panel video out via micro HDMI

- Dual GbE ports

- Dual SATA Gen3 ports

Benefits

- High-density low-power System-on-Chip (SoC)

- Integrated Platform Controller Hub (PCH)

- 16 GB DDR4 with Error Correction Code (ECC) for enhanced reliability, availability and serviceability

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VPX754

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 10 GbE 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.
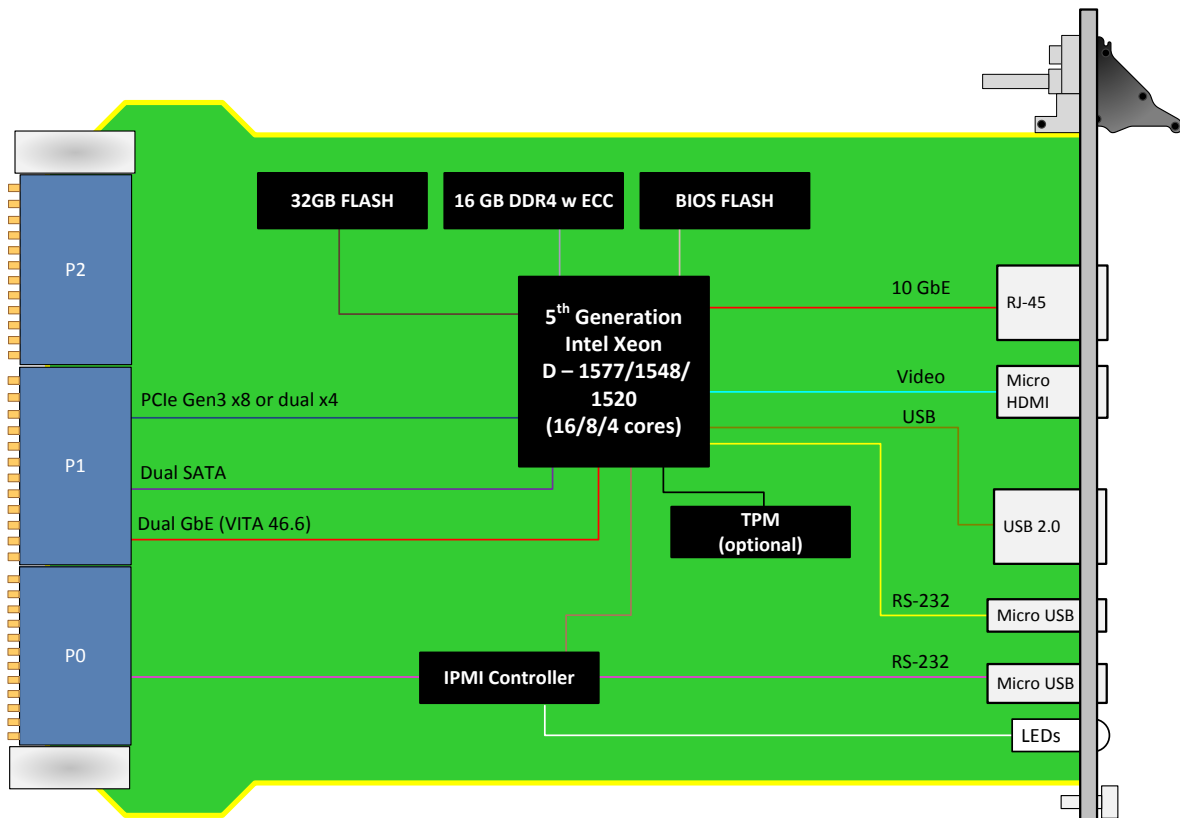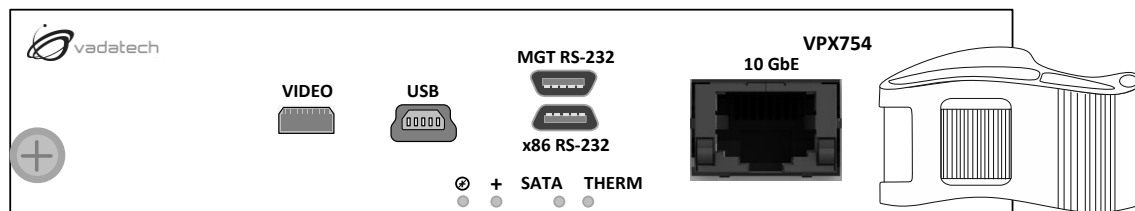
Block Diagram

Figure 1: VPX754 Functional Block Diagram

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	**10 GbE**	1x 10 GbE via RJ-45
	Video	1x micro HDMI
	Serial	CPU RS-232 and MGT RS-232 via micro USB
	USB	1x USB 2.0
	LEDs	User defined by the FPGA and Health Management
On-board Interfaces		None
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 ATCA and µTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), 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	G = Applicable Slot Profiles
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	0 = 5 HP

B = Trusted Platform Manager (TPM)	H = Environmental
0 = Not installed 1 = Installed	See Environmental Specification table option H description

	J = Conformal Coating
	0 = None 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

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

Contact

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