

Key Features:

- 10-36VDC Continuous Input Voltage
- 2250V Isolation Between Input /Output
- Active Input EMI Filtering
- Transient forward looking/cut-off technology
- 2 Voltage output Rails, 12V and 3.3Vaux
- 750W Maximum Continuous Power
- 95% Typical Efficiency
- -40°C to 85°C Rail Operating Temperature
- VITA 62 3U Form Factor
- VITA 46.11 ready
- Patent pending **FourRail** thermal interface
- [SMART.PSU] Technology

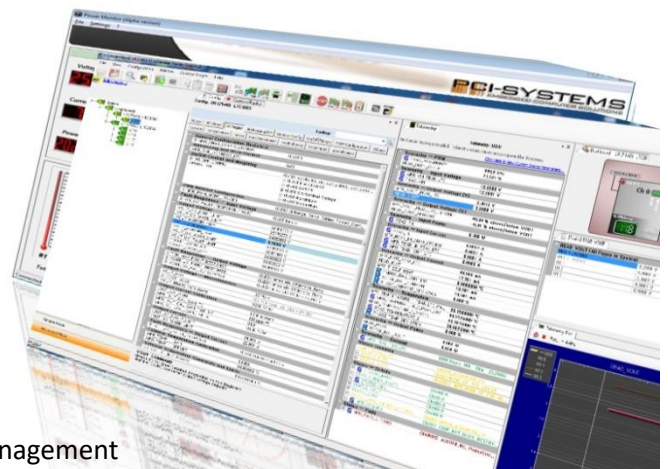
VITA 62 3U ISOLATED 750W 28V input POWER SUPPLY

This 3U power supply works with **10VDC to 36VDC input** and isolates the input voltage ground from the output voltage ground. The power supply is **conduction cooled** and can provide up to **750 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:

- Parallel operating with multiple power supplies
- Load sharing and balancing
- Digital On/Off control for low standby power
- Input / Output Voltage rail setting /adjustment
- Power supply history logging and fault management
- Monitoring all input/output voltages, currents and power
- Automatic temperature drift compensation for all outputs
- Total-Elapsed-Time Recorder
- 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_800.111
Hold Up time	
VITA Compliant	VITA62 SOSA
Size	3U
Temp. Range	-40 +85 C
Input (AC or DC)	DC
Input Range (AC)	10-36
Active EMI Filtering	YES
Power (W, max.)	750
Efficiency (% , typ.)	95
# of outputs	2

OUTPUTS (Total output not to exceed 1100W)	
VS1, VS3, V@A	+12V@62A
AUX, V@A	+3.3V@2A
AUX, V@A	
AUX, V@A	

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	VS1, VS2
Remote Sense	YES
Standard Control	YES, VITA62
Extended Control	YES, PCI Systems

COMPLIANCE	
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	10		40	V	
- Transient			50	V	100V Transient for 50 ms-- MIL 1275D
Under-Voltage Lockout					
- Turn-On Input Voltage Threshold	9.3	9.6	9.9	V	

INPUT VOLTAGE SPIKES SUPPRESSION (Vin Centered)	
+/- 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

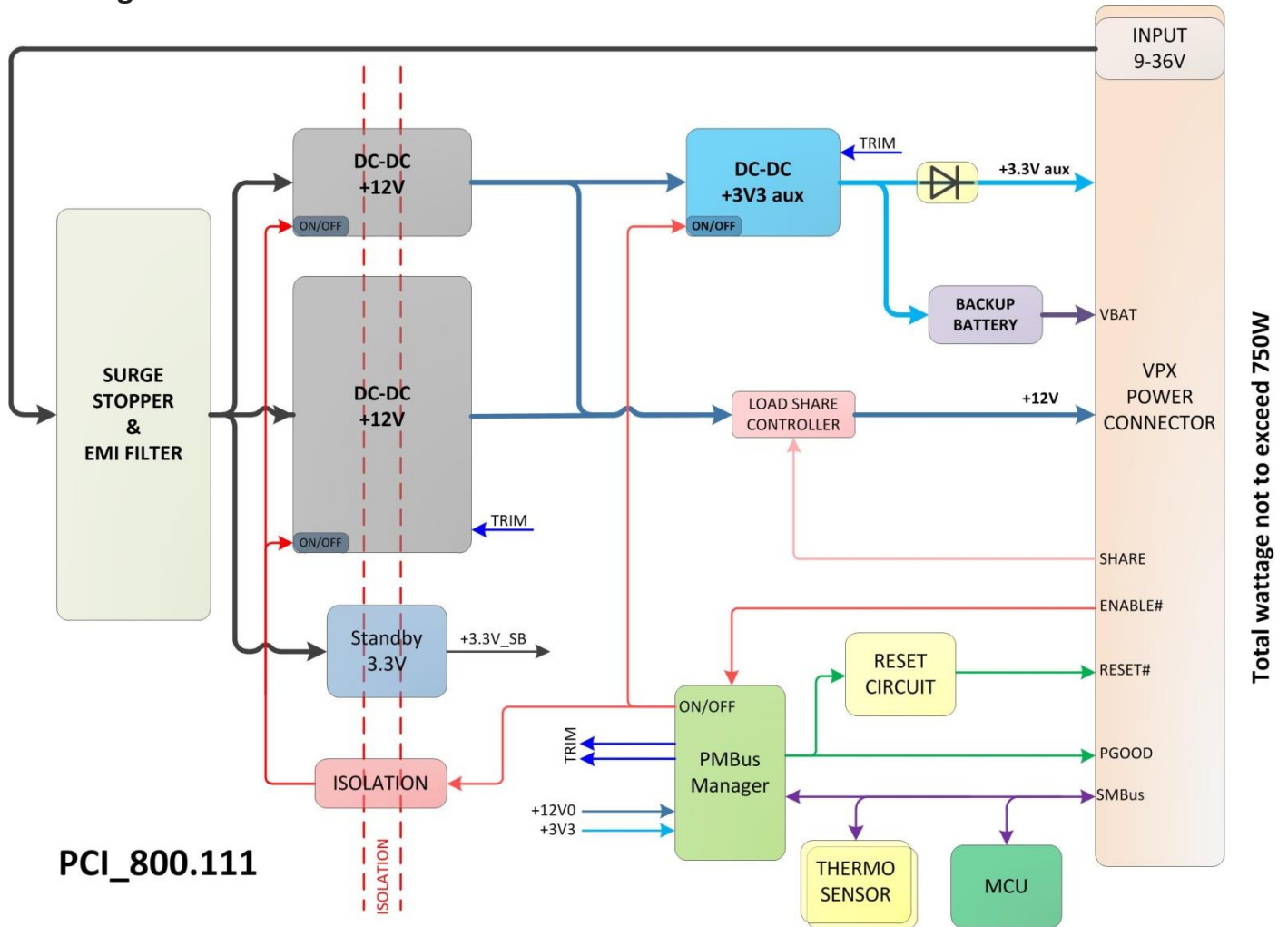
OUTPUT CHARACTERISTICS						
Parameter	+12V			+3.3V aux		Notes
Output Voltage Set Point, V	12			3.3		Vin = 28VDC
- Drift -40 deg.C to 85degC +/- %	0.01			0.01		Vin = 28VDC
Output Voltage Trim Range, V	12			3.3		Over Line/load/temp.
	+/- 10%			+/- 10%		Over Line/load/temp.
Output Voltage Ripple (pk-pk), mV	120			40		Full load with 1 uF + 10 uF tantalum capacitor
Operating Current Range, A	0-62			0-2		750W Total, combined Output
Over-Voltage Protection, V	14			4		
Current Limit Inception, A	65			3		
Maximum Output Capacitance, mF	10			0.5		

MODULE designed to	
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. 4.1 270.000 Hrs.

Block Diagram:

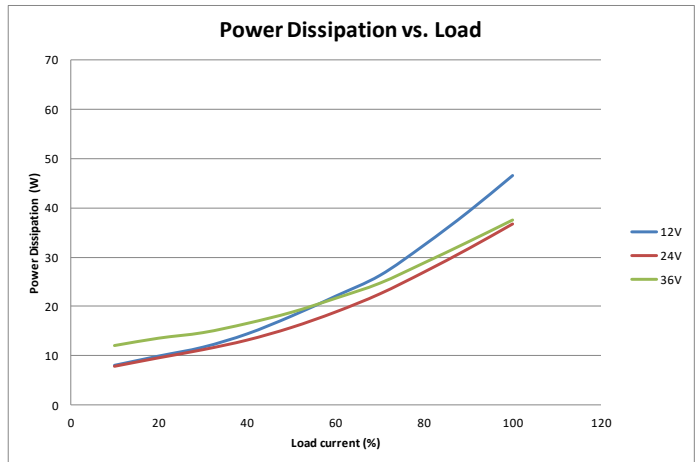
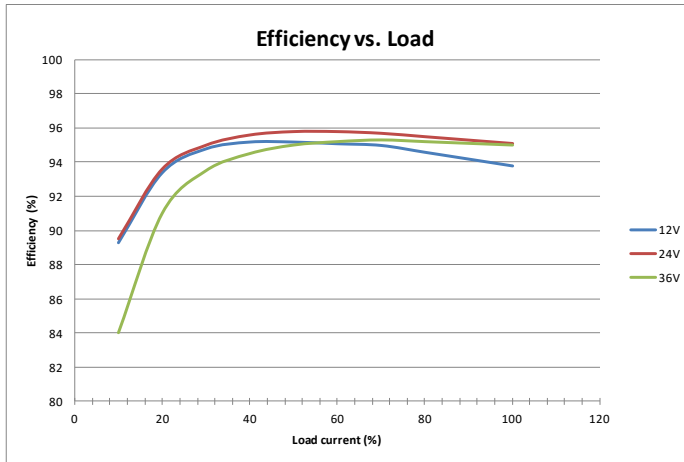


Patent pending 4 way heat transfer design adds 90 % more heat transfer surface.
NO chassis slot dimension change needed

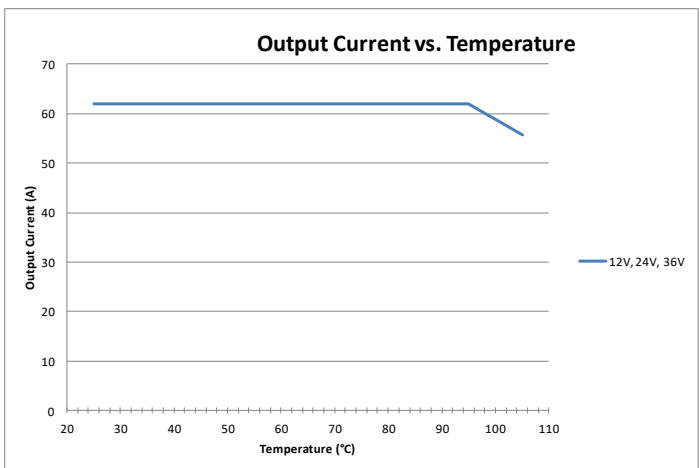
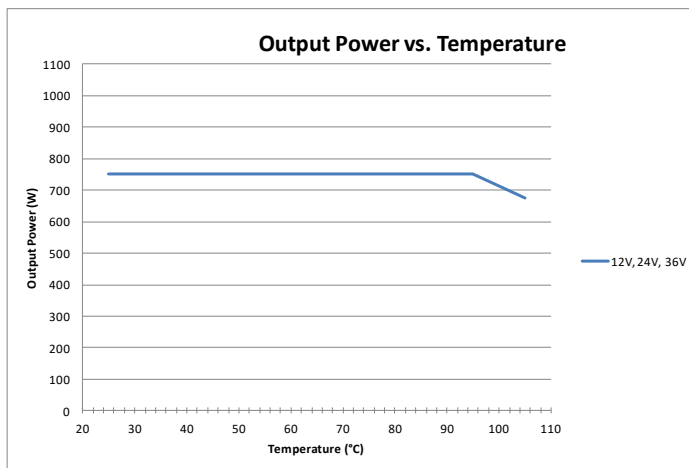
Pin-out: As per VITA 62 specification

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

Characteristic curves:



Efficiency and Power Dissipation at nominal output voltage vs. load current for min, nom, max input V at 25°C



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

ORDERING INFORMATION:

PCI_800.111
PCI_800.111_C

750W 9-36VDC input isolated conditioning 12V output PS
Version with Conformal Coating

Release_October_20_2020