VT807

3U Rugged Chassis to accommodate four x16 PCIe Modules with Dual Intel 5th Gen Xeon SP and Quad 100GbE

VT807

Key Features

- 3U Chassis that accepts four standard x16 PCIe Gen5
- Dual socket 5th Gen Intel® Xeon® Scalable Processors
- Multiple SKU support (i.e.4514Y, 4516Y+, 8571N etc.)
- 16 banks of DDR5 for up to 1TB with ECC per socket (total of 2TB)
- Intel PFR for secure boot
- The chassis is designed specifically for FPGA modules and/or high end GPGPU Modules
- Quad QSFP28 for Ethernet at 200G/100G/50G/25G
- 400W per module
    - The modules do not need active cooling (chassis will provide the cooling to each module) which is more efficient vs. active cooling on each module
- Universal AC and/or +48V DC input
    - Redundant power 3+1
- Base Management Controller (BMC) for health management with Shelf Manager
- GbE Switch
- Slide Rail option
- Front to back cooling

Benefits

- Turnkey solution and all integration done at VadaTech
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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VT807

The VT807 is a 3U four-slot rugged chassis that accommodates four x16 PCIe Gen5 style modules and dual socket 5th Gen Intel® Xeon® Scalable Processors (SP) with 8 banks of memory which provides up to a total of 1TB DDR5 memory with ECC per socket (total memory is 2TB). The chassis provides dual U.2 removable 2.5" Disk, Quad QSFP28, dual 10GbE via RJ-45 and dual USB 3.0 to the CPU.

High Speed Ethernet

The VT807 has Quad QSFP28. The Ethernet could be configured as 2x200G and/or 4x100G.

Power Supplies

The VT807 has four power supplies that can provide 3+1 redundancy. The VT807 has a Power Entry Module (PEM) that manages power to each slot. The VT807 has options for Universal AC and/or +48V DC power supplies.

Cooling

The VT807 has an intelligent fan controller which provides dynamic cooling. The cooling is front to back.

Figure 1: VT807 Front View

Module Routing

The VT807 chassis provides PCIe x16 Gen5 lanes to each of the four slots.

Integrated GbE Switch and USB

The VT807 has a layer two managed GbE switch that allows each of the PCIe modules to connect via a cable to the switch if the PCIe module supports it (i.e. VadaTech PCI598/PCI599 supports this feature). In addition, the VT807 has a USB port per slot that allows each of the PCIe modules (i.e. VadaTech PCI598/PCI599) to provide a USB connection to the host CPU.

Integrated BMC and Shelf Management

The VT807 has a health management controller on board which follows the IPMI specification. This allows dynamic cooling of the chassis as well as provide health management to the upper protocol. The shelf management is thru VadaTech fourth generation product VT040 VT040_Datasheet.pdf.

Integrated JTAG Switch Module (JSM)

Figure 2: VT807 Rear View

The VT807 has a JSM to allow all four slots to be managed thru a single JTAG connector or via GbE using a Virtual Probe functionality.

Chassis Locator

Each chassis could be assigned a unique Chassis Locator (CL) to uniquely identify the chassis among multiple chassis within the larger system.

High Level Architecture

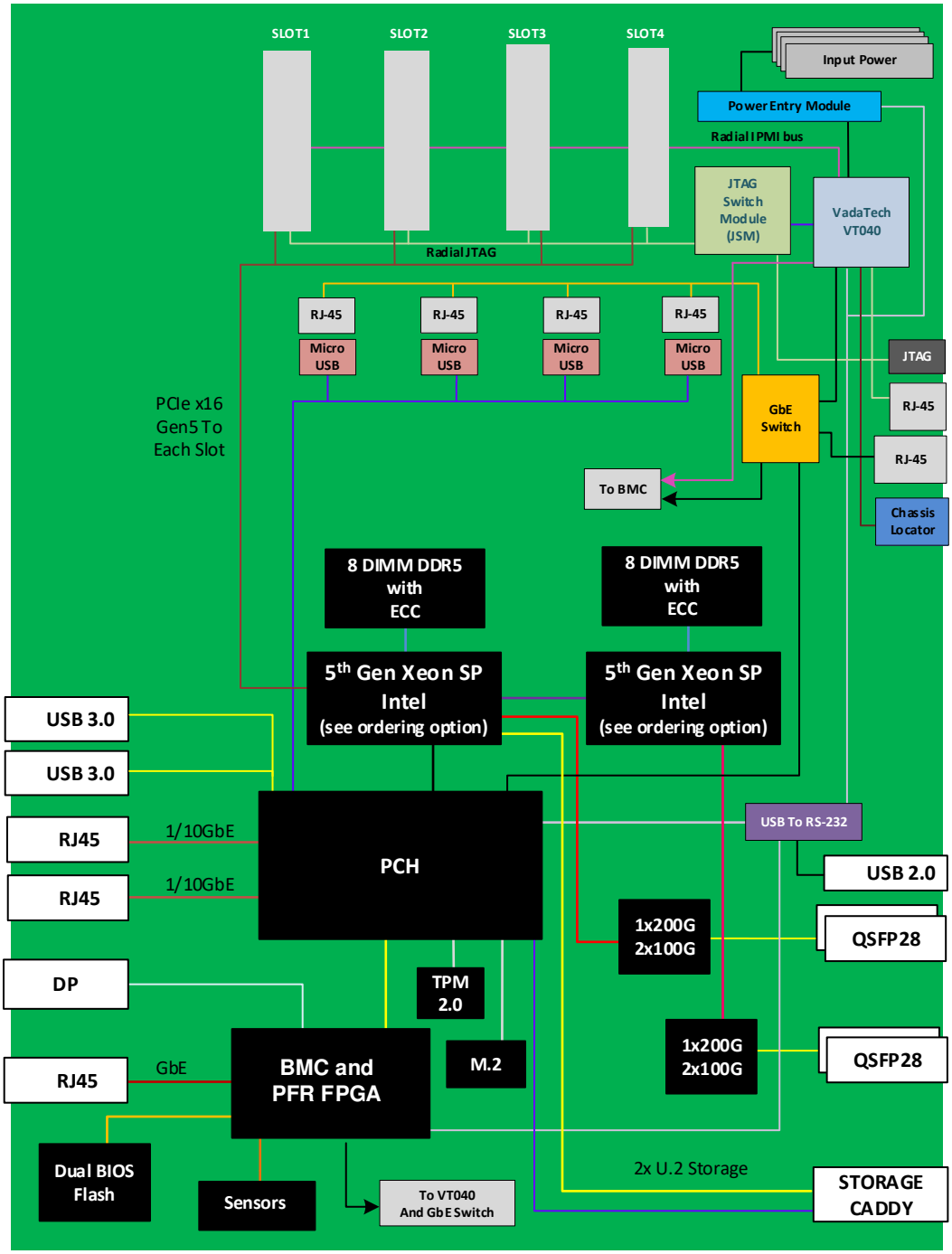

Figure 3: VT807 topology (VadaTech can modify the motherboard for different topology with MOQ)

Specifications

Architecture		
Physical	**Dimensions**	Height: 3U
		Width: 19”
		Depth: 25”
		Weight: TBD
Type	**PCIe Edge style**	Four x16 PCIe full length with dual Socket Gen5 SP
Standards		
PCIe Sig	**PCIe**	PCIe Sig specification Gen5
Configuration		
Power	**VT807**	Universal AC input or +48V DC
Environmental		See Ordering Options
Cooling		Front to Back
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	One (1) year, see VadaTech Terms and Conditions	

OpenVPX allows for a wide range of pin assignments and use cases. Prior to purchasing VadaTech products as standalone items (i.e., not part of an integrated platform) please consult with VadaTech on the system architecture to ensure compatibility.

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

VT807 – ABC-DEF-GHJ-K00

A = Processor Xeon® SP SKU*	D = Power Supplies	G = Slide Rail	K = M.2 Storage
0 = Reserved 1 = 4510T 3.7/2GHz, 12 cores 2 = 4510 4.1/2.4GHz, 12 core 3 = 4514Y 3.4/2GHz, 16 cores 4 = 4516Y+ 3.7/2.2GHz, 24 cores 5 = 8571N 4/2.4GHz, 52 cores 6 = 6548N 4.1/2.8GHz, 32 Cores 7 = 5520+ 4/2.2GHz, 28 Cores 8 = Reserved 9 = Reserved	0 = Quad 1200W AC (3+1) 1 = Quad 1000W 36V-75V DC (3+1) 2 = Reserved	0 = None 1 = Slides Rail on both sides	0 = None 1 = 1TB 2 = 2TB 3 = 4TB 4 = Reserved
B = CPU Socket	**E = QSFP28 Transceivers*** **	**H = Environmental**	
0 = Dual Socket 1 = Single Socket	0 = None 1 = SR (MTP/MPO) 2 = SR-CWDM (LC) 3 = LR (1KM, MTP/MPO) 4 = LR (10KM, MTP/MPO) 5 = Reserved	0 = Commercial (-5° to 55°) 1 = Industrial (-20° to 65°)	
C = DRAM per Processor**	**F = Caddy Storage*****	**J = Conformal Coating**	
0 = 256GB 1 = 512GB 2 = 1TB	0 = None 1 = 4TB 2 = 8TB 3 = Reserved	0 = No coating 1 = Humiseal 1A33 polyurethane 2 = Humiseal 1B31 acrylic 3 = Parylene	

Notes: *Other SKU's are support please contact VadaTech sales (only Embedded CPUs are supported).

** The DRAM is per socket. For example, C = 1 (total memory is 1TB) with B = 0 option

Four is installed unless B = 1 which then only two is installed; * Dual Caddy is provided with each having the same capacity

Related Products

PCI590

- PCIe x16 or any protocol on the x16 SERDES
- 72 fiber transceivers egress ports at 10G and/or 25G per lane
- AMD Versal™ Premium Series XCVP1802 FPG
- SyncE Master/Slave

PCI598

- PCIe x16 or any protocol on the x16 card edge SERDESac
- PCIe bifurcation to 2x8 or 4x4
- AMD Versal™ Premium Series XCVP1902 FPGA
- Quad QSFP-DD (Double Data Rate) ports

PCI599

- PCIe x16 or any protocol on the x16 SERDES
- AMD Versal™ Premium Series XCVP1802 FPGA
- Quad QSFP-DD (Double Data Rate) ports
- SyncE Master/Slave

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, Wenhu 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 | www.vadatech.com

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DOC NO. 4FM737-12 REV 01 | VERSION 2.2 – JUL/25