

VT042

System Management for VPX Chassis, 4th Generation



VT042

Key Features

- Provides full System Management for VPX chassis
- Follows VITA 65 and VITA 46.11 specification
- Quad ARM Cortex-A53 core @ 1.6 GHz per core
- 4 GB DDR4 memory
- FRAM for log messages
- 64 GB of NAND Flash
- Fourth generation (following up from VT001, VT002 and VT003 shelf managers)
- Small form factor 3.08" (78.2mm) x 2.125" (54mm)
- Deployable in conduction-cooled chassis

Benefits

- 4th Generation system manager in mezzanine format allows use in multiple form factors
- Compact size with low (~2W) power consumption
- 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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VT042

The VT042 incorporates Intelligent Platform Management Interface (IPMI v2.0) following VITA 46.11 System Management specification. It is VadaTech's 4th generation System Manager product and provides a complete hardware and software solution in a small form factor, 3.08" (78.2mm) x 2.125" (54mm), utilizing ~2W.

The VT042 is designed for deployment in any VPX Chassis to provide rapid implementation of health management in the chassis. The module is highly integrated and follows the OpenVPX specification.

Deployment with a secondary VT042 module in the chassis allows a full failover between the two modules. The module operates from the VPX +3.3V AUX or +3.3V. The module follows all the VPX specifications, including NVMRO for Write protect of the Flash.

The VT042 is specifically designed to support operation in a conduction-cooled chassis. Please contact VadaTech for the detailed implementation within the system.

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 (Field Replaceable Unit) population, alarms monitoring, power management, on-board sensors' value, 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.



Figure 1: VT042



Figure 2: VT042 Overhead View

Specifications

Architecture	
Physical	Dimensions Width: 2.125" (54 mm) Length: 3.08" (78.2 mm)
Type	System Manager Mezzanine module to mount to a management carrier within the chassis
Standards	
Module Management	IPMI IPMI v2.0, VITA 65 and VITA 46.11
Configuration	
Power	VT042 ~2W
Environmental	Temperature See Ordering Options Operating Temperature: -40° to +85°C Storage Temperature: -55° to +100°C
	Vibration Follows the VITA spec (see ordering option)
	Shock Follows the VITA spec (see ordering option)
	Relative Humidity 5 to 95% non-condensing
Others	Mechanical Tyco/Samtec 60 pin
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

VT042 –A00-000-0HJ

A = Heat Sink		
0 = Heat spreader (Conduction Cool) 1 = Standard Air cooled (fins) 2 = Not Installed 3 = Machined Aluminium*		
		H = Temperature Range
		See Environmental Specification
		J = Conformal Coating
		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic 3 = Parylene

Notes:

* VadaTech can make the heat sink in any height

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

VPX004



- Unified 1 GHz quad-core CPU for, Shelf Manager, and Fabric management
- Automatic fail-over with redundant VPX004
- 1GbE base switch with dual 100/1000/10G uplink

VPX570



- ADC 12-bit @ 5.4 GSPS (EV12AS350A)
- DAC 12-bit @ 6 GSPS (EV12DS460A)
- Xilinx UltraScale+ XCVU13P FPGA with 8 GB DDR4

VPX580



- Xilinx UltraScale+ XCZU19EG FPGA
- 8 GB of 64-bit wide DDR4 Memory (single bank) with ECC
- Dual FMC+ sites (16 SERDES to each) on a 6U VPX

Contact

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DOC NO. 4FM737-12 REV 01 | VERSION 1.0 – DEC/24