UTC023 / UTC023C – DC Power Module, 241W or 460W, Double Module

The UTC023 is a 241/460W power module for use in a µTCA chassis. The power module runs at 84% efficiency when running at maximum load. This results in 200/400W output (available to the system). It is fully compliant with the MicroTCA.0 and MicroTCA.1 specifications; including dual-redundant IPMI buses (IPMB-0).

The UTC023 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.

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.

The module is available in conduction cooled variant for harsh environments.

**KEY FEATURES**

- Double module, full-size per AMC.0
- 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
- Modules can be turned on without the presence of an MCH
- Menu driven software for ease of configuration
- Current measure for each module
- External as well as internal WDT

**Benefits of Choosing VadaTech**

- Very low ripple voltage
- Support for power module redundancy
- Efficient re-use of existing designs/components reduce costs
- Electrical, mechanical, software and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev product from one source

The VadaTech UTC023 is a 241/460W power module for use in a µTCA chassis. The power module runs at 84% efficiency when running at maximum load. This results in 200/400W output (available to the system). It is fully compliant with the MicroTCA.0 and MicroTCA.1 specifications; including dual-redundant IPMI buses (IPMB-0).
IPMI FUNCTIONALITY

The UTC023 is IPMI 2.0 and HPM.1 compliant with optional IPMI commands including warm/cold reset, re-arm sensor events, get device GUID, and get/set the hysteresis, threshold, and/or sensor event enable. The PMs follow the ATCA specification in fail-over for redundant IPMB-0 and FRU LED control. The units also have power channel control, get power channel status, PM reset, get PM status, and PM heartbeat. Temperature and current sensors are also included.

UTC023

BLOCK DIAGRAM

Figure 1: Block Diagram – Air Cooled Version

Figure 2: Front Panel
UTC023C – DC Power Module, 241W or 460W, Double Module

UTC023

BLOCK DIAGRAM

![Block Diagram - Conduction Cooled Version](image)

Figure 2: Block Diagram - Conduction Cooled Version

![Front Panel](image)

Figure 3: Front Panel
# UTC023 / UTC023C – DC Power Module, 241W or 460W, Double Module

## SPECIFICATIONS

| Architecture | Physical | Dimensions Width: 5.85” (148.5 mm)  
Depth 7.11” (180.6 mm)  
Type AMC Power Module  
Intelligent power controller for μTCA chassis  
Standards Module Management  
IPMI IPMI version 2.0  
AMC PICMG AMC.0 Revision 1.0 (AdvancedMC)  
μTCA PICMG MicroTCA.0 Revision 1.0  
HPM HPM.1 Revision 1.0  
Power UTC023  
241 W, input supply: 10 to 36 VDC  
460 W, input supply: 18 to 36 VDC  
Environmental Operating Temperature: -5° to 55°C industrial and military versions also available  
Storage Temperature: -40° to +85°C  
Vibration 1G, 5 to 500Hz on each axis  
Shock 30Gs on each axis  
Relative Humidity 5 to 95 per cent, non-condensing  
Front Panel External Interface  
RS-232 front panel access  
LEDs IPMI management control: blue, red, amber, green and fuse indicator for each input rail  
Mechanical Hot swap handle  
Temperature Sensor Multiple temperature 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 |

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and μTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), 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.

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# UTC023 / UTC023C – DC Power Module, 241W or 460W, Double Module

## ORDERING OPTIONS

### UTC023 – A0C – 000 – 00J

<table>
<thead>
<tr>
<th>A = Power</th>
<th>J = Temperature Range and Coating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = 241W (input voltage 10 to 36V)</td>
<td>0 = Commercial (–5° to +45° C), No coating</td>
</tr>
<tr>
<td>2 = 460W (input voltage 18 to 36V)</td>
<td>1 = Commercial (–5° to +45° C), Humiseal 1A33 Polyurethane</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C = Front Panel</th>
<th>2 = Commercial (–5° to +45° C), Humiseal 1B31 Acrylic Polyurethane</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = Reserved</td>
<td>3 = Reserved</td>
</tr>
<tr>
<td>2 = Reserved</td>
<td>4 = Industrial (–20° to +70° C), Humiseal 1A33 Polyurethane</td>
</tr>
<tr>
<td>3 = Full-size</td>
<td>5 = Industrial (–20° to +70° C), Humiseal 1B31 Acrylic Polyurethane</td>
</tr>
<tr>
<td>4 = Reserved</td>
<td>6 = Military (–40° to +85° C), Humiseal 1A33 Polyurethane</td>
</tr>
<tr>
<td>5 = Reserved</td>
<td>7 = Military (–40° to +85° C), Humiseal 1B31 Acrylic</td>
</tr>
<tr>
<td>6 = Full-size, MTCA.1 (captive screw)</td>
<td></td>
</tr>
</tbody>
</table>

### UTC023C – A0C – 000 – 00J

<table>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>C = Ruggedization Level*</th>
<th>2 = Commercial (–5° to +45° C), Humiseal 1B31 Acrylic Polyurethane</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = None</td>
<td>3 = Reserved</td>
</tr>
<tr>
<td>1 = Contact Vadatech</td>
<td>4 = Industrial (–20° to +70° C), Humiseal 1A33 Polyurethane</td>
</tr>
<tr>
<td>2 = Contact Vadatech</td>
<td>5 = Industrial (–20° to +70° C), Humiseal 1B31 Acrylic Polyurethane</td>
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<td>3 = Contact Vadatech</td>
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</tbody>
</table>

* Ruggedization level is per the uTCA.2 and uTCA.3 specification  
** Edge of module
UTC023 / UTC023C – DC Power Module, 241W or 460W, Double Module

RELATED PRODUCTS

| 8U MTCA.4 Chassis Platform 12 AMCs | UTC004 Gen 3 MCH | AMC720 Processor AMC |

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