VT805

3U Rugged Chassis to accommodate four x16 PCIe Edge Card Modules with Integrated 100G GbE Switch

VT805

Key Features

- 3U Chassis that accepts four standard x16 PCIe Gen5 style modules
- The chassis is designed especially for the FPGA modules that allows SERDES to be re-configured to any protocol
- 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, +28V DC and +48V DC input option
- Redundant power 2+2
- Base Management Controller (BMC) for health management
- Managed Layer 2 and 3 100GbE 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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The VT805 is a four-slot chassis that accommodates four x16 PCIe style modules.

Power Supplies

The VT805 can accept up to four power supplies that can provide 2+2 redundancy. The VT805 has a Power Entry Module (PEM) that manages power to each slot. The VT805 has options for Universal AC, +28V DC and +48V DC power supplies.

Cooling

The VT805 has an intelligent fan controller and the cooling is front to back.

Routing between modules

The VT805 chassis provides x4 lanes to each slot as a full mesh between the slots. From each module there is a 100G interface to the 100G Switch.

Integrated 100GbE Switch

The VT805 has a 100GbE Switch that allows each of the PCIe modules to connect via a cable or use the 4x SERDES on the PCIe Edge to connect to the switch. The VT805 has quad QSFP28 in the front panel. *Each QSFP28 can be configured by software to run as:*

- Single 100G or 40G
- Quad 25G/10G/5G/2.5G/1G (any mix combination within the quad ports is allowed)

In total the VT805 has 4x 100/40G and/or any combination of 16x 25G/10G/5G/2.5G/1G.

Integrated BMC

The VT805 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.

Integrated USB HUB

The VT805 has a USB Hub on board that allows each module to connect via cable to the hub.

Integrated JTAG Switch Module (JSM)

The VT805 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.

Figure 1: VT805 without Slide Rail

Figure 2: VT805 Front View

Figure 3: VT805 Alternate View

Figure 4: VT805 Rear View

Motherboard Topology Options

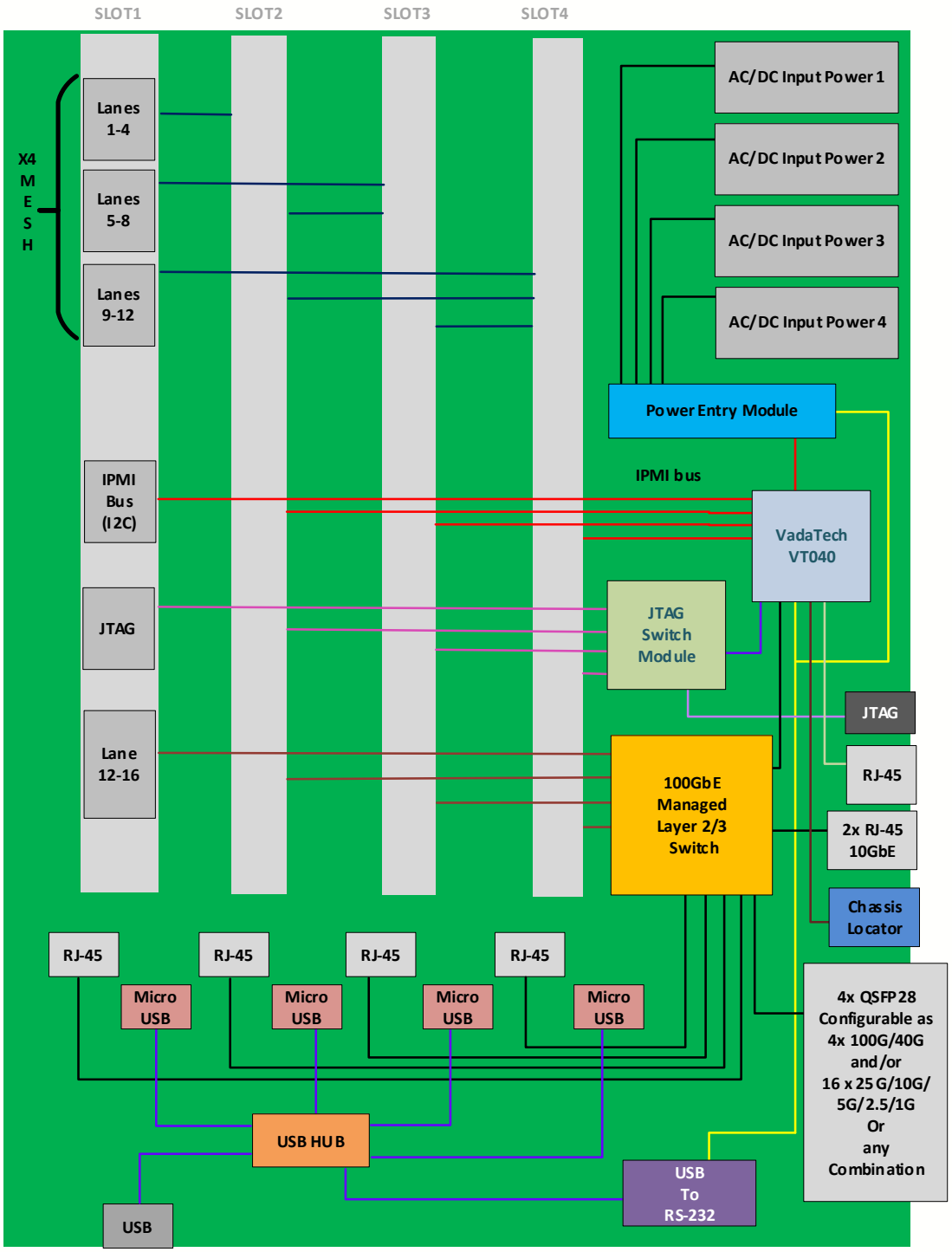

Figure 5: VT805 Backplane Connections (VadaTech can modify the motherboard for different topology)

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Specifications

Architecture		
Physical	**Dimensions**	Height: 3U
		Width: 19”
		Depth: 24.4”
		Weight: TBD
Type	**PCIe Edge style**	X16 PCIe full length
Standards		
PCIe Sig	**PCIe**	PCIe Sig specification Gen5
Configuration		
Power	**VT805**	Universal AC input, +28V DC 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

VT805 – AB0-D00-0HJ

A = Number of Power Supplies	D = Motherboard topology	
0 = Single 1200W (~200W per slot) 1 = Dual 1200W (400W per slot) 2 = Triple 1200W (2+1) 3 = Quad 1200W (2+2) 4 = Dual 18-36V DC (1200W total) 5 = Quad 18-36V DC (3+1) 6 = Dual 36V-75 DC (2000W total) 7 = Quad 36V-75V DC (2+2)	0 = Per figure 5 1 = Reserved 2 = Reserved	
B = Slide Rail		**H = Environmental**
0 = None 1 = Slides Rail on both sides installed		0 = Commercial 1 = Industrial
		J = Conformal Coating
		0 = No coating 1 = Humiseal 1A33 polyurethane 2 = Humiseal 1B31 acrylic 3 = Parylene

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 FPGA
- SyncE Master/Slave

PCI598

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

PCI594

- PCIe x16 or any protocol on the x16 SERDES
- Xilinx UltraScale+™ VU13P FPGA
- Quad QSFP28 ports and an additional GbE
- SyncE Master/Slave

Contact

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