

VT050

ATCA Switching Shelf Manager, Managed Layer 2 Fabric/Base Interface



VT050

Key Features

- Managed Layer two 10GbE Switch
- Compliant to PICMG 3.0 fabric/base specifications
- Dual GbE, 10/100 out-of-band, and RS-232 de-bug ports via RJ-45
- Quad GbE and quad 10GbE on the front panel
- Software for Sensor Data Record, event logs, FRU inventory monitoring temp and power, e-keying, alarms and more
- Telco alarm with Micro DB15 connector front panel interface
- Active/standby redundancy when utilizing two VT050 in a system

Benefits

- Combines functionality of switches and shelf managers in one unit, significantly boosting performance density
- Layer 2 managed switch performance
- Incorporates VadaTech's 3rd generation shelf manager with HTTP, SNMP, HPI, RMCP, CLI and other software features
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

Advanced TCA®



vadatech
THE POWER OF VISION



VT050

The VT050 AdvancedTCA Switching Shelf Manager is designed for use with VadaTech VT831 or VT832 ATCA Chassis. By combining VadaTech's 3rd Generation Shelf Manager with an integrated Layer two Managed Switch, the unit allows two slots in the system to be used as Nodes that would otherwise be allocated as dedicated switching hubs in the system.

Full redundancy and failover on both the Hub side and the Shelf Manager side can be achieved by using two VT050's in the system. The Compact design allows two switches to be mounted outside of the card cage area, saving space.

The VT050 can run as a protocol analyzer to monitor, inject, capture and validate I2C traffic on the Intelligent Platform Management Bus (IPMB). A Graphical User Interface (GUI) validates and displays the IPMB messages for injection into the shelf. The GUI application communicates with the VT050 through the Ethernet port.

The VT050 is fully hot-swappable to minimize service downtime.



Figure 1: VT050



Figure 2: VT050 Front View

Block Diagram

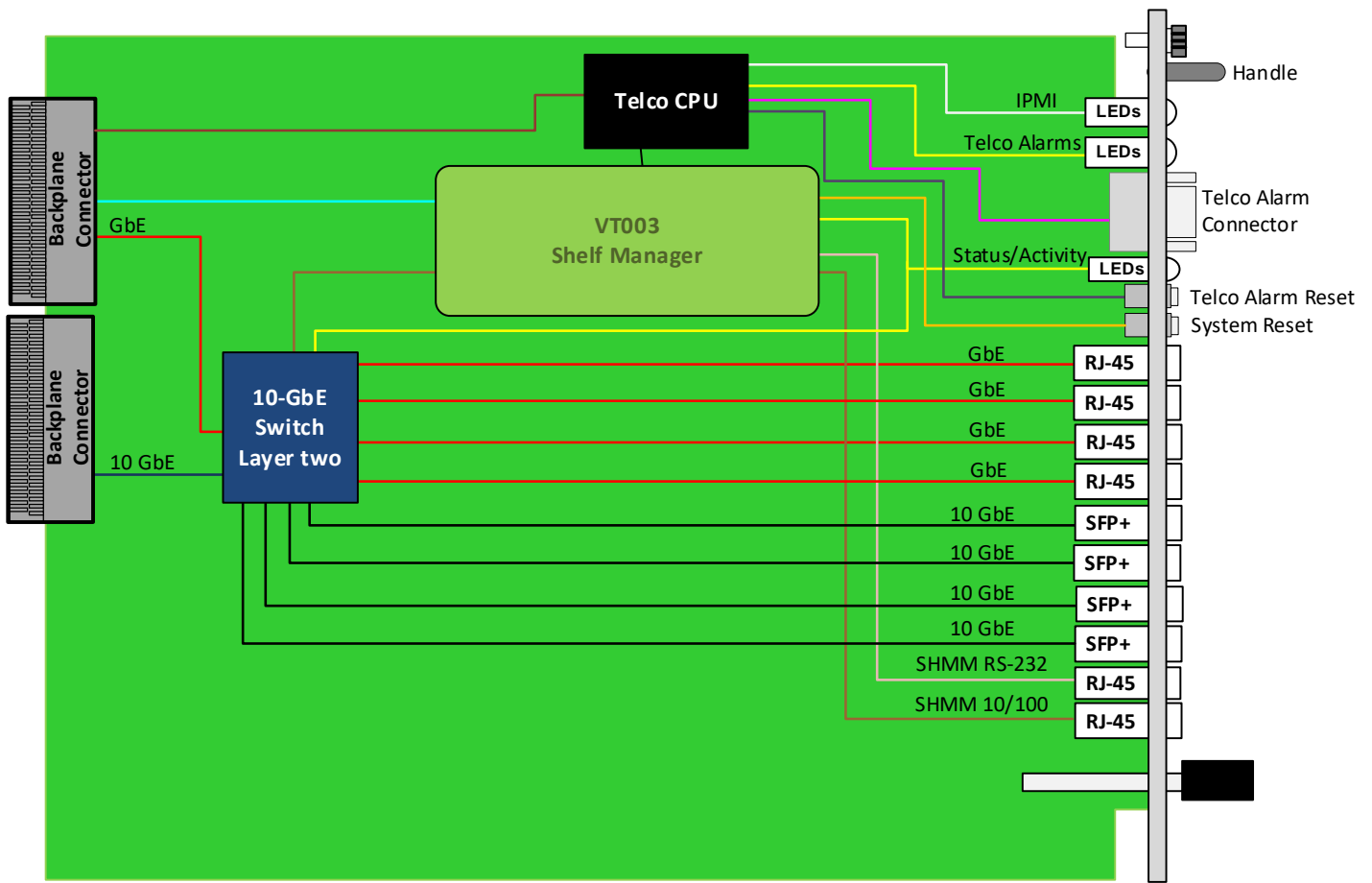


Figure 3: VT050 Functional Block Diagram

GbE Layer 2 Managed Switch

The Layer 2 managed GbE switch routes dual GbE ports to the backplane base channels. The features include Switching, Multi-cast, Source Port Filtering, Storm Control Per-Port, Spanning Tree, Double Tagging, and Mirroring.

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

VT050 can be used as an IPMI protocol analyzer, Figure .

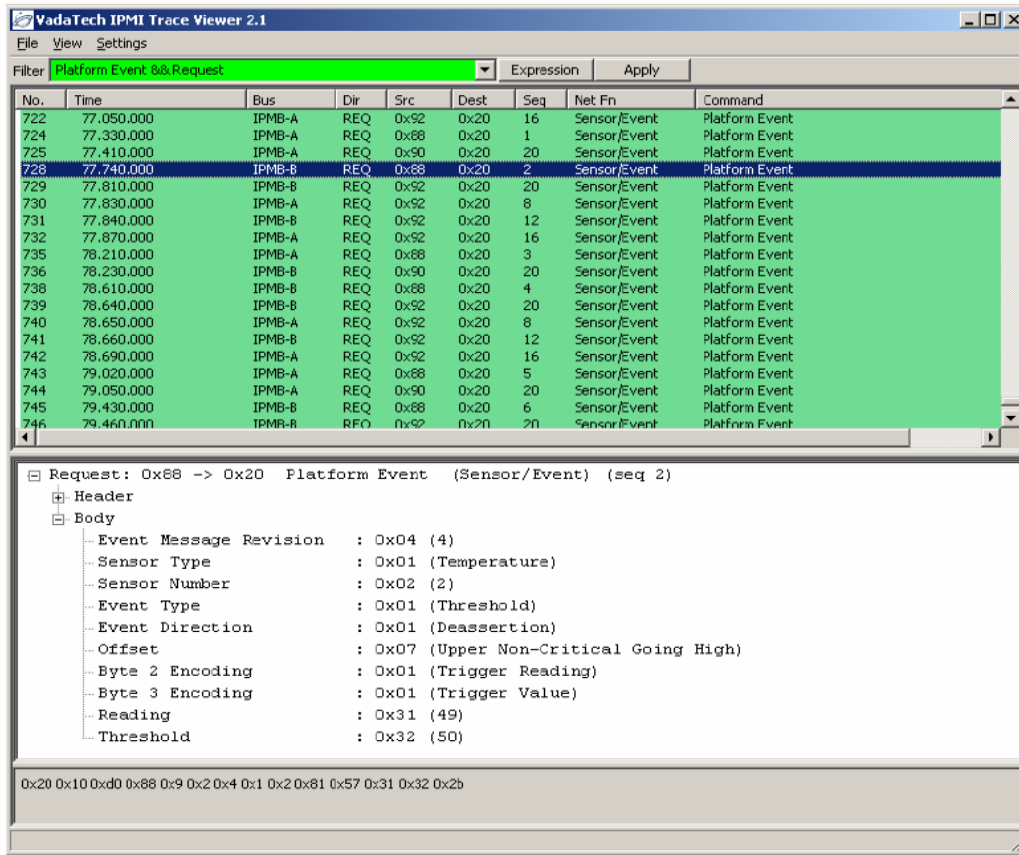


Figure 4: IPMI Protocol Analyzer Trace Viewer Output

Specifications

Architecture		
Physical	Dimensions	Width: 5.685" (144 mm) Depth 11.096" (281 mm)
Type	Shelf Manager	VadaTech ATCA Shelf Manager
Standards		
Module Management	IPMI	IPMI v2.0 and PICMG 3.0
Configuration		
Power	VT050	65 W
Environmental	Temperature	See Ordering Options Storage Temperature: -40° to +90°C
	Vibration	Operating 9.8 m/s ² (1G), 5 to 500 Hz on each axis
	Shock	Operating 30G each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	Interface Connectors	Micro DB15 connector for Telco Alarm RJ-45 for RS-232 port Single 10/100 out of band port support to the shelf manager Quad GbE ports (1000 speed only) and Quad SFP+
	LEDs	IPMI management control Activity/Link user LEDs
	Mechanical	Hot-swap ejector handle Cap-screw
	Push Button	Alarm reset and system reset
Software Support	Operating System	Linux (consult factory for VxWorks, Windows, or other 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

VT050 – A00-000-0HJ

A = SFP0+ Transceivers* 0 = No TXCVRs 1 = 10GBASE-SR 2 = 10GBASE-LR (1KM) 3 = 10BBASE-LR (10KM) 4 = Reserved		
		H = Temperature Range 0 = Commercial (Operating Temperature -5° to 65°C) 1 = Industrial
		J = Conformal Coating 0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

*Note: All four transceivers are loaded with the same type, contact VadaTech Sales for other options

Related Products



- Shelf manager for AdvancedTCA systems
- Utilizing Gen 3 Shelf Manager VT003
- Option to plug into ATC139 ATCA Carrier



- 10GbE Switching Shelf Manager, eliminates need for separate switch slots
- Compliant to PICMG 3.0 base specs
- Compliant to PICMG 3.1 fabric specs



- Switching Shelf Manager (SSM) – 40G
- Compliant to PICMG 3.0 base specs
- Compliant to PICMG 3.1 fabric specs

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

7 Floor, No. 2, Wenhua Street, Neihu District, Taipei 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

Choose VadaTech

We are technology leaders

- First-to-market silicon
- 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



vadatech
THE POWER OF VISION

Trademarks and Disclaimer

The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.

© 2019 VadaTech Incorporated. All rights reserved.
DOC NO. 4FM737-12 REV 01 | VERSION 1.1 – MAY/23