MicroTCA 600 W Power Module

AC-DC Double Width Full Size (6 HP)

PS-1138

The Telkoor PS-1138 is a high-power module designed for use in MicroTCA systems. It supports shelves, cube, and other implementations and complies with the PICMG MicroTCA .0 Revision 1.0 specifications.

The PS-1138 provides functionality for powering, managing, and protecting a MicroTCA system that includes up to 12 AdvancedMCs, 2 MicroTCA Carrier Hubs, and 2 Cooling Units.

Key Features

- 600 W output power
- 16 channels of 12 V @ 7.6 A; 16 channels of 3.3 V @ 150 mA
- Hot swappable N+1 output redundancy
- Monitors and reports power system status and conditions of operation
- Manages and isolates faults that affect the power system
- Provides protection against overload, short circuit, over voltage, and over temperature
- Provides power necessary for MCH and CU system elements on system bring-up

- Supports redundant IPMI (IPMB-0) communication with the MCH/Carrier-Manager
- Enables and provides power to AMCs, CUs, and additional MCHs under the command of the carrier manager
- Includes an Enhanced Module Management Controller Using two IPMBs (IPMB-A and IPMB-B)
- Meets Class B conducted emission standards
- Compliant with MicroTCA chassis standard

Product Specifications

Input

- Input voltage: 90 – 264 Vac, 50/60 Hz
- Power factor: 0.99 typical
- Efficiency: **> 90**%
- Hold-up Time: 10 ms minimum at 600W
- Inrush current: ≤ 35A

Output Voltages and Currents

Output	Output Voltage	Minimum Load	Total Maximum Load	Maximum Load per Channel
V1	16 x 12 Vdc	0	588 W @ 49 A	80 W/7.6 A
V2	16 x 3.3 Vdc	0	12.5 W @ 3.8 A	0.5 W/150 mA

12 V Output (Payload Power)

- Total regulation range: 12.25 to 12.95 Vdc when configured as primary PM
  11.60 to 12.00 Vdc when configured as redundant PM
- Setpoint: 12.6 Vdc typical when configured as primary PM
  11.8 Vdc typical when configured as redundant PM
- Ripple and noise: 100 mV maximum V p-p at 0 to 20 Mhz oscilloscope bandwidth, measured with 0.1uF ceramic and 10uF tantalum capacitor on any output
- Short circuit protection: 9.7 A maximum within 10 mSec auto recovery, over 10 mSec latch shut down
- Charge capacity per channel: 25 ms maximum with 1600 uF on output under test.

3.3 V Output (Management Power)

- Total regulation range: 3.16 to 3.63 Vdc
- Setpoint: 3.3 Vdc typical
- Ripple and noise: 50 mV maximum V p-p at 0 to 20Mhz oscilloscope bandwidth, measured with 0.1uF ceramic and 10uF tantalum capacitor on any output
- Short circuit protection: 225 mA maximum within 12 mSec auto recovery, over 12 mSec latch shut down.
- Charge capacity per channel: 25 ms maximum with 150 uF on output under test

Environmental Conditions

- Operating temperature: –**10** ºC to 55 ºC full load with 300 LFM forced air cooling
- Storage temperature: –40 ºC to 85 ºC
- Vibration: Random vibration, 10 Hz to 500 Hz, 3 axis 1.9 GRMS maximum
- Shock: Peak acceleration 1 GPK maximum

Safety Standards

- UL, cUL 60950-1
- CSA 60950-1
- VDE 60950-1