

# VT042

## System Management for VPX Chassis, 4<sup>th</sup> 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

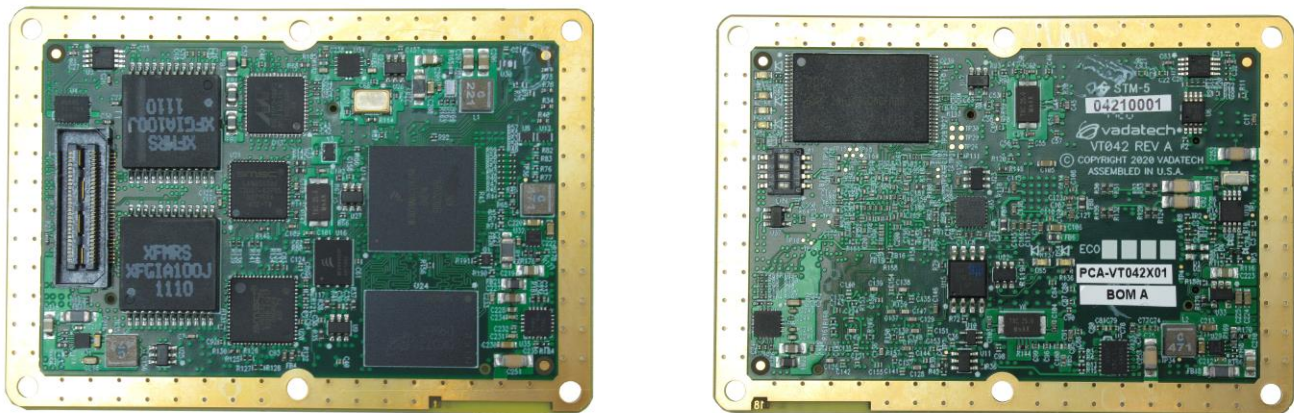


Figure 2: VT042 Overhead View

# Specifications

Architecture	
<b>Physical</b>	<b>Dimensions</b> Width: 2.125" (54 mm) Length: 3.08" (78.2 mm)
<b>Type</b>	<b>System Manager</b> Mezzanine module to mount to a management carrier within the chassis
Standards	
<b>Module Management</b>	<b>IPMI</b> IPMI v2.0, VITA 65 and VITA 46.11
Configuration	
<b>Power</b>	<b>VT042</b> ~2W
<b>Environmental</b>	<b>Temperature</b> See <a href="#">Ordering Options</a> Operating Temperature: -40° to +85°C Storage Temperature: -55° to +100°C
	<b>Vibration</b> Follows the VITA spec (see ordering option)
	<b>Shock</b> Follows the VITA spec (see ordering option)
	<b>Relative Humidity</b> 5 to 95% non-condensing
<b>Others</b>	<b>Mechanical</b> Tyco/Samtec 60 pin
Other	
<b>MTBF</b>	MIL Hand book 217-F@ TBD hrs
<b>Certifications</b>	Designed to meet FCC, CE and UL certifications, where applicable
<b>Standards</b>	VadaTech is certified to both the ISO9001:2015 and AS9100D standards
<b>Warranty</b>	Two (2) years, see <a href="#">VadaTech Terms and Conditions</a>

## 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

<b>A = Heat Sink</b>		
0 = Not Installed 1 = Standard Air cooled (fins) 2 = Heat spreader (Conduction Cool)		
		<b>H = Environmental</b>
		See <a href="#">Environmental Specification</a>
		<b>J = Conformal Coating</b>
		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic 3 = Parylene

## Environmental Specification

Option H	Air Cooled			Conduction Cooled	
	H = 0	H = 1	H = 2	H = 3	H = 4
<b>Operating Temperature</b>	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)
<b>Storage Temperature</b>	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)
<b>Operating Vibration</b>	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)
<b>Storage Vibration</b>	OS1* (20g)	OS1* (20g)	OS2* (40g)	OS2* (40g)	OS2* (40g)
<b>Humidity</b>	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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- Constant innovation
- Open systems expertise

## We commit to our customers

- Partnerships power innovation
- Collaborative approach
- Mutual success

## We deliver complexity

- Complete signal chain
- System management
- Configurable solutions

## We manufacture in-house

- Agile production
- Accelerated deployment
- AS9100 accredited



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