

VPX984

Chassis Manager carrier for 3U VPX based on VadaTech VT042 Module



VPX984

Key Features

- Quad ARM Cortex-A53 @ 1.6 GHz per core
- 4GB LP-DDR4 memory
- FRAM for log messages
- 64 NAND Flash
- I2C Real Time Clock with battery backup
- Low power (2W)
- Based on the VadaTech VT042 Module
- IPMI 2.0 compliant

Benefits

- Supports VITA 46.11 Tier-2 command set
- Utilizing VadaTech VT042 fourth generation Shelf
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

OpenVPX™



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VPX984

The VadaTech VPX984 Chassis Manager is based on the VITA 46.11 specification. The VITA 46.11 leverages the Intelligent Platform Management Interface (IPMI) and AdvancedTCA Specification by PICMG as its architectural foundation. The VPX984 is a carrier for VadaTech VT042 Module which provides all the health management to the VPX system. [VT042 - System Management for VPX Chassis, 4th Generation \(vadatech.com\)](http://vadatech.com).

The VadaTech Chassis Management solution is derived from our field proven VadaTech ATCA Shelf Manager utilizing core interfaces such as the Simple Network Management Protocol (SNMP), Remote Management Control Protocol (RMCP), Web Interface, System Management application (Scorpionware™), and a user-friendly Command Line Interface.

The Module has GbE as 1000Base-TX to the front panel connecting to the Shelf Manager or as GbE to P1 as 1000Base-BX (SERDES Based). The module also had 10/100 Ethernet port in the front as well as 10/100 Ethernet going to P2 connector for fail over between two VPX984. The P2 connector also carries further signals for fail over between the two modules for full fail over.

The module allows the P1 and/or P2 to be installed as load option for chassis that don't route the signals.



Figure 1: VPX984



Figure 2: VPX984 Conduction Cooled

Front Panel View



Figure 3: VPX984 Front Panel View



Figure 4: VPX984 Conduction Cooled Front Panel Views

Scorpionware™ Software

VadaTech’s Scorpionware™ software can be used to access information about the current state of the Shelf or the Carrier, obtain information such as the FRU population, or monitor alarms, power management, current sensor values, and the overall health of the Shelf. The software GUI is very powerful, providing a Virtual Carrier and FRU construct for a simple, effective interface.

IPMI Protocol Analyzer

VPX984 can be used as an IPMI protocol analyzer. Figure shows the trace viewer output from VPX984.

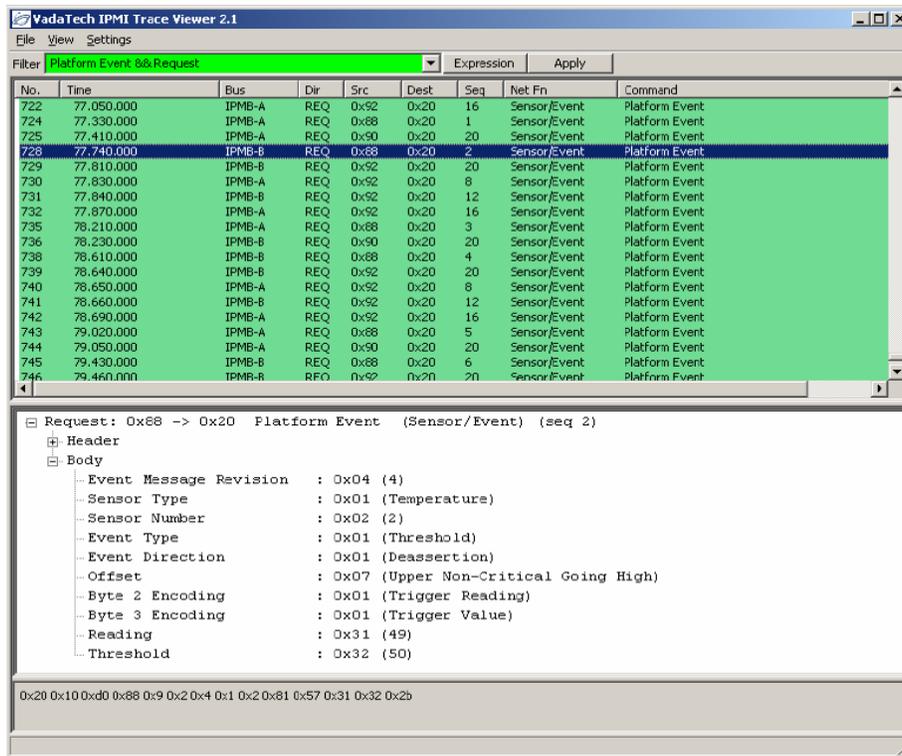


Figure 5: IPMI Protocol Analyzer Trace Viewer Output

Block Diagram

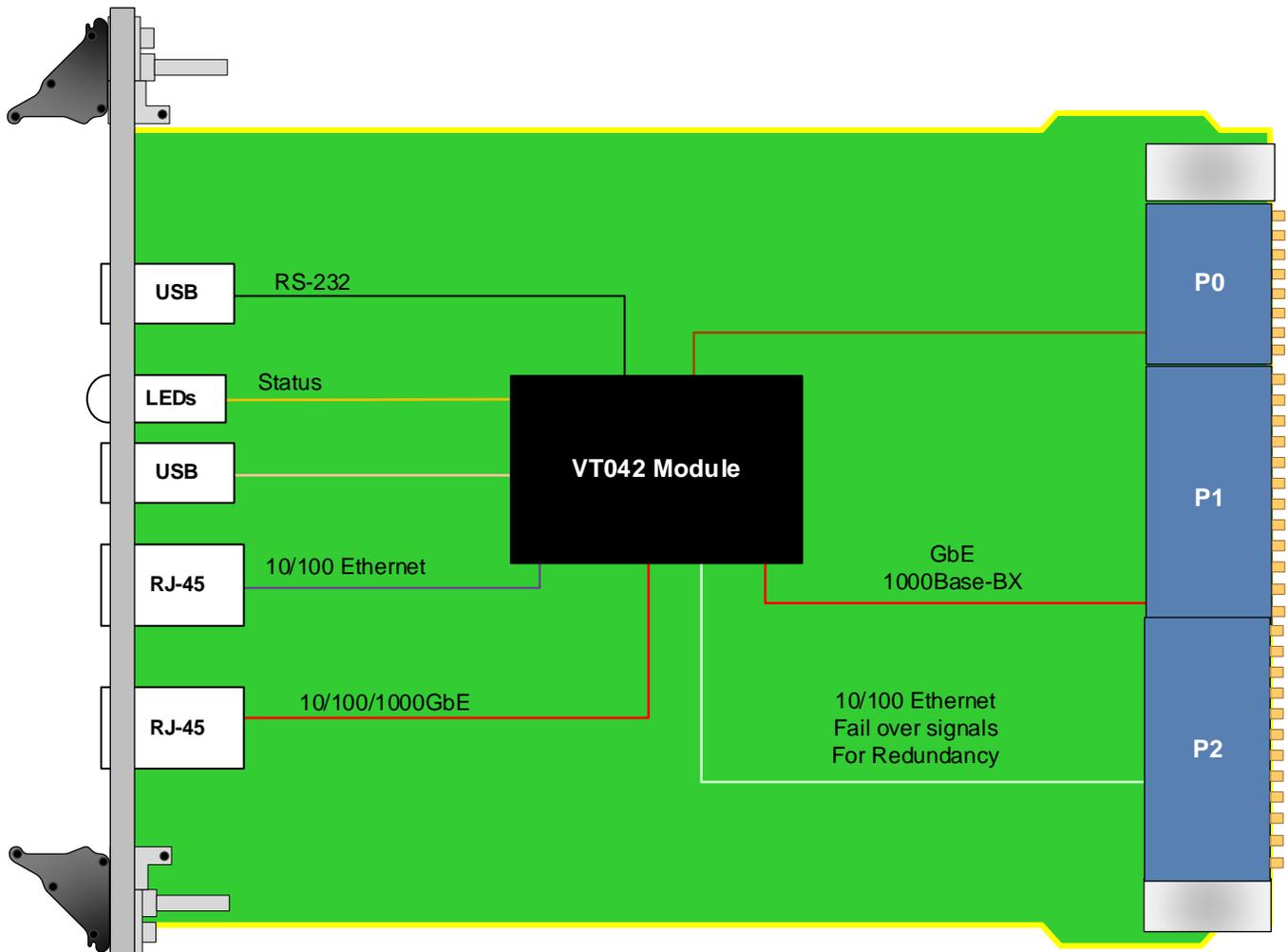


Figure 6: VPX984 Functional Block Diagram

Pinout Block Diagram

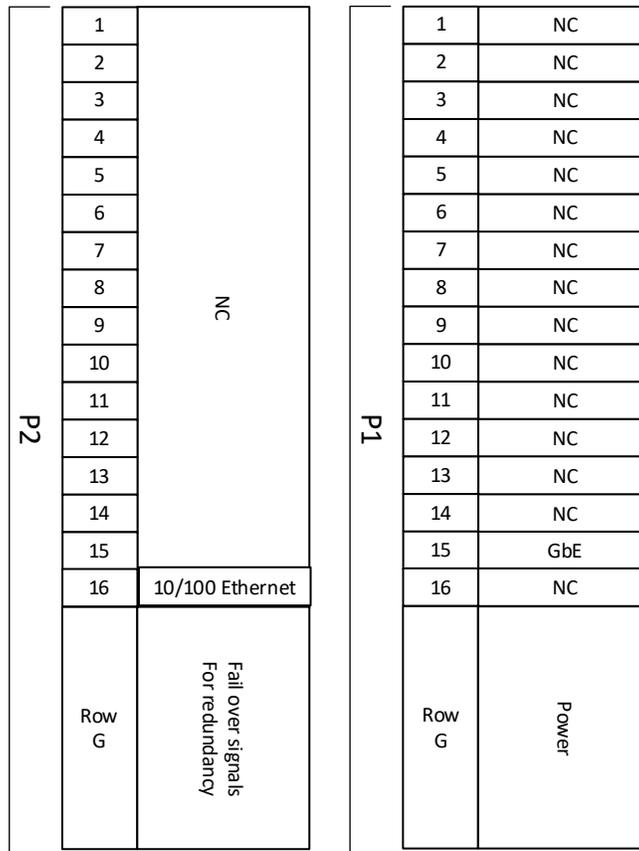


Figure 5: VPX984 Pinout Block Diagram

Specifications

Architecture	
Physical	Dimensions 3U, 1" pitch
Standards	
Module Management	IPMI VadaTech VPX Shelf Manager and JTAG Switch Module
Configuration	
Power	VPX984 ~2W
Environmental	Temperature See Ordering Options
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	Two (2) years, see VadaTech Terms and Conditions

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

VPX984 – ABC-000-GHJ

A = VPX P1 Connector 0 = Not installed 1 = Installed	G = Applicable Slot Profiles 0 = 5 HP, VITA 48.1
B = VPX P2 Connector 0 = No installed 1 = Installed	H = Environmental See Environmental Specification
C = VPX Connector Type 0 = Standard 50u Gold Rugged 1 = KVPX Connectors	J = Conformal Coating 0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Notes:

Environmental Specification

Option H	Air Cooled			Conduction Cooled	
	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

Notes: *Nomenclature per ANSI/VITA 47. Contact local sales office for conduction cooled (H = 2, 3, 4).

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

VTX866



- 11U VPX Chassis, Twelve 6U Slots with RTM Support
- Dual Dedicated Switch/management slots
- Up to ten 6U VPX payload slots (with two slots that can have up to 10 HP)

VPX752



- 6U VPX module Intel 5th Generation Xeon-D SoC
- PCIe Gen3 x16 (dual x8 or quad x4)
- Quad 10GbE XAU1

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