ATCA Shelf Manager with Integrated 10GbE/GbE Switch – VT030
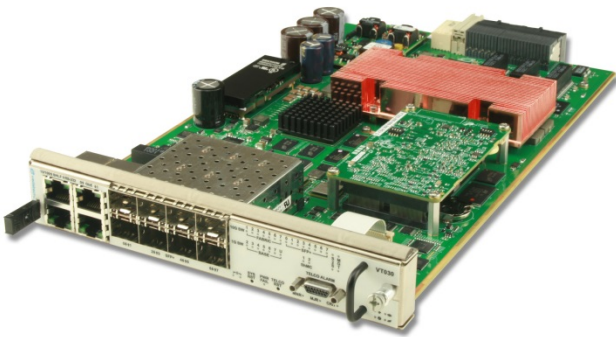
ATCA Switching Shelf Manager

KEY FEATURES

- 10GbE Switching Shelf Manager eliminates need for separate switch slots
- Compliant to PICMG 3.0 base and PICMG 3.1 fabric interface (10GbE/GbE) specifications
- Compact 1.0" H x 5.685" W x 11.096" D size
- Octal 10GbE ports via SFP+
- Dual GbE, 10/100 out-of-band, and RS-232 de-bug ports via RJ-45
- Ten 10GbE ports routed to RTM for optional access
- Software for Sensor Data Record, event logs, FRU inventory monitoring temp and power, e-keying, alarms and more
- Unmatched front panel density, including LED indicators for Base, Fabric, SHMC, Reset, Power Fail, Standby, and more
- Can run as an IPMI protocol analyzer to monitor the I2C busses.
- IPMI 2.0 (or 1.5) compliant
- Telco alarm with Micro DB15 connector front panel interface
- Active/standby redundancy when utilizing two VT030 IMSs in a system

Benefits of Choosing VadaTech

- Combines functionality of switches and shelf managers in one unit, significantly boosting performance density
- 10GbE Layer 2 or Layer 3 managed switch performance
- Incorporates VadaTech's 3rd generation shelf manager with HTTP, SNMP, HPI, RMCP, CLI and other software features
- Efficient re-use of existing designs/components reduce costs
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company

The VT030 Switching Shelf Manager (SSM) combines VadaTech's 3rd Generation Shelf Manager with integrated 10GbE Layer 2 or Layer 3 Managed Switches on the same module. This allows two slots in the system to be used as Nodes versus having the slots otherwise be allocated as dedicated switching hubs in the system.

With two VT030's in the system, there is full redundancy and failover both on the Hub side as well as on the Shelf Manager side. The SSMs are compact, where two switches can be mounted outside of the card cage area, saving space. The VT030 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 VT030 through the Ethernet port.

The VT030 is fully hot-swappable to minimize service downtime. An ART030 Rear Transition Module (RTM) for routing the I/O to the rear can be ordered separately.

10GBE LAYER 2 OR LAYER 3 MANAGED SWITCH

The Layer 2 or Layer 3 managed 10GbE switch routes 10GbE across the fabric ports. There are eight uplink ports on the front panel via the SFP+ connectors for expansion. The features include Spanning Tree (+ Rapid), VLANs, GMRP, GVRP, Port Authentication, IGMP/Snooping Proxy, and Multi-cast Listener Discovery.
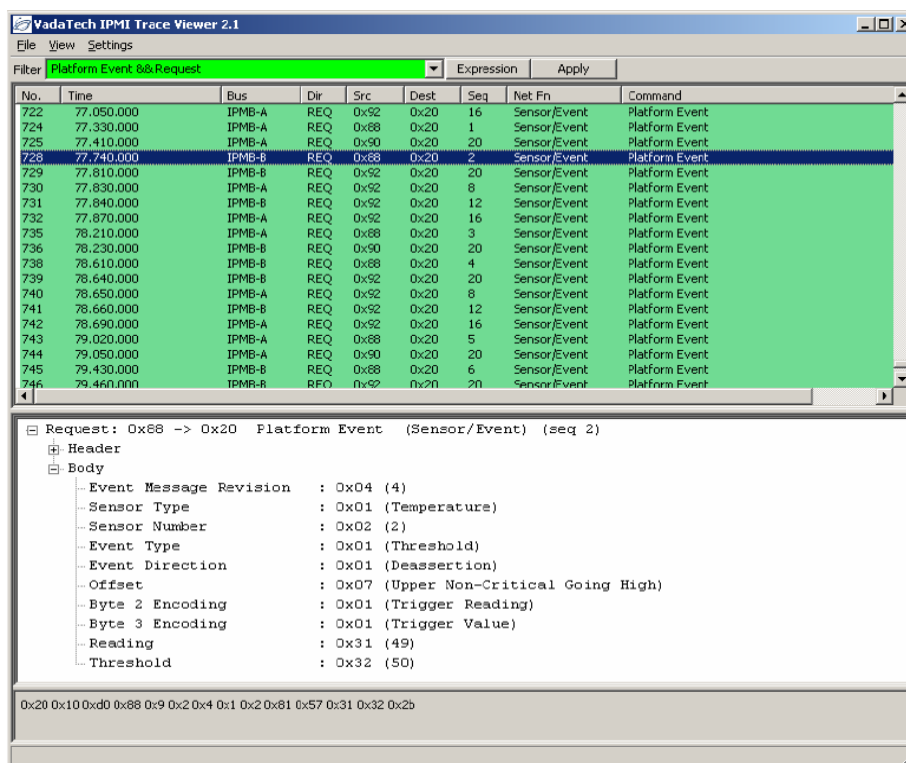
GBE LAYER 2 OR LAYER 3 MANAGED SWITCH

The Layer 2 or Layer 3 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

VT030 can be used as an IPMI protocol analyzer. Figure 1 shows the trace viewer output from VT030.

Figure 1: VT030 IPMI Protocol Analyzer Trace Viewer Output

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and µTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), 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.
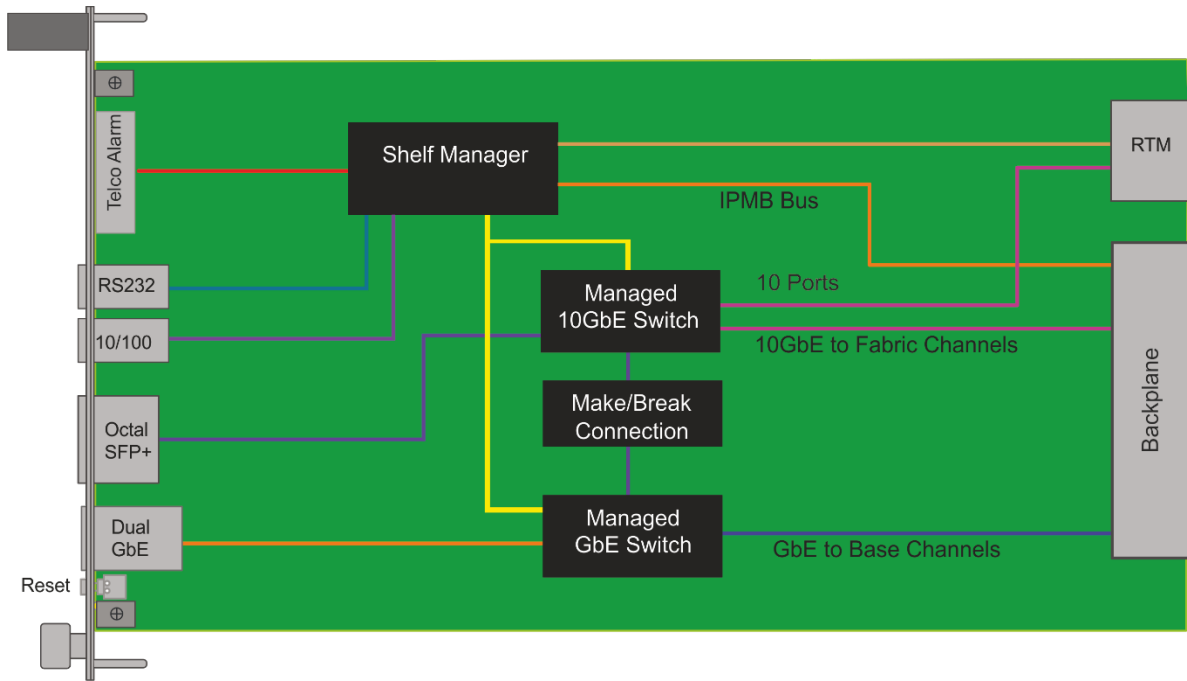
SPECIFICATIONS

Architecture		
Physical	Dimensions	Width: 5.685" (144 mm)
		Depth 11.096" (281 mm)
Type	Shelf Manager	VadaTech ATCA Shelf
Standards		
Module Management	IPMI	IPMI version 2.0 and PICMG 3.0
Configuration		
Operating Temperature		Operating Temperature: 0° to 65°C (Air flow requirements is to be greater than 200 LFM). Available in industrial temperature range
Environmental	Temperature	Storage Temperature: –40° to +90°C
	Vibration	1 G, 5 to 500 Hz on each axis
	Shock	30 Gs on each axis
	Relative Humidity	5 to 95 per cent, 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
		Dual GbE ports (10/100/1000)
		Eight SFP+ ports[1]
	LEDs	IPMI management control
		Activity / Link user LEDs
	Push Button	Reset Switch
Software Support	Operating System	Linux
Conformal Coating		Humiseal 1A33 Polyurethane (Optional)
		Humiseal 1B31 Acrylic (Optional)
Other		
Certifications	Designed to meet FCC, CE and UL certifications where applicable	
Compliance	PICMG 3.0 Rev 3.0, RoHS 2. Designed to meet NEBS Level 3	
Standards	VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards	
Warranty	Two (2) years	
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	

---

[1] Ten 10GbE connections are routed to RTM for rear access via optional ART030.

BLOCK DIAGRAM

ORDERING OPTIONS

VT030 – ABC – D00 – 0HJ*

A = GbE Switch
0 = None
1 = GbE Layer 2 Managed

B = 10GbE Switch
0 = None
1 = 10GbE Layer 2 Managed**

C = Number of SFP+ LR Transceivers
0 = None
1 – 8 = Number of SFP+ LR Transceivers

D = Number of SFP+ SR Transceivers
0 = None
1 – 8 = Number of SFP+ SR Transceivers

H = Temperature Range

0 = Commercial
1 = Industrial

J = Conformal Coating
0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

*The VT030 has an associated ART030 for rear I/O routing.

RELATED PRODUCTS

Photo Coming Soon

| ART030 | VT830 – 6U ATCA Shelf | VT000 – Power Board for Bench Top Development |

CONTACT US

VadaTech Corporate Office

198 N. Gibson Road,
Henderson, NV 89014
Email: info@vadatech.com
Telephone: (702) 896-3337
Fax: (702) 896-0332

Asia Pacific Sales Office

7th Floor, No. 2, Wenhu Street, Neihu District, Taipei 114,Taiwan
Email: info@vadatech.com
Telephone: +886-2-2627-7655
Fax: +886-2-2627-7792

VadaTech European Sales Office

Ocean Village Innovation Centre, Ocean Way, Ocean Village, Southampton, SO14 3JZ
Email: info@vadatech.com
Telephone: +44 2380 381982
Fax: +44 2380 381983