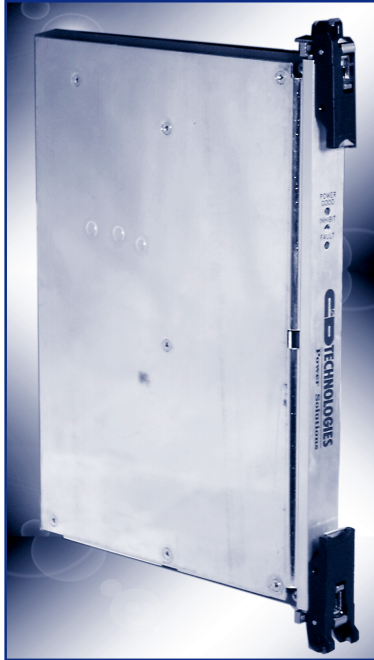


cPCI500DC

500 Watt, 6U x 4HP, CompactPCI



- 6U X 4HP
- 36-72 VDC Input Range
- 500 Watt Continuous Output Power
- Complies with PICMG 2.11 R1.0 with 47 Pin I/O Connector
- Hot-Swap Capable
- Outputs Individually Protected Against Overloads; Automatic Recovery
- PCI Voltage Architecture (5V, 3.3V, +12V, -12V)
- IPMI Capability
- No Minimum Load

The cPCI500DC is a high-reliability, 500 watt power supply for 6U Compact PCI™ systems. Developed to support hot-swap, redundant operation, the cPCI500DC is designed for compliance with PICMG™ 2.11 R1.0 *Power Interface Specification* with 47-pin I/O connector, as well as the underlying CompactPCI™ standards. Available with IPMI functionality, this unit was developed with high-availability (HA)

telecommunications applications in mind. Current sharing and internal ORing diodes are included to support these and other applications requiring reliable, hot-swap performance and N+1 redundant configuration. The 4HP package and complement of agency approvals provide for an advanced, high-density, high-efficiency power solution for your CompactPCI™ system requirements.

SPECIFICATIONS, ALL MODELS

| INPUT | PARAMETER | SYMBOL | CONDITIONS | MIN | TYP | MAX | UNITS |
|-------|-------------------------|-----------------|------------------------|-----|-----|-----|-------|
| | Input Operating Voltage | V _{in} | | 36 | | 72 | VDC |
| | Input Voltage Withstand | | | 34 | | 75 | VDC |
| | Inrush Current | I _i | 36VDC input | | 10 | | APK |
| | | | 72VDC input | | 20 | | APK |
| | Efficiency | η | 48VDC input, 500W load | | 80 | | % |

| OUTPUT | I _{OUT} | | | | | | |
|--------------|-------------------------|--|--------------------------------|--------|--------|---|-------|
| | OUTPUT NUMBER | V _{OUT} RATED OUTPUT VOLTAGE | RATED OUTPUT CURRENT | | | REGULATION | |
| | | | Min | A* | B* | | |
| | V1 | +5.0VDC | 0A | 55.0 A | 30.0 A | +/-1% | |
| | V2 | +3.3VDC | 0A | 30.0 A | 60.0 A | +/-1% | |
| | V3 | +12.0VDC | 0A | 11.0 A | 11.0 A | +/-1% | |
| | V4 | -12.0VDC | 0A | 1.75 A | 1.75 A | +3, -3% | |
| | PARAMETER | SYMBOL | CONDITIONS | MIN | TYP | MAX | UNITS |
| | Temperature Coefficient | TC | | | | 0.02 | %/°C |
| | PARD | | 20MHz bandwidth all outputs | | | 50 mV _{p-p} or 1.5% P-P whichever is greater | |
| Output Power | | 50°C max temp. | | | 500 | W | |

* Total output power not to exceed 500 Watts

SPECIFICATIONS, ALL MODELS

Transient Response

For a step load change of 50%-100%-50%, the peak output excursion will not exceed 8% of nominal voltage, and will recover to within 1% of nominal voltage within 200 microseconds.

Current Share

Active current sharing is employed on Outputs V1, V2 and V3.

Remote Sense

Outputs V1, V2, and V3 are capable of compensating up to 0.3VDC of line drop. Unit automatically reverts to local sensing in the event that the sense leads are opened for any reason. Unit is protected against reversed or shorted sense leads.

Output Power

500W continuous maximum, with 400lfm airflow at a maximum ambient of 50°C.

Overload Protection

Outputs are individually protected against overloads and indefinite short circuit with automatic recovery upon removal of the fault condition.

Over Voltage Protection

All outputs have over voltage protection at 125% typical (135% max.) of nominal.

Over Temperature Protection

Outputs are individually protected against over temperature. Outputs will automatically restore upon recovery to acceptable temperatures.

Output Fault Isolation

Output isolation diodes are present in all outputs to isolate faults within a failed power supply.

IPMI Option

An I²C board is available as a factory-installed option to provide an IPMI interface to the SM bus. Status functions include output voltage and current levels as well as the DEG warning. Output inhibit control can be toggled under software command. See Application Note ACAN-02 for satellite controller specification, ACAN-03 for firmware update procedure and ACAN-04 for test procedure.

Remote Inhibit (INH#)

Secondary referenced, active low, TTL compatible signal inhibits all outputs upon activation.

Power Fail Warning (FAL#)

Open collector signal indicates output failure. Active low.

Enable (EN#)

Short pin on connector will enable power supply output when the mating pin is grounded. Supply will not power up until this pin is engaged to its mate in the backplane. Unit output will be inhibited as pin is disengaged from the mating connector.

Temperature Warning (DEG#)

Open collector indicates internal temperatures are approaching the thermal shutdown limit. Active low.

Fault Indicator LED

A red LED will be ON if output voltages are not within specification.

Power Present LED

A green LED will be ON when input voltage is present and above the minimum requirement.

Cooling

400lfm of airflow required to maintain full output power at 0-50°C ambient. Additional data on operation below 400lfm is available in Application Note ACAN-01.

Temperature

Full output power achievable over the range of 0-50°C. Storage temperature limits are -20 to +85°C. Additional data on operation above 50°C is available in Application Note ACAN-01.

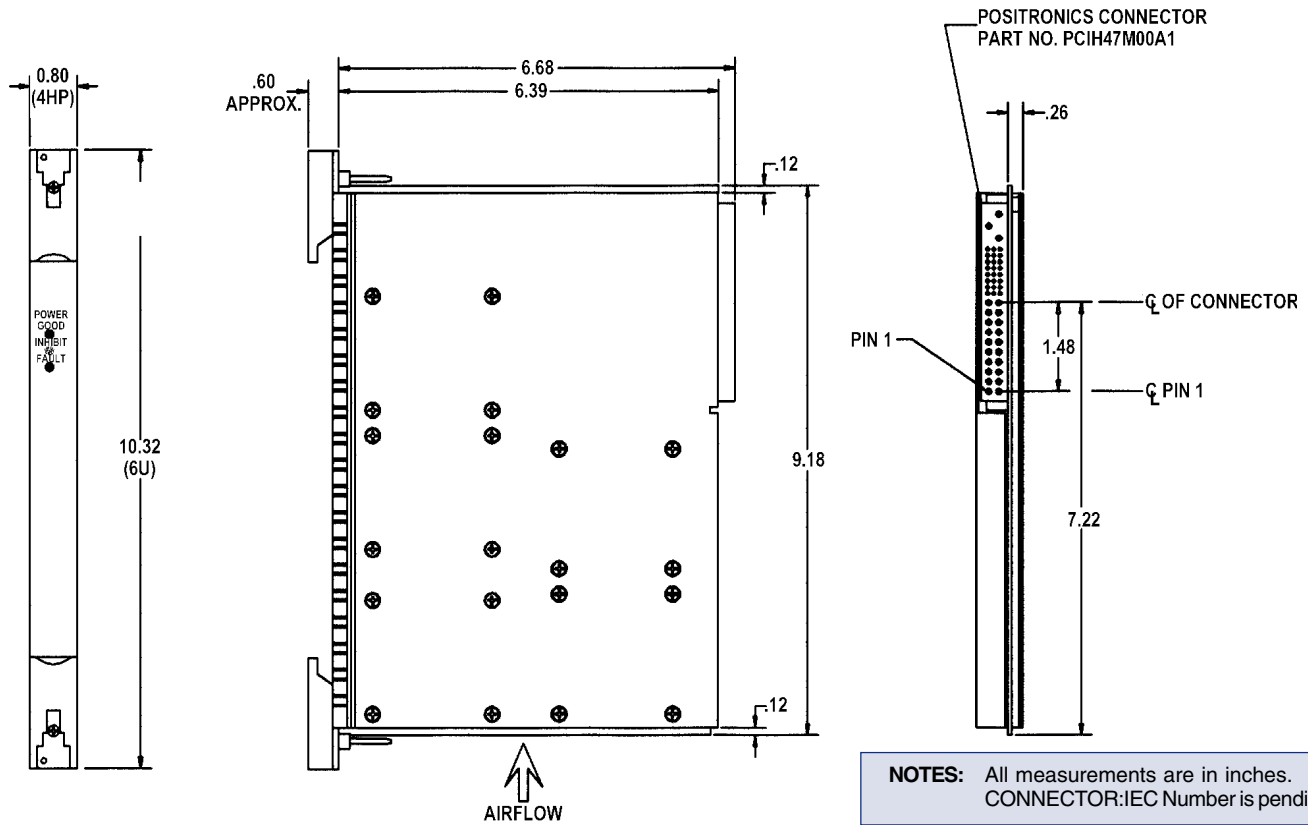
Altitude

Operating: -200 to +10,000 feet with ambient temperature derating above 5,000 feet in accordance with the adiabatic lapse rate.

Inhibit Indicator LED (Yellow)

A yellow LED will be ON when the outputs are inhibited.

MECHANICAL



NOTES: All measurements are in inches.
CONNECTOR: IEC Number is pending.

PIN ASSIGNMENT: Pin assignment consistent with PICMG™ 2.11R1.0 specification. The table below details the PICMG™ assignment.

| Pin # ¹ | Staging ² | Signal Name | Description |
|--------------------|----------------------|-------------|----------------------------|
| 1-4 | M | V1 | V1 Output |
| 5-12 | M | RTN | V1 and V2 Return |
| 13-18 | M | V2 | V2 Output |
| 19 | M | RTN | V3 Return |
| 20 | M | V3 | V3 Output |
| 21 | M | V4 | V4 Output |
| 22 | M | RTN | Signal Return |
| 23 | M | RESERVED | Reserved |
| 24 | M | RTN | V4 Return |
| 25 | M | GA0 | Geographic Address Bit 0 |
| 26 | M | RESERVED | Reserved |
| 27 | S | EN# | Enable |
| 28 | M | GA1 | Geographic Address Bit 1 |
| 29 | M | V1ADJ | V1 Adjust |
| 30 | M | V1 SENSE | V1 Remote Sense |
| 31 | M | GA2 | Geographic Address Bit 2 |
| 32 | M | V2ADJ | V2 Adjust |
| 33 | M | V2 SENSE | V2 Remote Sense |
| 34 | M | S RTN | Sense Return |
| 35 | M | V1 SHARE | V1 Current Share |
| 36 | M | V3 SENSE | V3 Remote Sense |
| 37 | M | IPMB SCL | IPMB Serial Clock Line |
| 38 | M | DEG# | Degrade Signal |
| 39 | M | INH# | Inhibit |
| 40 | M | IPMB SDA | IPMB Serial Data Line |
| 41 | M | V2 SHARE | V2 Current Share |
| 42 | M | FAL# | Fail Signal |
| 43 | M | IPMB PWR | IPMB Power Input |
| 44 | M | V3 SHARE | V3 Current Share |
| 45 | L | CGND | Chassis Grnd (Safety Grnd) |
| 46 | M | ACN/+DC IN | AC Input Neutral/+DC Input |
| 47 | M | ACL/-DC IN | AC Input Line/-DC Input |

NOTES: (1) Pin numbers correspond to the female backplane connector.

(2) L = Long Length Pin (First Make, Last Break); M = Medium Length Pins; S = Short Length Pins (Last Make, First Break)

MECHANICAL

Shock: MIL-STD-810d, Method 516.3, Procedure 1.

Vibration: MIL-STD-810d, Method 514.3, Procedure 1.

Dimensions: 6U x 4HP x 160mm (see Mechanical above)

EMC & SAFETY

EMI: NEBS Compliant

ETSI Compliant

Safety Agency Ratings

Input Voltage: 48 VDC

Input Current: 15A

Input Power: 620W

Agency Approvals

UL1950/CSA950, EN60950, CE Mark.

(Low Voltage Directive)

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