Power Module for µTCA Conduction Cooled Chassis

UTC011

KEY FEATURES

- Single-width, full-height module per AMC.0
- Dual 10 to 36 VDC input for 241W option and 18 to 36 VDC input for 460W option
- Support for power module redundancy
- Dual IPMI bus
- 32-bit RISC processor
- Two banks of 256K flash for redundancy
- Field upgradable
- IPMI 2.0 compliant
- HPM.1 compliant
- Without the presence of an MCH the modules can be turned on
- Menu driven software for ease of configuration
- Current measure for each module
- External as well as internal WDT

The VadaTech UTC011 is a 241/460W power module for use in a µTCA ATR chassis (Conduction Cooled chassis). The power module runs at 84% efficiency when running at maximum load. This results in 200/400W (available to the system). It is fully compliant with the MicroTCA.0 revision 1.0 specification; including dual-redundant I^{2}C buses (IPMB-0).

The UTC011 is fully redundant when used in conjunction with a second instance of the module. It provides power to the twelve slots, two MCHs (MicroTCA Carrier Hubs) as well as the CUs (Cooling Units, may not be present in the Conduction Cooled Chassis).

Multiple temperature sensors are included on-board to monitor for over-temp conditions within the module. The current is continuously measured for each of the modules and reported to MCH for any fault.

The firmware is upgradable via HPM.

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

SPECIFICATIONS

| Architecture		
Physical	**Dimensions**	Width: 2.89in. (73.5 mm), not including the wedge locks
		Depth:7.11 in. (180.6 mm), not including the front handle
Type	**AMC Power Module**	Intelligent Power controller for µTCA style chassis
Standards		
Module Management	**IPMI**	IPMI Version 2.0
	ATCA	PICMG 3.0 Revision 2.0 (AdvancedTCA)
	AMC	PICMG AMC.0 Revision 1.0 (AdvancedMC)
	µTCA	PICMG MicroTCA.0 Revision 1.0
	HPM	HPM.1 Revision 1.0
Configuration		
Power	**UTC011**	241/460W Power Module
Environmental	**Temperature**	Operating Temperature: -20° to 70° C (-40° to +80°C is available upon request)
		Storage Temperature: -45° to +95° C
	Vibration	MIL-810 (TBD)
	Shock	DO-160 (TBD)
	Relative Humidity	5 to 95 percent, non-condensing
Features	**External interface**	RS-232 front panel access
	Input Power	10 to 36VDC for 241W option and 18 to 36 VDC for 460W option
	Temp Sensor	Multiple temp sensors on-board
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 AS9100B:2004 standards	
Compliance	RoHS and NEBS	
Warranty	Two (2) years	
Trademarks	The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedMC™, AdvancedTCA™ and µTCA™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.	
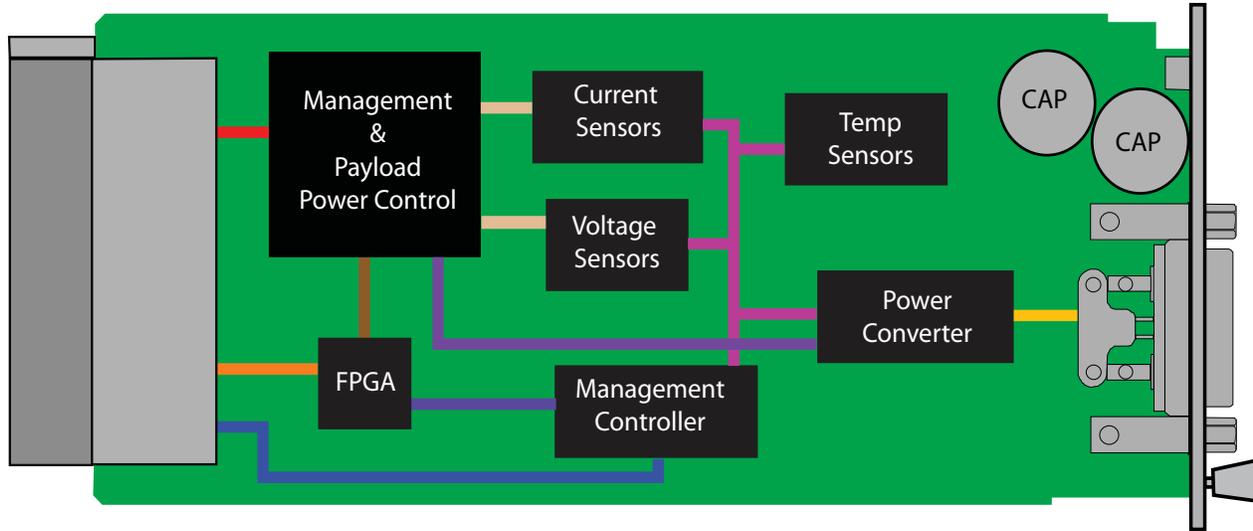
FIGURE 1. UTC011 Functional Block Diagram
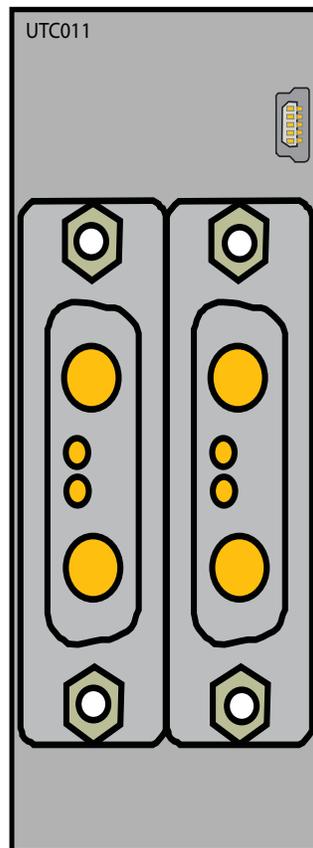
FIGURE 2. UTC011 Front Panel Diagram

Key Software / Hardware Features:

❖ Core IPMI Functionality

 ❖ IPMI 2.0 compliant

 ❖ HPM.1 compliant

 ❖ SDR Repository with Update Mode

 ❖ FRU Inventory

 ❖ Initialization Agent

 ❖ Temperature and Current sensors

❖ Optional IPMI Commands Supported

 ❖ Warm/Cold Reset

 ❖ Get Device GUID

 ❖ Get/Set Sensor Hysteresis

 ❖ Get/Set Sensor Threshold

 ❖ Get/Set Sensor Event Enable

 ❖ Re-arm Sensor Events

❖ Core ATCA Functionality

 ❖ Redundant IPMB-0

 ❖ FRU LED control

❖ µTCA Functionality

 ❖ Power Channel Control

 ❖ Get Power Channel Status

 ❖ PM Reset

 ❖ Get PM Status

 ❖ PM Heartbeat

ORDERING OPTIONS

UTC011 - A00 - 000 - 0HJ

A = Input Power

  1 = 241W (input voltage 10 to 36V)
  2 = 460W (input voltage 18 to 36V)

H = Operating Temp

  1 = Commercial (0° to +65°)
  2 = Industrial (-20° to +70°)
  3 = Military (-40° to +80°)

J = Conformal Coating

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

Document No_____ Date:. June 2009 Pass two