



Key Features:

- 12-36VDC Continuous Input Voltage
- 2250V Isolation Between Input /Output
- Active Input EMI Filtering
- Transient forward looking/cut-off technology
- 2 Voltage output Rails
- 2000W Maximum Continuous Power
- 95% Typical Efficiency
- -40°C to 85°C Rail Operating Temperature
- VITA 62 6U Form Factor
- VITA 46.11 ready
- Patent pending **FourRail** thermal interface
- [SMART.PSU] Technology

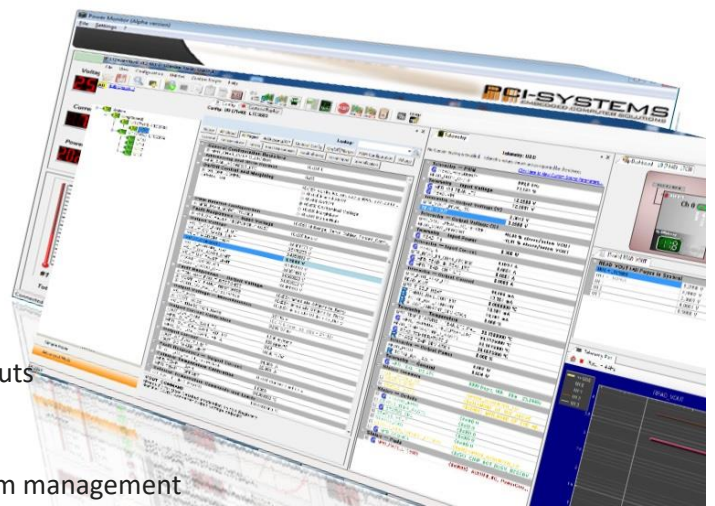
VITA 62 6U ISOLATED 1000W or 2000W 28V POWER SUPPLY

This 6U power supply works with **12VDC to 36VDC input** and isolates the input voltage ground from the output voltage ground. The power supply is **conduction cooled**, uses **poly-phase** technology on all voltage rails and can provide up to **2000 watts**. It is suitable for use in **mission critical rugged applications**.

[SMART.PSU]PCI-Systems Inc. intelligent power supplies integrate a **microcontroller (MCU)** for a fully programmable and flexible solution. Intelligent power conversion allows **configuration and reconfiguration** for different applications. With intelligent power conversion, the power supply becomes a platform solution for Vita 46.11 system management based systems. The power supply can easily be **reprogrammed** to support different **operating limits and control inputs**.

Features:

- Digital On/Off control for low standby power
- Input / Output Voltage rail setting /adjustment
- Power supply sequencing and hot-swap control
- Power supply history logging and fault management
- Monitoring all output voltages, currents and power
- Current fold back control
- Automatic temperature drift compensation for all outputs
- Total-Elapsed-Time Recorder
- Efficiency calculations at any time
- Communication via SMB/I2C (PMB)for Vita 46.11 system management
- Collects data from temperature sensors for over temperature protection
- Precision compensation of all output voltages using integrated 5ppm voltage reference



Overview	
P/N	PCI_800.317
Hold Up time	TBD
VITA Compliant	VITA62
Size	6U
Temp. Range	-40 +85 C
Input (AC or DC)	DC
Input Range (AC)	12-36
Active EMI Filtering	YES
Power (W, max.)	2000
Efficiency (% , typ.)	95
# of outputs	2

OUTPUTS (Total output not to exceed 2000W)	
VS1, VS2, V@A	+12@160A
AUX, V@A	+3.3@20A

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	NO
Remote Sense	YES
Standard Control	YES, VITA62
Extended Control	YES, PCI Systems

COMPLIANCE	
Designed to meet the following standards, additional circuitry in the chassis may be required	
VITA62	YES
MIL-STD-704 (B-F)	YES
MIL-STD-461	YES
MIL-STD-810G	YES
* ESD Protection	YES
* Shock	YES
* Vibration	YES
* Rapid Decompression	YES
* Corrosion Resistance	YES
* Fungus Resistance	YES
* Altitude	YES
* Humidity	YES

INPUT CHARACTERISTICS					
Parameter	Min.	Typ.	Max.	Units	Notes
Absolute Maximum Ratings					
Input Voltage					
- Non-Operating	-60		60	V	Continuous
- Operating	-40		40	V	Continuous- Reverse input Protection
- Operating Transient Protection			100	V	50ms transient, square wave
Isolation Voltage			2250	V	
Operating Temperature	-40		85	C	
Storage Temperature	-55		105	C	
Electrical Characteristics					
Input Voltage					
- Continuous	12		40	V	
- Transient	12		50	V	100V Transient for 50 ms -- MIL 1275D
Under-Voltage Lockout					
- Turn-On Input Voltage Threshold		10		V	

INPUT VOLTAGE SPIKES SUPPRESSION (Vin Centered)	
Designed to meet the following standards, additional circuitry in the chassis may be required	
+/- 450V, 100 us	MIL-STD-1275D
+/- 490V, 10 us	MIL-STD-461C (CS06); DEF-STAN 61-5
+/- 450V, 5 us	MIL-STD-461C (CS06)
+/- 600V, 10 us	RTCA/DO-160E

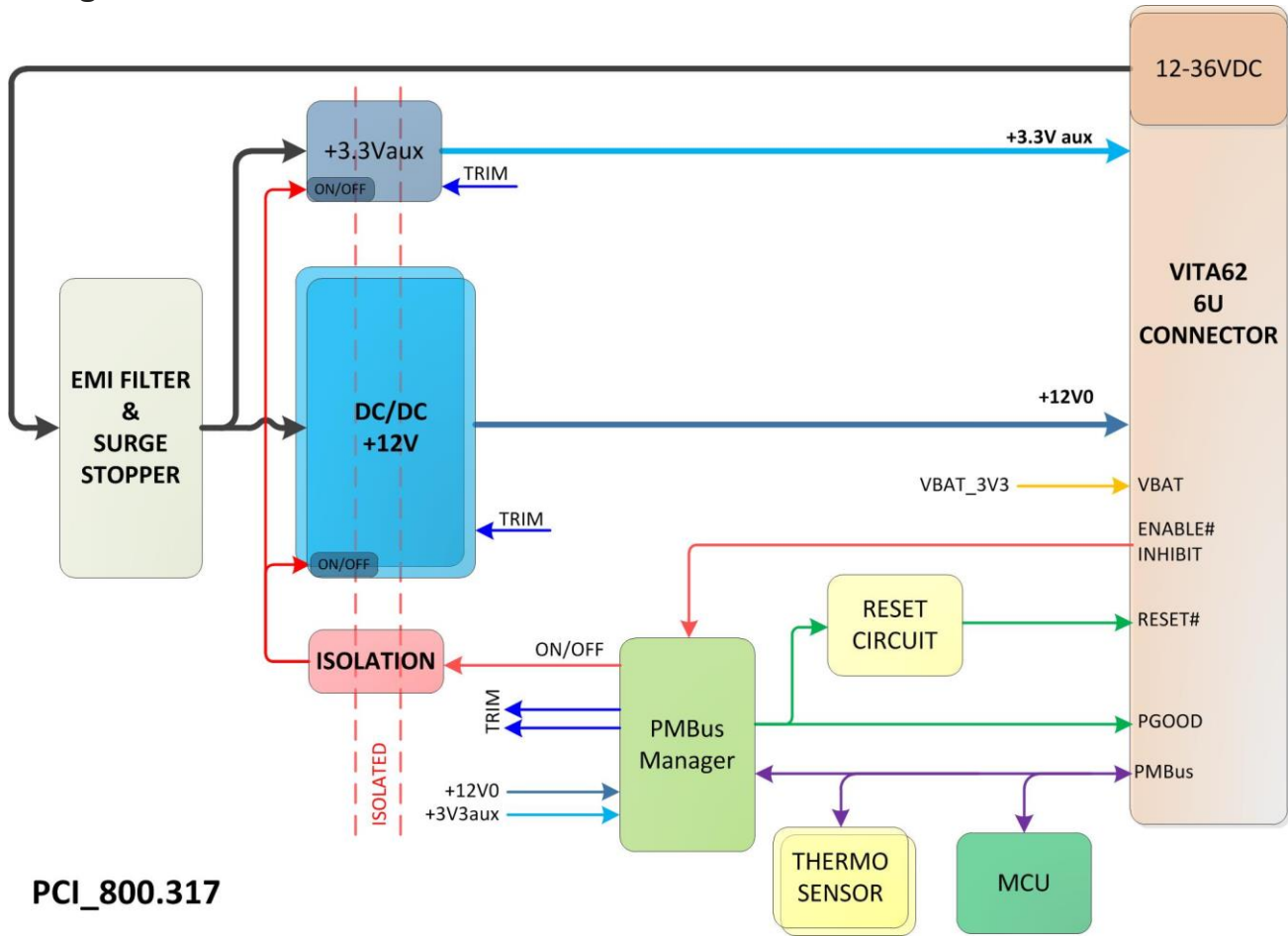
OUTPUT CHARACTERISTICS						
Parameter	+12V	+12V		+3.3V aux		Notes
Output Voltage Set Point, V	12	12		3.3		Vin = 28VDC
- Drift -40 deg.C to 85degC +/- %	0.01	0.01		0.01		Vin = 28VDC
Output Voltage Trim Range, V	12	12		3.3		Over Line/load/temp.
	+/- 10%	+/- 10%		+/- 10%		Over Line/load/temp.
Output Voltage Ripple (pk-pk), mV	120	120		40		Full load with 1 uF + 10 uF tantalum capacitor
Operating Current Range, A	0-80	0-80		0-20		2000W Total, combined Output
Over-Voltage Protection, V	13.6	13.6		3.6		
Current Limit Inception, A	85	85		22		
Maximum Output Capacitance, mF	10	10		10		

MODULE QUALIFICATION	
Designed to meet the following standards, additional circuitry in the chassis may be required	
Test Name	Method
Random Vibration	MIL-STD-810, 514.6 - Procedure I, Class V3
Shock	MIL-STD-810, 516.6 - Procedure I, VI, Class OS2
Altitude	MIL-STD-810, 500.5 - Procedure I, II, III
Fungus Resistance	MIL-STD-810, 508.6
Corrosion Resistance	ASTM G85, Annex A4
Humidity	MIL-STD-810, 507.5 - Procedure II
High Temperature	MIL-STD-810, 501.5 - Procedure I, II
Low Temperature	MIL-STD-810, 502.5 - Procedure I, II
Temperature Cycling	MIL-STD-202, 107 - Class C4
ESD	EN61000-4-2, Level 4; 15kV Air Discharge

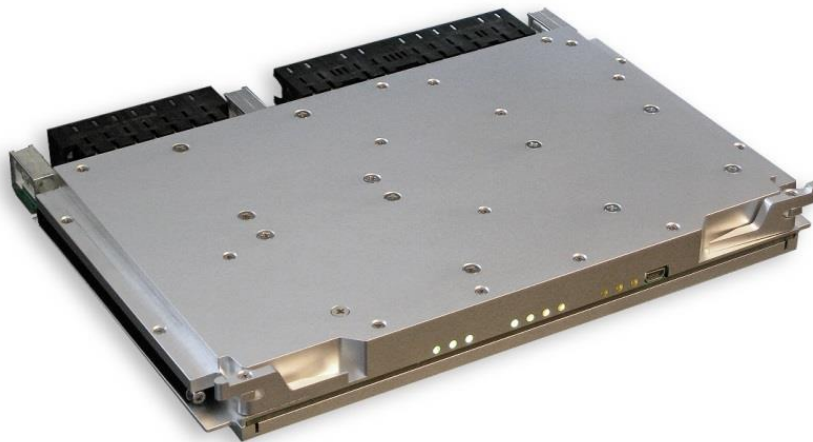
RELIABILITY CHARACTERISTICS

Calculated MTBF per MIL-HDBK-217F (GB) at 70 deg C. 4.1 280.000 Hrs.
 Calculated MTBF per MIL-HDBK-217F (GM) at 70 deg C.0.92 250.000 Hrs.

Block Diagram:



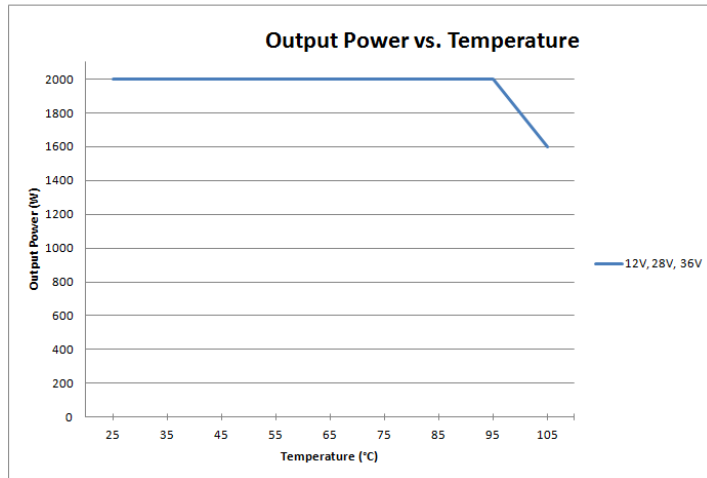
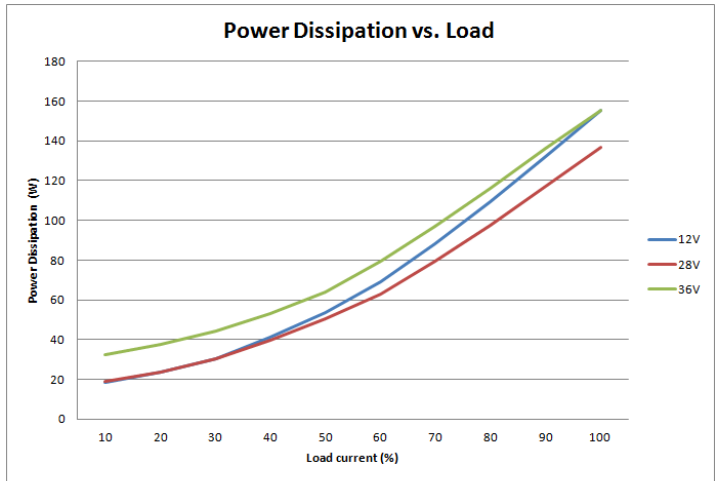
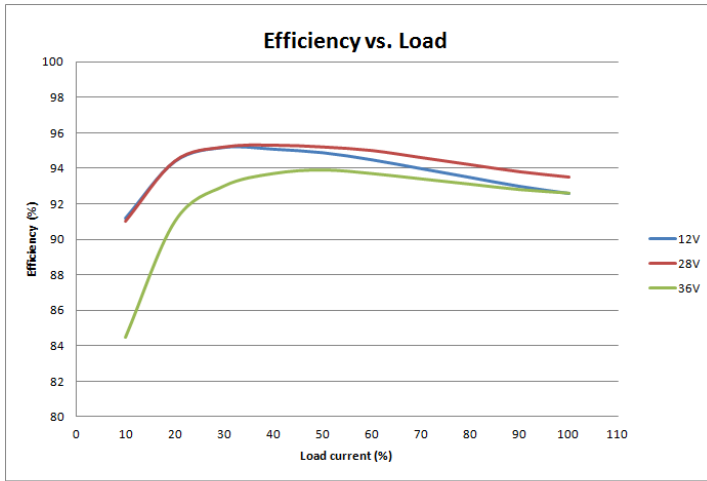
PCI_800.317



Pin-out: As per VITA 62 specification

Mechanical Dimensions: As per VITA 62 specification (1" pitch)

Characteristic curves:



Thermal derating max Output Power vs. temp at module cover. (Delta T to wedgelock 7°C)

ORDERING INFORMATION:

PCI_800.317_1
PCI_800.317_2

6U VITA 62 1000W 12-36VDC Isolated Rugged Power Supply with Conformal Coating
6U VITA 62 2000W 12-36VDC Isolated Rugged Power Supply with Conformal Coating

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