Power Module for µTCA Chassis

UTC010

vadatech inc
THE POWER OF VISION

Commercial

Conduction Cool

KEY FEATURES

- Single-width, full-height module per AMC.0
- Dual -36VDC to -75VDC input
- 792W (available in 396W)
- Hot swappable
- Support for power module redundancy
- Dual IPMI bus
- 32-bit RISC processor
- Two banks of 256K flash for redundancy
- Blue, Red, Amber and Green LEDs
- 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
- Available in uTCA.3 Conduction Cool

The VadaTech UTC010 is a 792W power module (available in 396W) for use in a µTCA chassis. The power module runs at 95% efficiency when running at maximum load. This results in over 752W available to the system. It is fully compliant with the MicroTCA.0 revision 1.0 specification; including dual-redundant I^2C buses (IPMB-0).

The UTC010 is hot-swappable and 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).

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.

Once installed in the system the firmware is upgradable via the shelf manager. The UTC010 can be configured to power and enable the modules without the presence of an MCH.

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

µTCA™

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SPECIFICATIONS

Architecture		
Physical	**Dimensions**	Width: 2.89in. (73.5 mm)
		Depth:7.11 in. (180.6 mm)
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	**UTC010**	796W supply with 95% efficiency; providing over 752W to the system
Environmental	**Temperature**	Operating Temperature: 0° to 65° C with 400 LFM (available in uTCA.3)
		Storage Temperature: -40° to +90° C
	Vibration	1G, 5-500Hz each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95 percent, non-condensing
Features	**External interface**	RS-232 front panel access
	LEDs	IPMI Management Control Blue, Red, Amber, Green and Fuse indicator for each input rail
	Switch	Hot swap switch input with +/-15KV ESD protection
	Input Power	-36VDC to -75VDC
	Temp Sensor	Multiple temp sensors on-board
Other		
MTBF	MIL Spec 217-F > 197,343 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.	

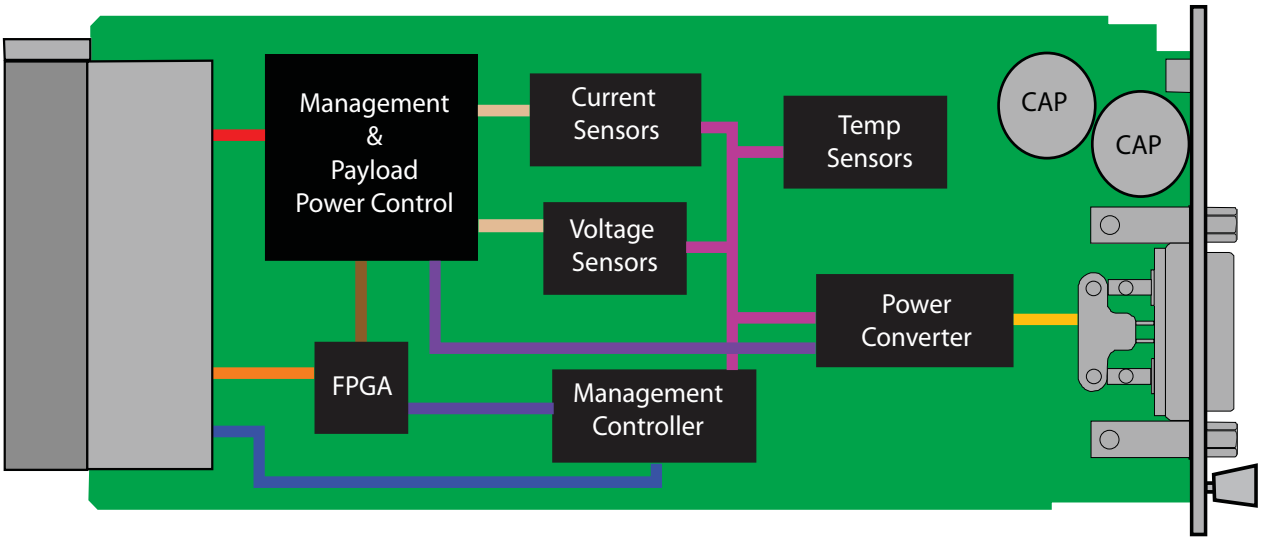

FIGURE 1. UTC010 Functional Block Diagram

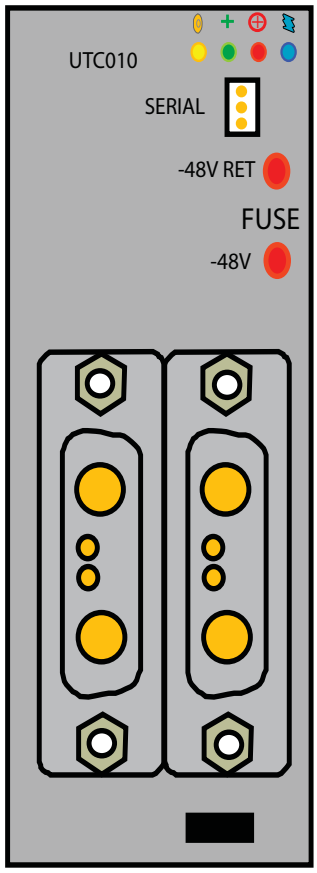

FIGURE 2. UTC010 Front Panel Diagram

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
  - Hot-swap handle
  - FRU LED control
- µTCA Functionality
  - Power Channel Control
  - Get Power Channel Status
  - PM Reset
  - Get PM Status
  - PM Heartbeat

ORDERING OPTIONS

UTC010 - AB0 - 000 - 0HJ

A = Power

1 = 396W
2 = 792W

B = Specification

0 = uTCA.0 (convection cool)
1 = uTCA.3 (conduction cool)

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

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