VTX994

One Slot 6U VPX Benchtop and Rackmount Chassis with RTM for Conduction Cooled Module

VTX994

Key Features

- One slot 6U VPX benchtop platform for Conduction cooled modules
- Vertical/Horizontal Benchtop positioning or 19" Rackmount option
- Multiple backplane configurations for VITA 66.4, VITA 66.5, VITA 67.2, etc. by selectable connector options
- Chassis monitors the temperature of the wedgelock and maintains the required level
- Removable panels allow ease of access for probing
- Support for Rear Transition Modules (RTMs)
- Health monitoring via shelf manager (VadaTech VT040 is included within the chassis)
- JTAG connector
- User setting of SYSRESET, NVMRO, etc.
- Option to mount special I/O in the rear
- VBAT provided by onboard battery pack

Benefits

- Allows development of conduction cooled modules in a benchtop environment
- Optional shelf manager supports Tier 2 Health Management
- 400W AC Power supply
- Ease of access to board for debug and development
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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VTX994

The VTX994 is a single slot 6U VPX chassis for board bring-up and testing of conduction cooled 6U VPX modules. The chassis can accept a front and a rear module. The panels on both the front and rear slots are removable for ease of probing and debugging.

The Chassis CPU will monitor and maintain the VPX module wedge temperature, set by the user. This allows testing of the conduction cooled module without going through the thermal chamber.

The unit can be horizontally or vertically bench mounted for ease of access or has a 19" Rackmount option.

Power Supply

The VTX994 Universal AC power supply provides 400W to the chassis. The chassis supplies all the necessary power (+12V, -12V, +5V, etc.) to the module in accordance with VITA 46 specifications.

A battery pack is included that provides VBAT to the module. The chassis provides the current draw on the +12V and +5V by the VPX module and it's associated RTM.

Cooling

Variable speed fans controlled by the onboard CPU keeps the wedge at the user defined temp.

Backplane

The backplane provides all the necessary VITA 46 signals set by the user (NVMRO, SYSRESET, SYS_CON, driver the dual clock, etc.). All the connectors are installed P0 thru P6 and are routed from the front to the rear.

Health Monitoring

The chassis comes with the VadaTech 4th Generation shelf manager (VT040) that monitors the VPX board sensors in compliance to VITA 46.11. The VT040 supports Tier 2 Health Management. For a more complete and detail description of the VT040, the data sheet may be downloaded from VadaTech web page.

JTAG

The backplane breaks-out the JTAG signals via a header connector to enable external connection of a JTAG probe.

I/O

The VTX994 chassis could be provide for custom I/O such as Optical, MIL-STD-3899, etc. Please contact VadaTech for custom I/O configuration.
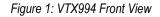

Figure 1: VTX994 Front View

Figure 2: VTX994 Rear View

Chassis Layout

Figure 3: VTX994 Chassis Layout - Front View

Figure 4: VTX994 Chassis Layout - Rear View

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Chassis Layout cont.

Figure 5: VTX994 Chassis Layout with custom I/O- Rear View

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Specifications

Architecture			
Physical	**Dimensions**	Height: 2U; 19"	
Standards			
VPX	**Type**	VITA 46.0 and VITA 66.4, VITA 66.5, VITA67.2, etc. Baseline Specification	
Configuration			
Power	**VTX994**	400W AC universal	
Environmental		See Ordering Options	
Cooling		Front to rear	
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

VTX994 – A00-DE0-GHJ

A = Backplane	D = Mounting	G = VPX Connector Type
0 = P1/P2/P3/P4/P5/P6 standard 1 = P1/P2/P3/P4/P5 standard P6 VITA 66.5 2 = P1/P2/P2/P4/P5 (special routing) * 3 = Reserved 4 = Reserved 5 = Reserved 6 = Reserved	0 = Benchtop 1 = 19" Rackmount 2 = Reserved 3 = Reserved	0 = Standard 50u Gold Rugged 1 = KVPX Connectors
	E = Air Flow	**H = Environmental**
	0 = Wedge lock cooling 1 = Over the module	See Environmental Specification
		J = Conformal Coating
*Contact VadaTech for this routing		0 = No coating 1 = Humiseal 1A33 polyurethane 2 = Humiseal 1B31 acrylic

Environmental Specification*

Option H	H = 0	H = 1
Operating Temperature	-5°C to +55°C	AC3* (-40°C to +70°C)
Storage Temperature	-40°C to +85°C	C3* (-50°C to +100°C)
Operating Vibration	0.04 g2/Hz max	V2* (0.04 g2/Hz max)
Storage Vibration	20g	OS1* (20 g)
Humidity	95% non-condensing	95% non-condensing

Notes:

*Please contact VadaTech Sales for other specification

Related Products

VPX551

- Dual Kintex UltraScale™ XCKU115
- 16 GB of 64-bit wide DDR4 Memory to each FPGA
- Rear fibre I/O via VITA 66.5

VPX646

- 3U VPX NVMe Host Bus Adapter with Full support for RAID
- Dual Core ARM A15 RAID on Chip (ROC)
- Onboard 8 GB of DDR4 Memory with ECC

VPX752

- 6U VPX module Intel 5th Generation Xeon-D SoC
- PCIe Gen3 x16 (dual x8 or quad x4)
- Quad 10GbE XAUI

Contact

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