

VT039 –Shelf Manager for VT825 13U AdvancedTCA Shelf

ATCA Shelf Manager



KEY FEATURES

- Shelf manager for use in VT825 AdvancedTCA shelf
- Single module, full-size
- Redundant failover between the two shelf managers
- Quad Core ARM Freescale processor @ 1 GHz per core
- 1 GB DDR3 memory
- FRAM for log messages
- 32 GB of Flash
- 8 GB of NAND Flash
- 10/100 Ethernet port
- RS-232 ports
- I2C Real Time Clock with battery backup
- Rich set of Management software (refer to the VT003 specification for all software components) such as HPI, RMCP, SNMP, CLI, HTTP, etc
- IPMI 2.0 compliant
- RoHS compliant

Benefits of Choosing VadaTech

- 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 system supply from industry leader
- AS9100 and ISO9001 certified company

The VadaTech VT039 is VadaTech Shelf Manager for VT825 Shelf based on the Vadatech's 3rd generation VT003.

The VT039 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 VT039 through the Ethernet port.

When two VT039s are in the system, they operate in redundant active/standby mode. During operation one VT039 is active while the second one is synchronized in hot standby mode. The VT039 is fully hot-swappable to minimize service down time.

Lithium Battery and/or Super CAP for the Real Time Clock.

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BLOCK DIAGRAM

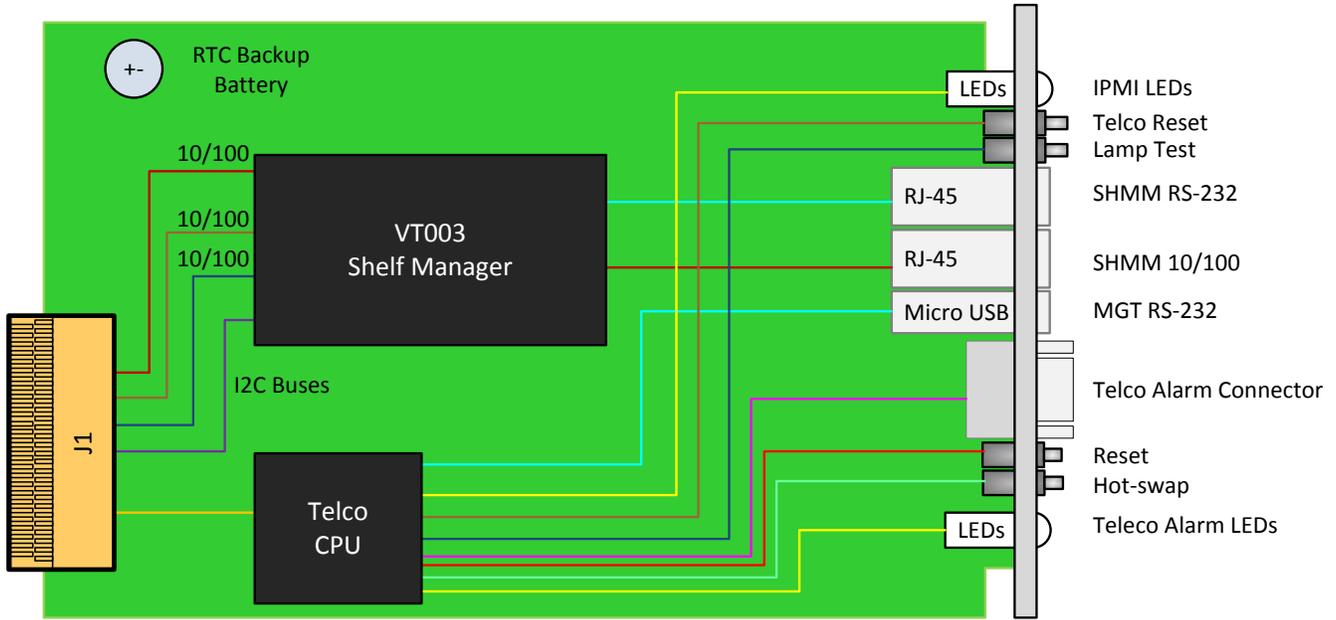


Figure 1: VT039 Block Diagram

FRONT PANEL

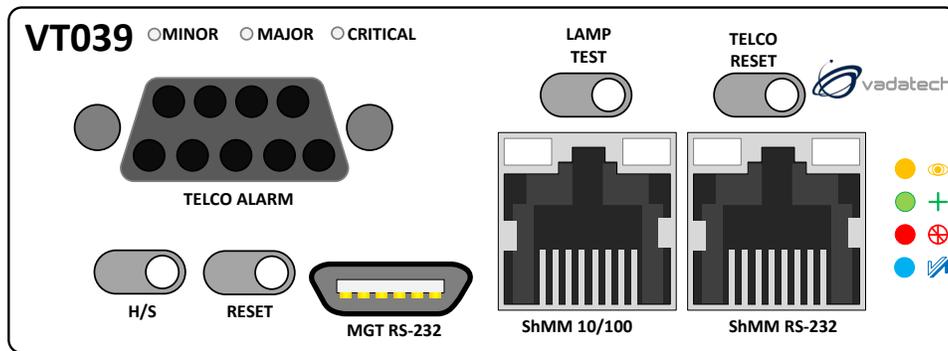


Figure 2: VT039 Front Panel View

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.

PROTOCOL ANALYZER

VT039 can be used as an IPMI protocol analyzer. Figure 3 shows an example trace viewer output.

The screenshot displays the VadaTech IPMI Trace Viewer 2.1 interface. The main window shows a table of IPMI events with columns for No., Time, Bus, Dir, Src, Dest, Seq, Net Fn, and Command. A filter is applied to 'Platform Event && Request'. The detailed view below shows the structure of a selected event (Request: 0x88 -> 0x20 Platform Event (Sensor/Event) (seq 2)).

No.	Time	Bus	Dir	Src	Dest	Seq	Net Fn	Command
722	77.050.000	IPMB-A	REQ	0x92	0x20	16	Sensor/Event	Platform Event
724	77.330.000	IPMB-A	REQ	0x88	0x20	1	Sensor/Event	Platform Event
725	77.410.000	IPMB-A	REQ	0x90	0x20	20	Sensor/Event	Platform Event
728	77.740.000	IPMB-B	REQ	0x88	0x20	2	Sensor/Event	Platform Event
729	77.810.000	IPMB-B	REQ	0x92	0x20	20	Sensor/Event	Platform Event
730	77.830.000	IPMB-A	REQ	0x92	0x20	8	Sensor/Event	Platform Event
731	77.840.000	IPMB-B	REQ	0x92	0x20	12	Sensor/Event	Platform Event
732	77.870.000	IPMB-A	REQ	0x92	0x20	16	Sensor/Event	Platform Event
735	78.210.000	IPMB-A	REQ	0x88	0x20	3	Sensor/Event	Platform Event
736	78.230.000	IPMB-B	REQ	0x90	0x20	20	Sensor/Event	Platform Event
738	78.610.000	IPMB-B	REQ	0x88	0x20	4	Sensor/Event	Platform Event
739	78.640.000	IPMB-B	REQ	0x92	0x20	20	Sensor/Event	Platform Event
740	78.650.000	IPMB-A	REQ	0x92	0x20	8	Sensor/Event	Platform Event
741	78.660.000	IPMB-B	REQ	0x92	0x20	12	Sensor/Event	Platform Event
742	78.690.000	IPMB-A	REQ	0x92	0x20	16	Sensor/Event	Platform Event
743	79.020.000	IPMB-A	REQ	0x88	0x20	5	Sensor/Event	Platform Event
744	79.050.000	IPMB-A	REQ	0x90	0x20	20	Sensor/Event	Platform Event
745	79.430.000	IPMB-B	REQ	0x88	0x20	6	Sensor/Event	Platform Event
746	79.460.000	IPMB-B	REQ	0x92	0x20	20	Sensor/Event	Platform Event

```

Request: 0x88 -> 0x20 Platform Event (Sensor/Event) (seq 2)
  Header
  Body
    Event Message Revision : 0x04 (4)
    Sensor Type            : 0x01 (Temperature)
    Sensor Number          : 0x02 (2)
    Event Type             : 0x01 (Threshold)
    Event Direction        : 0x01 (Deassertion)
    Offset                  : 0x07 (Upper Non-Critical Going High)
    Byte 2 Encoding         : 0x01 (Trigger Reading)
    Byte 3 Encoding         : 0x01 (Trigger Value)
    Reading                 : 0x31 (49)
    Threshold               : 0x32 (50)
  
```

0x20 0x10 0xd0 0x88 0x9 0x2 0x4 0x1 0x2 0x81 0x57 0x31 0x32 0x2b

Figure 3: VT039 IPMI Protocol Analyzer – Trace Viewer Output Example

SPECIFICATIONS

Architecture		
Physical	Dimensions	Single module, full-size
		Width: 4.04" (102.6 mm)
		Depth: 5.68" without handles (144.27 mm)
Type	ATCA Shelf Manager	Designed for VT825 Shelf
Standards		
Module Management	IPMI	IPMI Version 2.0 and PICMG 3.0
Configuration		
Power	VT039	4 W
Environmental	Temperature	Operating temperature: 0° to 55°C (See environmental spec sheet)
		Storage Temperature: -40° to +90° C
	Vibration	Operating 9.8 m/s ² (1G), 5 to 500 Hz
	Shock	30Gs on each axis
	Relative Humidity	5 to 95 percent, non-condensing
Front Panel	LEDs	IPMI management control
		Telco Alarm, Link/Activity
	Connectors	ShMM 10/100, ShMM RS-232 via RJ-45
		MGT RS-232 via micro USB
		Telco Alarm via micro DB-15
	Push button	Hot-swap, reset, lamp test and telco alarm reset
Other		
MTBF	MIL Handbook 217-F@TBD Hrs	
Certifications	Designed to meet FCC, CE and UL certifications where applicable	
Compliance	RoHS and NEBS	
Standards	Standards VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards	
Warranty	Two (2) years	

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and μ TCA 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

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ORDERING OPTIONS

VT039 – AB0 – 000 – 0HJ

A = Software Option

0 = Shelf Manager/Protocol analyser
(VT003 included)

1 = As Telco Alarm only (VT003 is not included)

B = Battery

0 = None

1 = Lithium

2 = Super Cap

3 = Lithium and super cap

H = Operating Temperature

0 = Commercial

1 = Industrial

J = Conformal Coating

0 = None

1 = Humiseal 1A33 Polyurethane

2 = Humiseal 1B31 Acrylic

RELATED PRODUCTS



VT825 13U AdvancedTCA Shelf



VT011 – Shelf Manager for ATCA



VT820 12U ATCA Shelf, Rugged

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