Complete ATCA IPMI Test Suite and Validation or VT027/VT028 Development

ATC001

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FIGURE 1: ATC001 option load for IPMI Test Suite and Validation

KEY FEATURES

- Capture and store I^{2}C bus data
- Analyzer mode
- Exerciser mode
- Compliance test mode
- Graphical User Interface (GUI)
- Field-upgradable firmware
- Two 10/100 Mbit Ethernet ports routed to the front panel or to zone 2
- Option for VadaTech VT028 for evaluation and testing
- Option for VadaTech VT027 for evaluation and testing
- VT027 option allows four NXP LPC2138's to be programmed at a time
- IPMI 2.0 compliant
- RoHS compliant

VadaTech designed the ATC001 simulator in the ATCA form factor to test, capture and validate I^{2}C traffic on the Intelligent Platform Management Bus (IPMB). The ATC001 utilizes an integrated VT001 IPMI controller to monitor or inject IPMI packets into the shelf. 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 integrated VT001 IPMI controller through an Ethernet port on the front panel or the rear (base channel on Zone 2).

In the Zone 3 area, the ATC001 has eleven I^{2}C connectors for expansion to other parts of the chassis or external devices. The ATC001 facilitates creation of a robust test environment and real world simulation.

The ATC001 can also be loaded with VadaTech VT027 or VT028 IPMI controller based on the NXP LPC2138 Processor. This optional load allows development and evaluation of the VadaTech VT027/VT028 IPMI solution. The VT027 can manage up to eight AMC slots and connects directly to the ATCA IPMI bus while the VT028 is targeted for ATCA modules that don't have any AMC slots.

Advanced TCA®

SPECIFICATIONS

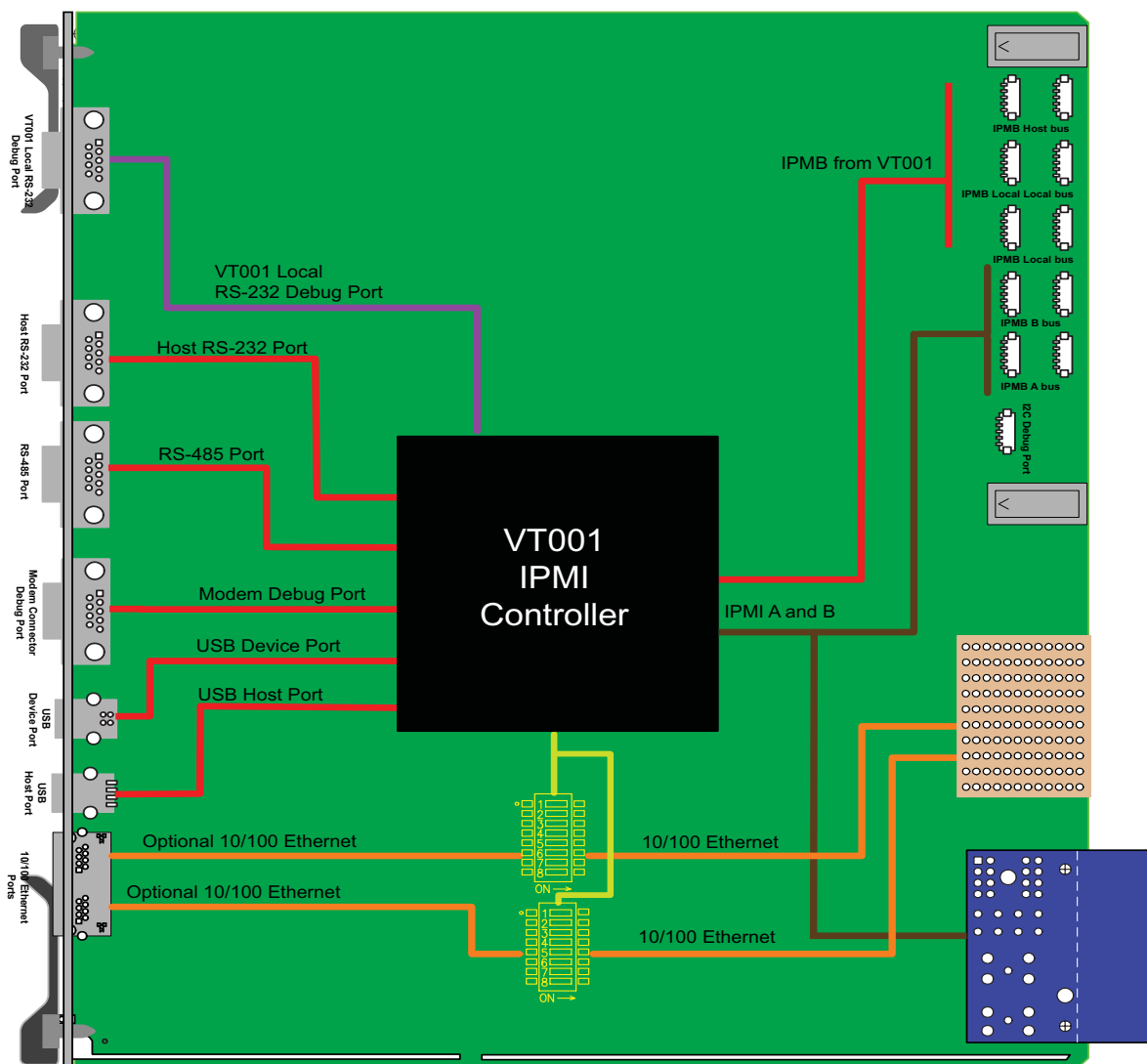| Architecture		
Physical	Dimensions	Width: 12.687in. (322.25 mm)
		Depth: 11.024 in. (280 mm)
Type	IPMI Test Suite and Validation Platform	Analyzer mode
		Exerciser mode
		Compliance test mode
	VT027	VadaTech VT027 schematic implementation
Standards		
Module Management	IPMI	IPMI Version 2.0
Configuration		
Power	ATC001	2 Watts
Environmental	Temperature	Operating Temperature: 0° to 65° C
		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 (See Ordering Options)	One USB Host port and one USB Device port
		Three RS-232 ports (DB9)
		One RS-485 port (DB9)
		Dual 10/100 Ethernet ports with RJ-45 connectors
	LEDs	IPMI Management Control
		Activity and Link
	Mechanical	Hot Swap Ejector Handle
Other		
MTBF		MIL Spec 217-F > 221,000 Hrs. (VT027 option)
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
Trademarks and Logos		The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC™ and the AdvancedTCA™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.

For Use as a Protocol Analyzer:

The ATC001 bus analyzer offers the ability to simultaneously monitor up to four I^2C buses. The accompanying software interprets and displays the IPMI and ATCA messages, enabling rapid analysis and diagnosis of communication and protocol problems. Important features include:

- AdvancedTCA shelf IPMB-A and IPMB-B monitoring
- External bus support via I^2C connectors
- Configurable Ethernet interface to packet analysis software

The ATC001 includes an onboard VT001 Intelligent Platform Management Interface (IPMI) controller. This management controller provides four general-purpose I^2C buses, which are routed to the Zone 1 Connector and to a standard I^2C connector.

FIGURE 2: ATC001 Functional Block Diagram as Protocol Analyzer option

FIGURE 3: Viewing a captured trace

For VT027 Development with Four Slot AMC Simulation:

With the VT027 evaluation and development option, the ATC001 has a total of six NXP LPC2138's: two on-board (representing the VT027 design) and four in sockets to simulate the four out of eight AMC slots (representing the VT026 design). These four are loaded with VadaTech VT026 code (VT026 is a single LPC2138 running the IPMI code as an AMC module). The sockets can also be used to program the LPC2138's. The board has on-board switches to simulate the insertion and extraction of the AMC modules as well as the front panel switch for the AMC. The VT027 option is capable of communicating with the payload via I2C or RS-232.

FIGURE 4: ATC001 Functional Block Diagram for VT027 Development option
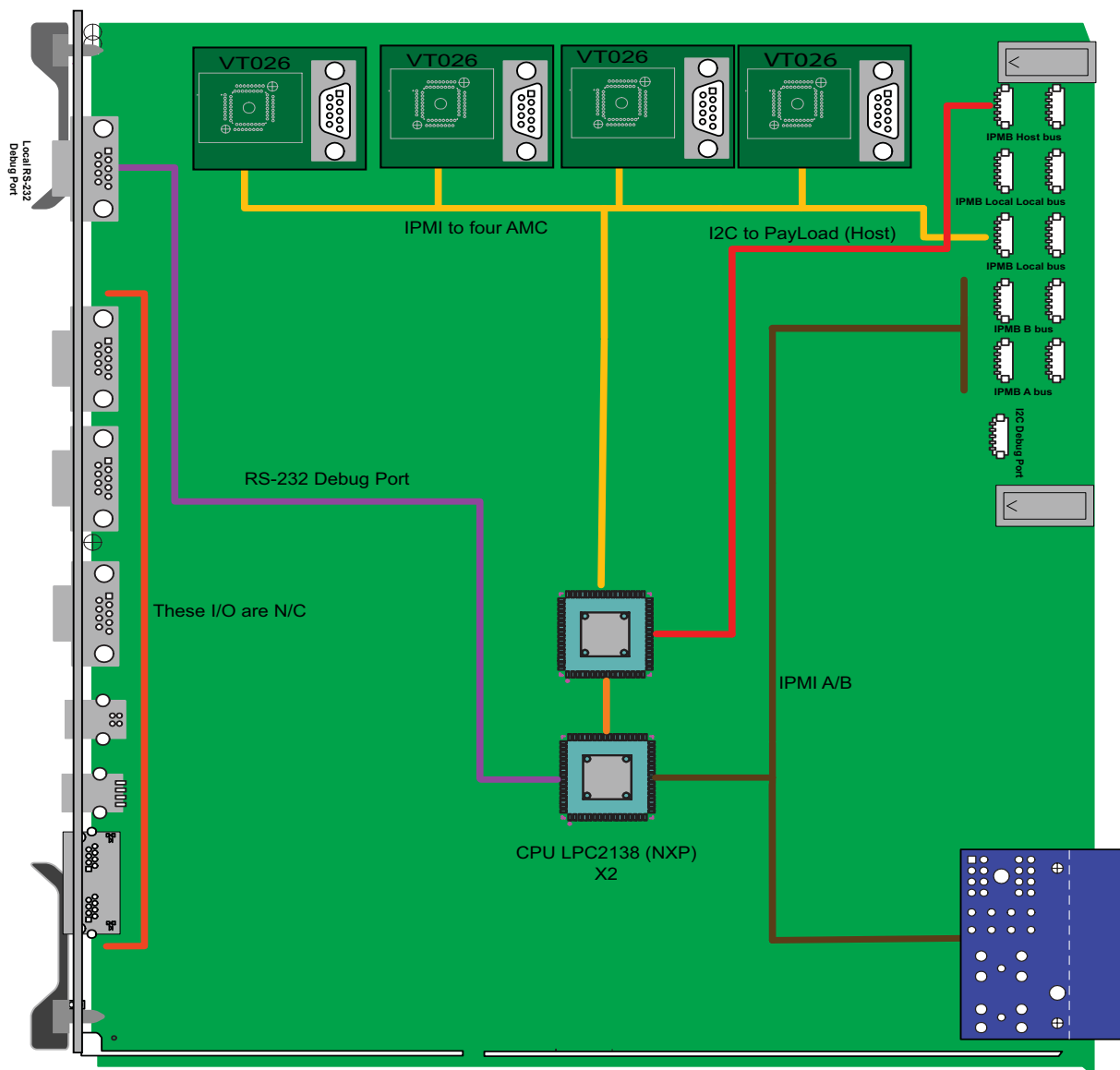
For VT028 Development:

With the VT028 evaluation and development option, the ATC001 has a single NXP LPC2138. The VT028 is targeted for the ATCA modules that do not have any AMC slots. The VT028 option is capable of communicating with the payload via I2C or RS-232.

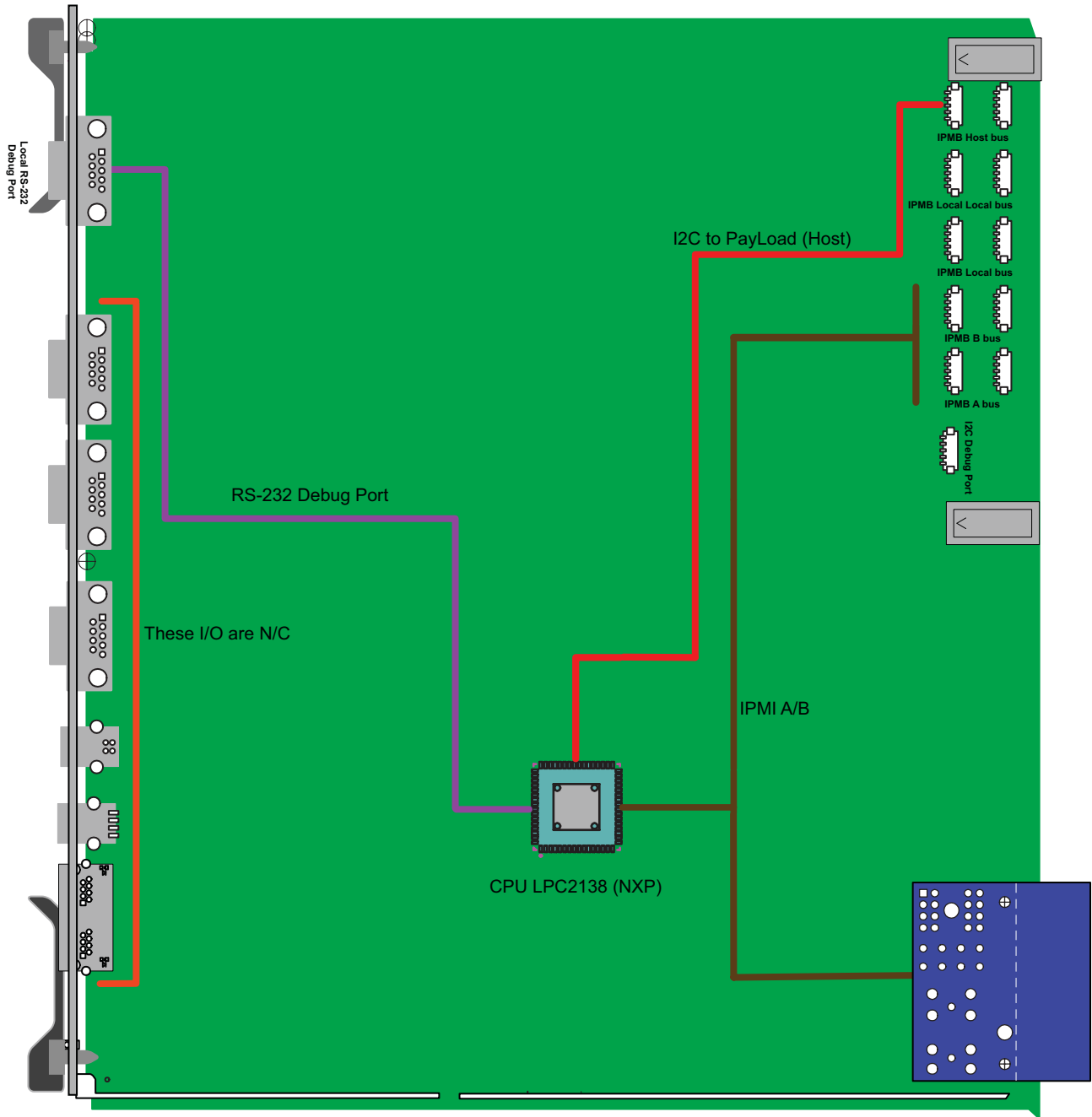FIGURE 5: ATC001 Functional Block Diagram for VT028 Development option

FIGURE 6: ATC001 option load for VT027 Development

ORDERING OPTIONS

ATC001 - A00 - 000 - 00J

A = Built Option

1 = Protocol Analyzer
2 = VT027 Development
3 = VT028 Development

J = Conformal Coating

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

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