

VT986

Integrated Processor/Switch with MXM (Conduction Cooled, Commercial Version)



VT986

Key Features

- Processor Intel® Xeon® Processor E3-1505M v6 (Kaby Lake)
- Optional MXM module
- Quad NBASE-T and 10GbE Copper with POE
- Quad GbE with 64 GB of DDR4 memory
- Redundant Flash memory for BIOS
- +28V Input typical with EMI Filtering-MIL-STD-461E
- Transient protection-MIL-STD-704A/E/F, MIL-STD-1275A/B/D
- Hold cap with input surge withstand 50V for 100 ms
- Environmental per MIL-STD-810G Methods 509.5, 508.6, 510.5, 500.5, 514.6, 501.5, 502.5, 503.5, 516.6, 512.5, 511.5
- Health Management

Benefits

- High performance Xeon E3-1505M processor with CM238 PCH
- Multiple graphics output via Display Port, VGA
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader



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The VT986 is based on the Intel® Xeon® Processor E3-1505M v6 (Kaby Lake) with CM238 PCH. The processor base frequency is 3.0 GHz with max turbo frequency of 4.0 Hz. Redundant BIOS Flash is provided, with up to 64 GB DDR4 and a mSATA socket. The optional SmartFusion2 supports secure boot with TPM 2.0.

The unit provides Quad 10/100/GbE, Quad NBASE-T and 10GbE Copper with Power Over Ethernet (POE). Dual USB 3.0 support external peripherals for MMI or additional storage. The module also has Dual CAN bus with Audio output.

Quad graphics outputs (x3 DisplayPort, x1 VGA) can be driven by either the host processor or the optional MXM module.

The VT986 operates from +28V input (10V-36V) and has an onboard filter to meet MIL-STD-461E, Transient protection MIL-STD-704A/E/F and MIL-STD-1275A/B/D.

The VT986 (conduction cooled) conforms to environmental standards MIL-STD-810G, methods 509.5, 508.6, 510.5, 500.5, 514.6, 501.5, 502.5, 503.5, 516.6, 512.5 and 511.5.

Linux OS is standard on the VT986, consult VadaTech for further options.



Figure 1: VT986 Front View



Figure 2: VT986 Rear View



Figure 3: VT986 Conduction Cool Version

Block Diagram

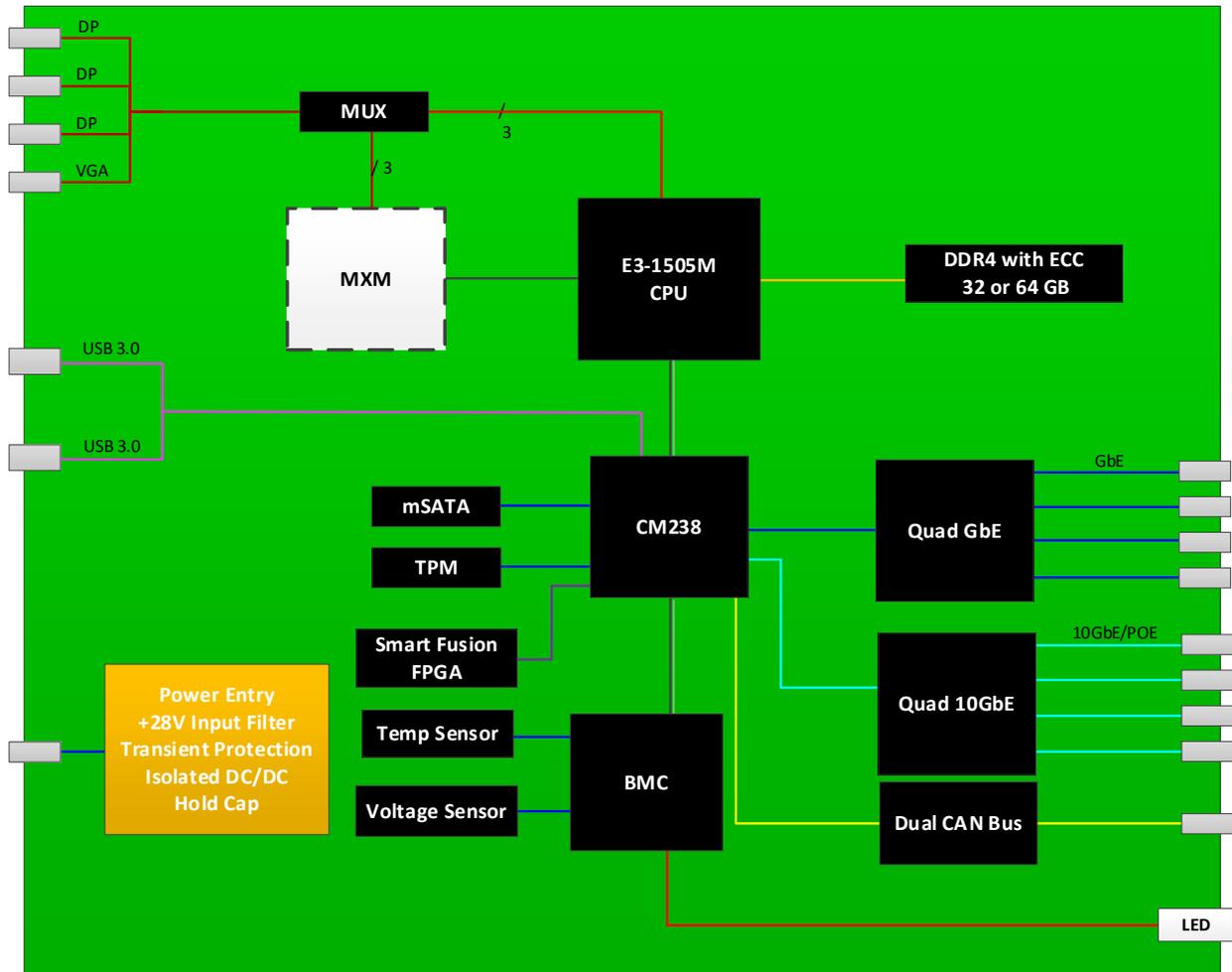


Figure 4: VT986 Functional Block Diagram

Chassis Layout

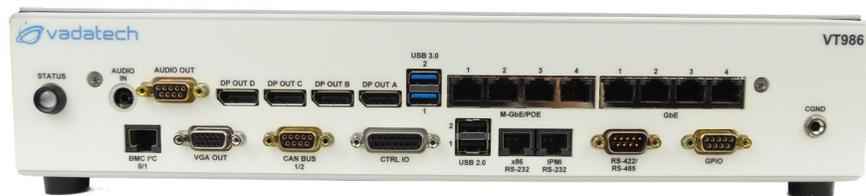


Figure 5: Chassis Layout – Front



Figure 6: Chassis Layout – Rear

Specifications

Architecture	
Physical	Dimensions W 15", D 14" (excluding connectors), H 3.4"
	Conduction Cooled W 17.75", D 11.24", H2.63"
Type	AMC Processor Intel Xeon E3 Processor AMC, Quad Core, 4.0 GHz
Standards	
Module Management	IPMI IPMI v2.0
	MIL-STD-461E, MIL-STD-704A/E/F, MIL-STD-1275A/B/D
	MIL-STD-810G methods 509.5, 508.6, 510.5, 500.5, 501.5, 502.5, 503.5, 516.6, 512.5, 511.5
	Mil-STD-810G method 514.6 Vibration, Procedure I, Category 20, Ground Vehicles
Configuration	
Power	VT986 85W without the MXM module
Environmental	Temperature Operational -46°C Ambient MIL-STD-810G method 502.5 Low Temp Procedure II for 4 hours Storage Temperature: -60° to +90°C (MIL-STD-810G Method 501.5 procedure I)
	Altitude 1300 feet below to 15,000 feet above sea level and atmospheric pressure of 508 mill bars
	Relative Humidity 5 to 95% non-condensing
Front Panel	Interface Connectors See Ordering Options
	LEDs IPMI, activity and user defined (conduction cooled has only one LED)
	Mechanical MIL-STD-810F (conduction cooled)
Software Support	Operating System Linux (consult VadaTech for 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 ISO9001:2000 and AS9100D:2017 standards
Warranty	One (1) year, 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

VT986 – ABC-DEF-00J

A = MXM Module 0 = No MXM 1 = NVIDIA P3000 2 = NVIDIA P5000 3 = AMD E9260 4 = AETINA M3N1060-MN-DC 5 = Reserved 6 = Reserved	D = DDR4 Memory 0 = 32 GB 1 = 64 GB	
B = mSATA 0 = Reserved 1 = 128 GB 2 = 512 GB 3 = 1 TB 4 = 2 TB	E = Smart Fusion FPGA 0 = No Smart Fusion FPGA 1 = Smart Fusion FPGA	
C = I/O Connectors 0 = Commercial 1 = MIL-DTL-38999 Base Configuration with 1 USB 3.0** 2 = MIL-DTL-38999 Base Configuration with up to 4 Display Ports**	F = Enclosure Type 0 = Air Cooled, Bench Top 1 = Conduction Cooled, Rugged	J = Temperature Range and Coating* 0 = Commercial (–5° to +55°C), No coating 1 = Commercial (–5° to +55°C), Humiseal 1A33 Polyurethane 2 = Commercial (–5° to +55°C), Humiseal 1B31 Acrylic 3 = Industrial (–20° to +70°C), No coating 4 = Industrial (–20° to +70°C), Humiseal 1A33 Polyurethane 5 = Industrial (–20° to +70°C), Humiseal 1B31 Acrylic 6 = Extended (–40° to +85°C), Humiseal 1A33 Polyurethane 7 = Extended (–40° to +85°C), Humiseal 1B31 Acrylic

Notes: *Edge of module for conduction cooled boards, consult factory for availability

**Must be ordered with MXM (see option A)

Related Products

VT873



- MTCA.3 Conduction Cooled System Platform
- 1/2 Short Air Transport Rack (ATR)
- Per ARNIC404A, with NO internal fan

VT869



- MTCA System Platform 19" x 6U x 13.62" deep
- Full redundancy with dual MicroTCA Carrier Hub (MCH)
- Dual Cooling Units and dual Power Modules

VT877



- Three mid-size single module AMC slots
- Hardened MTCA Chassis
- Conduction cooling, fanless operation

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