

ELMA

Your Solution Partner



VT019KEY FEATURES

- For ELMA ATCA based or radial chassis
- 5W max power
- 32-bit RISC processor @ 400MHz
- 64 MB of DDR @ 266Mhz
- 32Kbyte FRAM for log messages
- Quad 10/100 Ethernet ports
- RS-232 Debug port
- Linux release 2.6.21
- Field upgradable with dual boot flash
- IPMI 2.0 compliant
- Telco alarms
- Isolated DC/DC converter
- Active/standby redundancy when utilizing two VT019s in system
- Rich set of Management software (refer to the VT002 specification for all software components) such as HPI, RMCP, SNMP, CLI, HTTP, etc.
- VT019 can run as an IPMI protocol analyzer to monitor all the 40+ I²C busses

The VadaTech VT019 is VadaTech Shelf Manager for ELMA chassis. The VT019 is a 5W module. The VT019 can also run as a protocol analyzer to monitor, inject, capture and validate I²C traffic on the Intelligent Platform Management Bus (IPMB) on **all the radial busses**. A Graphical User Interface (GUI) validates and displays the IPMI packets or schedules IPMI messages for injection into the shelf. The GUI application communicates with the VT019 through the Ethernet port.

The VT019 has true radial bussing with dual FPGAs for redundancy. Each IPMI bus has a 64-byte FIFO to allow for a full IPMI packet on each I²C bus so there is no packet loss during operation.

When two VT019s are in the system, they operate in redundant active/standby mode. During operation one VT019 is active while the second one is synchronized in hot standby mode. The VT019 is fully hot-swappable to minimize service down time.

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

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

Advanced TCA®

Shelf Manager for ELMA ATCA Chassis

SPECIFICATIONS

| Architecture | | |
|----------------------|---|---|
| Physical | Dimensions | Width: 3.07 in. (78 mm) |
| | | Depth: 11.466 in. (291 mm) |
| Type | Shelf Manager | For ELMA chassis |
| Standards | | |
| Module Management | IPMI | IPMI Version 2.0 and PICMG 3.0 |
| Configuration | | |
| Power | VT004 | 4W typical, 5W max |
| Environmental | Temperature | Operating Temperature: 0° to 65° C (Air flow requirement is to be greater than 100 LFM) Available in Industrial Temp |
| | | Storage Temperature: -40° to +90° C |
| | Vibration | 1G, 5-500Hz each axis |
| | Shock | 30Gs each axis |
| | Relative Humidity | 5 to 95 percent, non-condensing |
| Front Panel | Interface Connectors | DB15 connector for Telco alarm |
| | | RS-232 via Micro DB-9 |
| | | 10/100 Ethernet via RJ-45 |
| | | Reset Switch |
| | LEDs | Alarm Clear |
| | | IPMI Management Control Activity/Link; user LED, etc. |
| | Push Button | Reset Switch and Telco Alarm Clear |
| Mechanical | Hot Swap Ejector Handle | |
| Software Support | Operating Systems | Linux version 2.6.15 |
| Other | | |
| MTBF | MIL Handbook 217-F > 220,000 Hrs. | |
| Certifications | Designed to meet FCC, CE and UL certifications where applicable | |
| Standards | VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards | |
| Compliance | RoHS and NEBS | |
| Warranty | Two (2) years | |
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FIGURE 1: Viewing a captured trace while running the VT019 as an IPMI Protocol Analyzer

The screenshot displays the VadaTech IPMI Trace Viewer 2.1 interface. The main window shows a table of captured IPMI messages. The filter is set to 'Platform Event && Request'. The selected message (No. 728) is expanded to show its details.

| 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

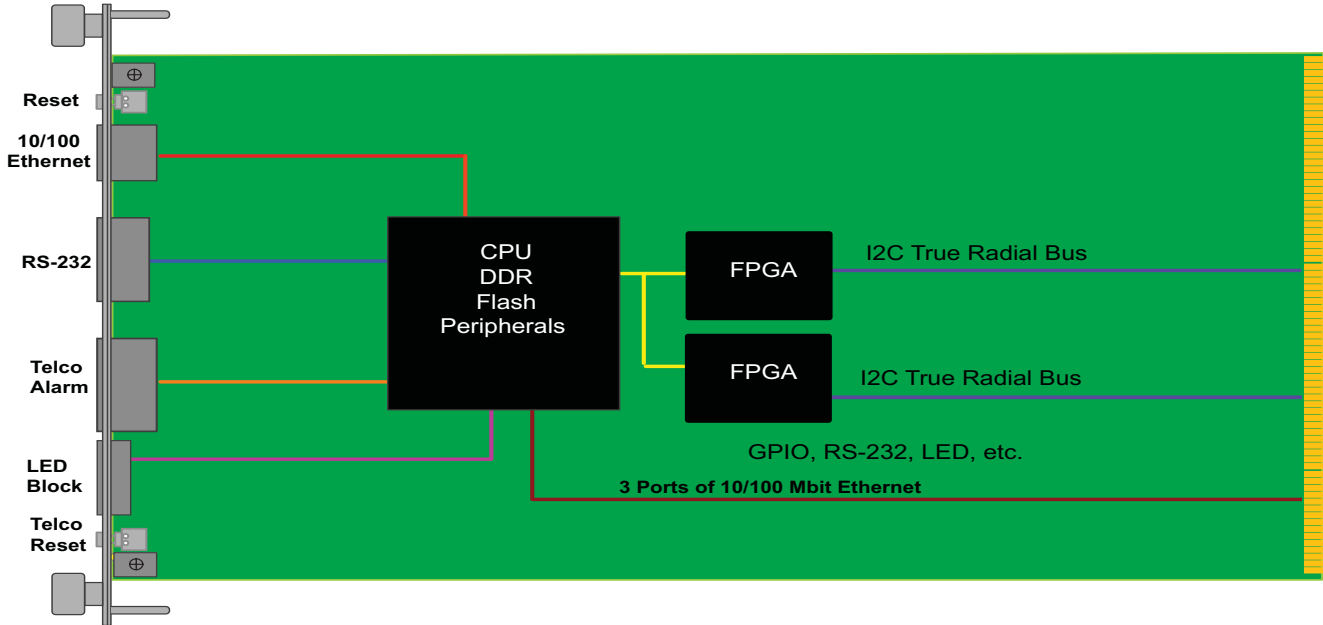


FIGURE 2. VT019 Functional Block Diagram

ORDERING OPTIONS

VT019 - AB0 - 000 - 0HJ

A = Software option

- 1 = Shelf Manager
- 2 = IPMI Protocol Analyzer

B = Battery

- 0 = Lithium
- 1 = Super CAP
- 3 = Lithium and Super CAP

H = Operating Temp

- 1 = Commercial
- 2 = Industrial

J = Conformal Coating

- 0 = None
- 1 = Humiseal 1A33 Polyurethane
- 2 = Humiseal 1B31 Acrylic