

# VTX985

## Two Slot 3U VPX Rackmount Chassis with RTM for Conduction Cooled Module



VTX985

### Key Features

- Two slot 3U VPX platform for Conduction cooled modules
- 19" Rackmount
- Multiple backplane configurations for VITA 66.4, VITA 66.5, VITA 67.1, etc. by selectable connector options
- Chassis monitors the temperature of the wedge lock and maintains the required level
- Support for Rear Transition Modules (RTMs)
- Health monitoring via shelf manager
- JTAG connector
- User setting of SYSRESET, NVMRO, etc.
- VBAT provided by onboard battery pack

### Benefits

- Allows development of conduction cooled modules in standard 19" rack mount
- Shelf manager supports Tier 2 Health Management
- 400W AC Universal 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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# VTX985

The VTX985 is a dual slot 3U VPX chassis conduction cooled for two 3U VPX modules. The chassis can accept a front and a Rear Transition Module (RTM).

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

The chassis has provision to mount to a 19" Rackmount.

## Power Supply

The VTX985 Universal AC power supply provides 400W to the chassis. The chassis supplies all the necessary power (+12V, -12V, +5V, +3.3V 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, +5V and +3.3V by the VPX module and its 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. The backplane can be ordered with custom routing between the two modules. The default routing, routes all P1 ports between the two modules.

## Health Monitoring

The chassis comes with the VadaTech 4<sup>th</sup> Generation shelf manager (VT040) that monitors the VPX board sensors in compliance to VITA 46.11. The VT040 supports Tier 2 Health Management and comes with the VTX985 chassis. 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.



Figure 1: VTX985 Front View



Figure 2: VTX985 Rear View

# Chassis Layout



Figure 3: VTX985 Chassis Layout - Front View

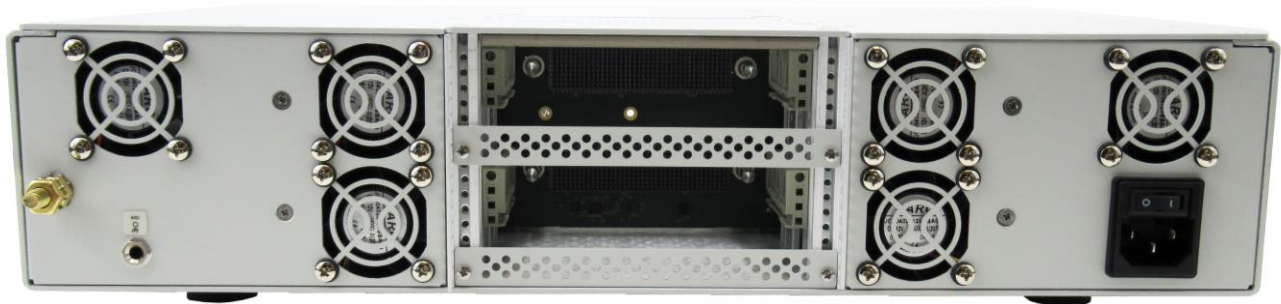


Figure 4: VTX985 Chassis Layout - Rear View

# Backplane Connection Diagrams

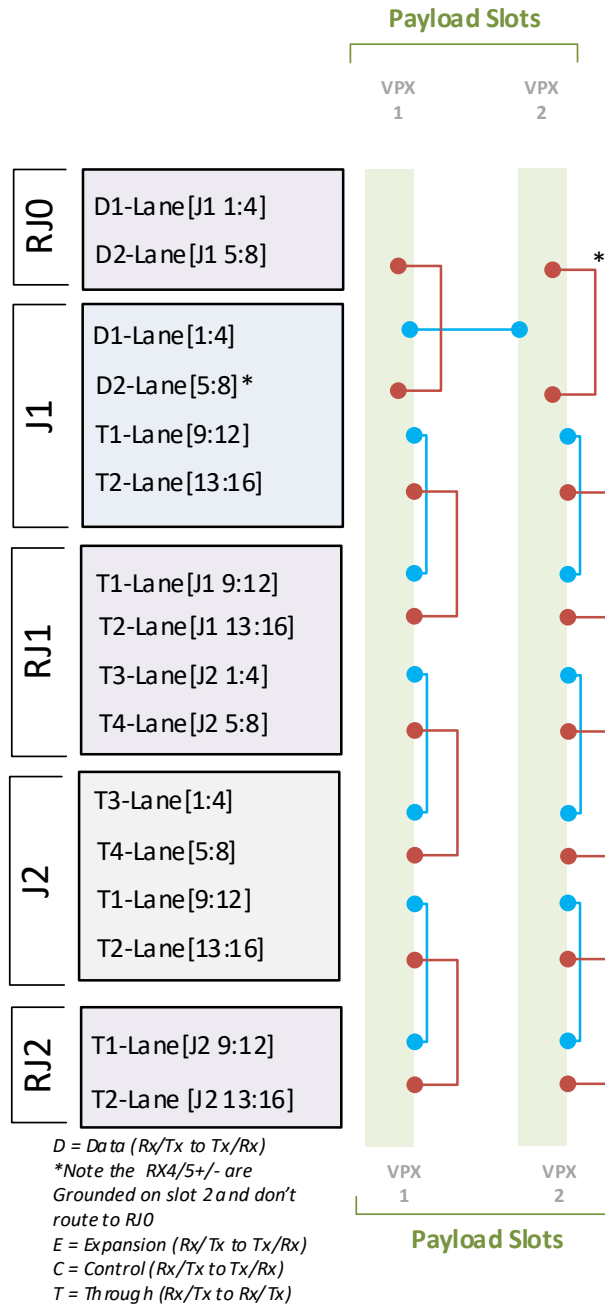


Figure 5: Backplane, Option A=0\*

\*Note for option A = 0:

On the top slot VS1 is connected to +5V which is a violation of the VPX Spec and VS2 is not connected to +3.3V.

On the bottom slot VS1 is not connected to the +12V

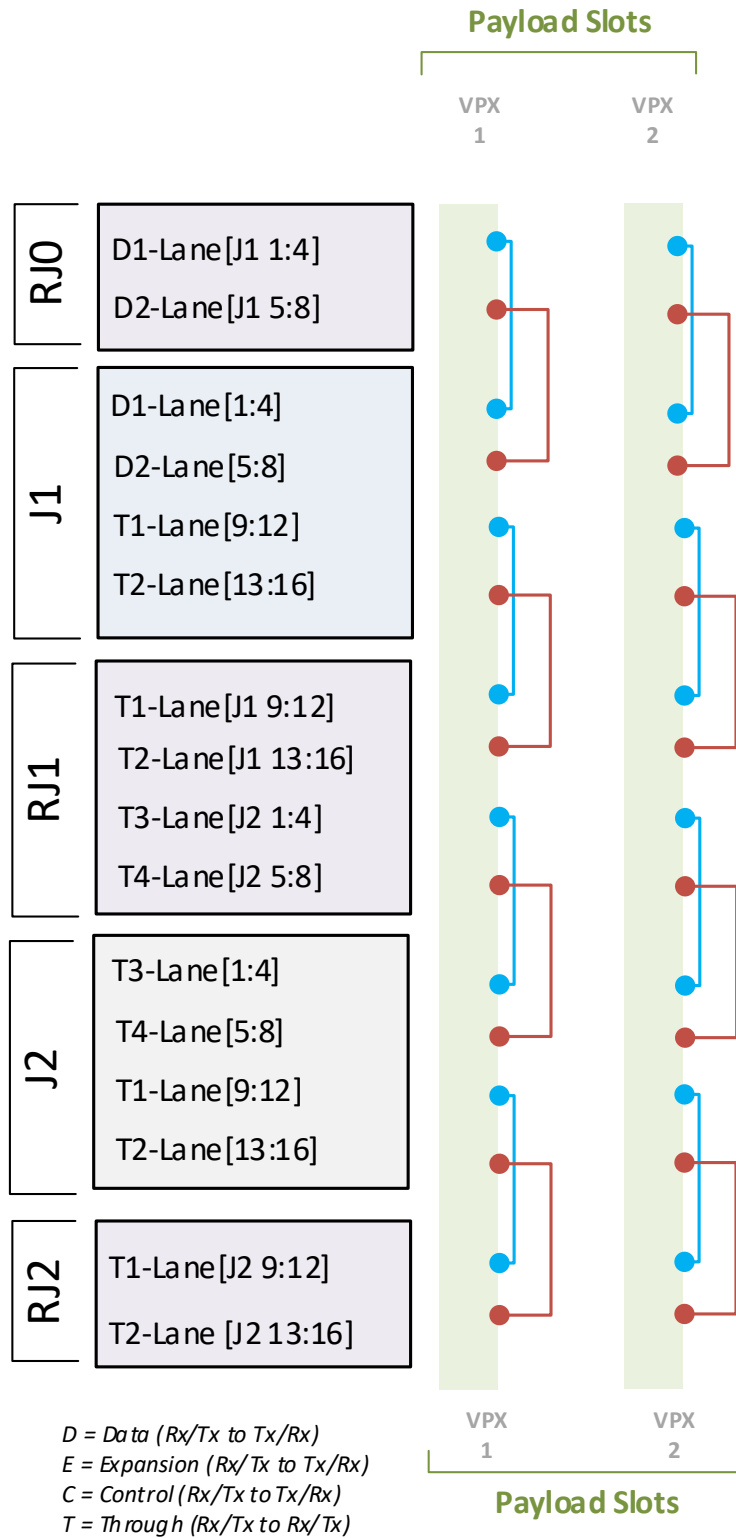


Figure 6: Backplane, Option A=1

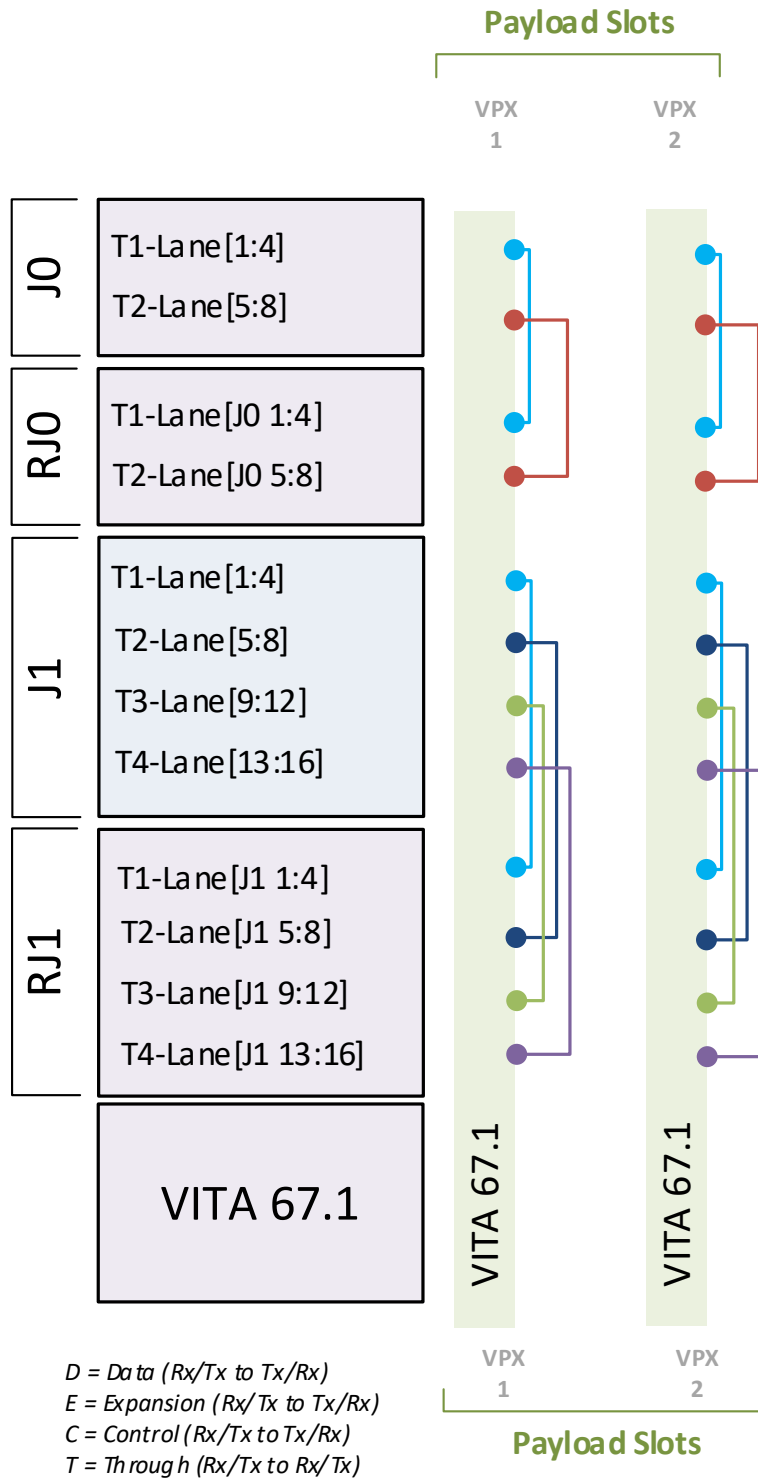


Figure 7: Backplane, Option A=2

# Specifications

Architecture		
Physical	Dimensions	Height: 2U; 19"
Standards		
VPX	Type	VITA 46.0 and VITA 66.4, VITA 66.5, VITA67.1, etc. Baseline Specification
Configuration		
Power	VTX985	400W AC universal
Environmental		See <a href="#">Ordering Options</a>
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 <a href="#">VadaTech Terms and Conditions</a>

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

## VTX985 – AB0-D00-GHJ

A = Backplane	D = Mounting	G = VPX Connector Type
0 = Per Figure 5 1 = Per Figure 6 2 = Per Figure 7 3 = Reserved 4 = Reserved 5 = Reserved 6 = Reserved	0 = Bench Top 1 = 19" Rackmount 2 = Reserved 3 = Reserved	0 = Standard 50u Gold Rugged 1 = KVPX Connectors
B = VPX Module 5HP Pitch		H = Environmental
0 = VITA48 1 = IEEE1101.1		See <a href="#">Environmental Specification</a>
		J = Conformal Coating
		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

VPX102



- 3U VPX Dual ADC 12-bit @ 6.4 GSPS or Quad ADC @ 3.2 GSPS
- Virtex UltraScale+ XCVU13P with large internal memory
- ANSI/VITA 42.3 (XMC PCI Express)

VPX572



- 3U VPX NVMe Host Bus Adapter with Full support for RAID
- Dual Core ARM A15 RAID on Chip (ROC)
- Health Management through dedicated Processor

VTX995



- Two Slot 6U VPX Rackmount Chassis with RTM for Conduction Cooled Module
- Optional backplane configurations for VITA 66.4, VITA 66.5, VITA 67.2, etc.
- Chassis monitors the temperature of the wedgelock and maintains the level

## 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

7F-3, No16, Jihu Rd Lane 35, Neihu 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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