



Key Features:

- 220VAC Continuous Input Voltage
- **VITA 62.2 specification compatible**
- 2300V Isolation Between Input /Output
- Active Input EMI Filtering, no LC stage
- Transient look ahead/cut-off technology
- 6 Voltage output Rails
- Isolated 3.3V aux standby feature
- 600W Maximum Power, with PFC stage
- 87% 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 600W 220VAC POWER SUPPLY

This 3U power supply works with **220VAC input** voltage at input frequencies **50/60Hz** and isolates the input voltage ground from the output voltage ground. The power supply is **conduction cooled**, uses **polyphase** technology on all voltage rails and can provide up to **600 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, all rails
- Load sharing and balancing
- Digital On/Off control for low standby power
- Input / Output Voltage rail setting /adjustment
- Spread Spectrum Clocking of power supply stages
- Power supply sequencing and hot-swap control
- 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
- 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_800.155
Hold Up time	3ms
VITA Compliant	VITA62
Size	3U
Temp. Range	-40 +85 C
Input (AC or DC)	AC
Input Range (VDC)	85-264Vac
Active EMI Filtering	YES
Power (W, max.)	600
Efficiency (% , typ.)	87
# of outputs	6

OUTPUTS (Total output not to exceed 600W)	
VS1, V@A	+12@40A
VS2, V@A	+3.3@20A
VS3, V@A	+5@40A
AUX, V@A	+3.3@4A
AUX, V@A	+12@1.5A
AUX, V@A	-12@1.5A

FEATURES	
Over-current Protection	YES
Over-voltage Protection	YES
Over-temperature Protection	YES
Current Sharing	VS1, VS2, VS3
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			360	V	
- Operating			264	V	Continuous
- Operating Transient Protection			280	V	100ms transient
Isolation Voltage			1500	V	
Operating Temperature	-40		85	C	
Storage Temperature	-55		105	C	
Electrical Characteristics					
Input Voltage					
- Continuous	85		264	V	
- Transient	85		280	V	Transient for 100 ms
Under-Voltage Lockout					
- Turn-On Input Voltage Threshold		80		V	

INPUT VOLTAGE SPIKES SUPPRESSION (Vin Centered) COMPLIANCE

Designed to meet the following standards, additional filter 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

<i>Parameter</i>	+12V	+5V	+3.3V	+3.3V aux	+12V aux	-12V aux	<i>Notes</i>
Output Voltage Set Point, V	12	5	3.3	3.3	12	-12	Vin = 115VAC
- Drift -40 deg.C to 85degC +/- %	0.01	0.01	0.01	0.01	0.01	0.01	Vin = 115VAC
Output Voltage Trim Range, V	12	5	3.3	3.3	12	-12	Over Line/load/temp.
	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	Over Line/load/temp.
Output Voltage Ripple (pk-pk), mV	80	50	40	40	80	80	Full load with 1 uF + 10 uF tantalum capacitor at each slot
Operating Current Range, A	0-40	0-40	0-20	0-4	0-1.5	0-1.5	600W Total, combined Output
Over-Voltage Protection, V	14	6	3.6	3.6	14	14	
Current Limit Inception, A	41	41	21	4.1	1.7	1.7	
Maximum Output Capacitance, mF	10	10	10	1	1	1	

MODULE QUALIFICATION

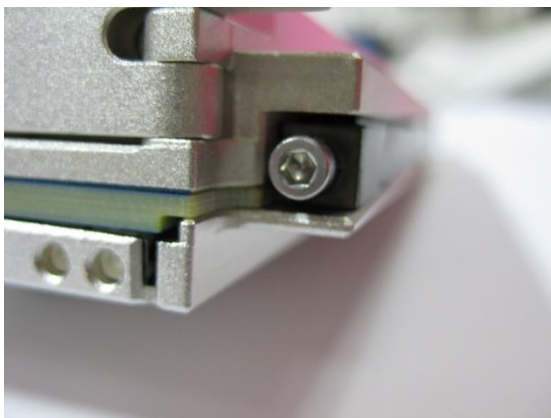
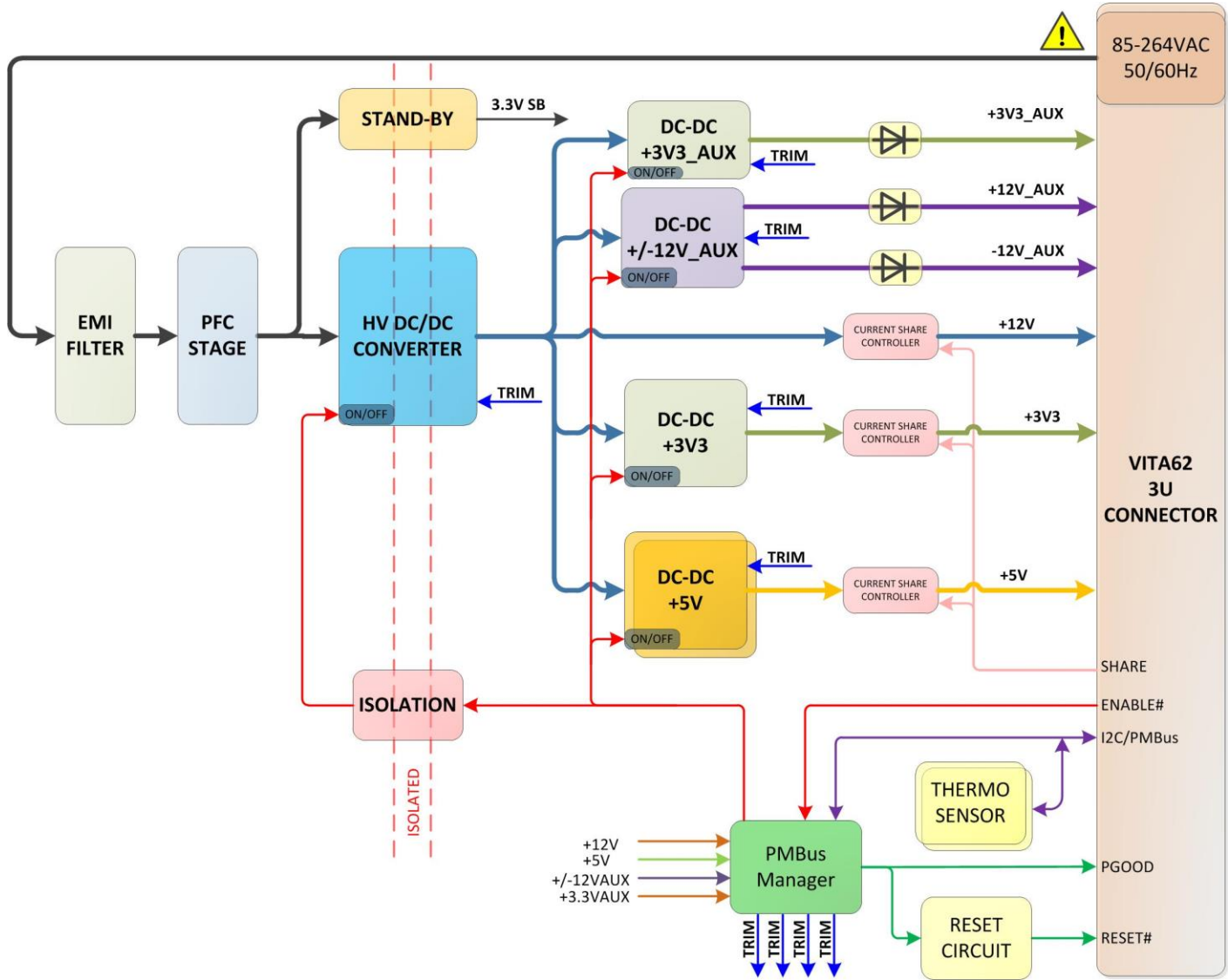
Designed to meet the following standards, additional circuitry in the chassis may be required

<i>Test Name</i>	<i>Method</i>
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

Calculated MTBF per MIL-HDBK-217F (GB) at 70 deg C. 2.100.000 Hrs.

Calculated MTBF per MIL-HDBK-217F (GM) at 70 deg C. 450.000 Hrs.

Block Diagram:



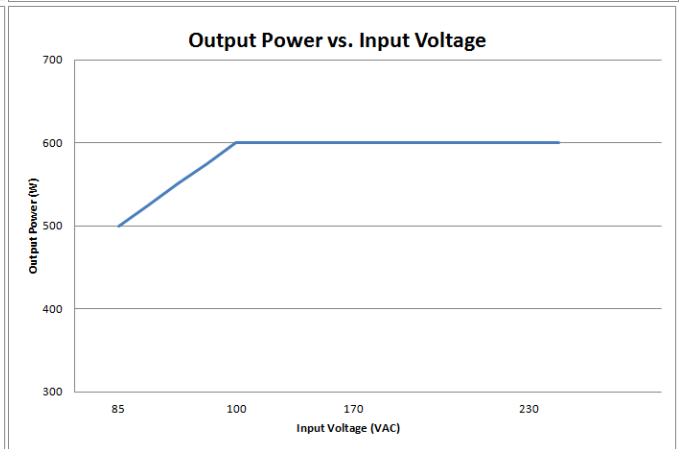
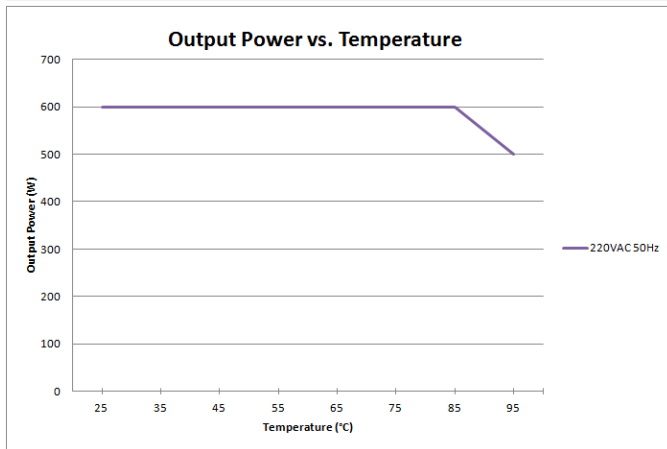
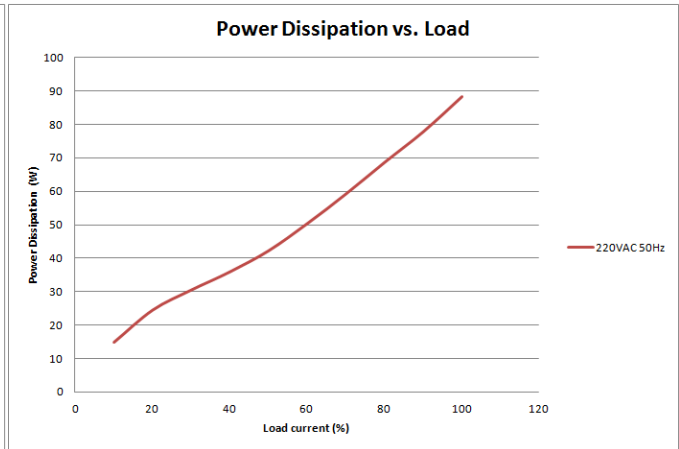
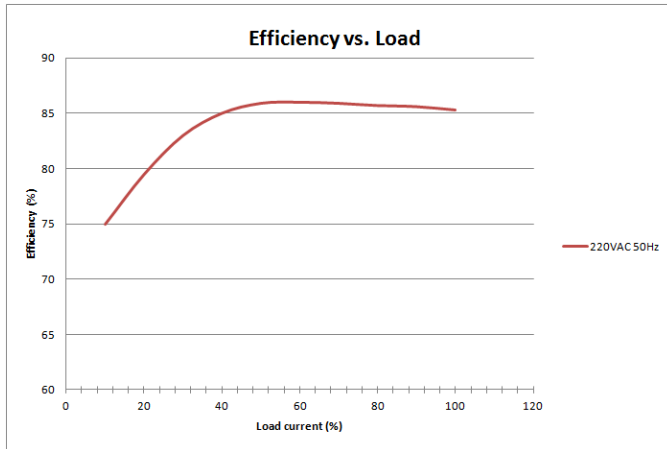
Patent pending 4 way heat transfer design adds 90 % more heat transfer surface.



New extractor design

Pinout: As per VITA 62.2 specification

Mechanical Dimensions: As per VITA 62 specification (1.6" pitch)



ORDERING INFORMATION:

PCI_800.155_C 3U VITA 62 220VAC, with PFC stage 600W Isolated Rugged Power Supply with Conformal Coating

Release June 21 2021

