

ST8091A

AC-DC Power Card CompactPCI®

(Document Rev A07 11/03/2015)



**Single Phase 60Hz 115Vac Input
Quad Output, 564W Max Total**

Market: Telecommunications

Application: Up/Down Satellite Link Communications

Features

- 115Vac 60Hz Input
- 564W Quad Output
- Single Slot Power Card
- Designed to meet FCC Class A EMI Emissions requirements
- Designed to meet UL1950 when installed in customer chassis.
- *CompactPCI® Compatible**

Table 1: Maximum Ratings

Parameter	Rating	Unit	Notes
Vin max range	105 to 132	Vac	47-63Hz
Temperature	-20 to +40	°C	With 500LFM air flow
Output Power	564	W	
Input power	750	W	
Max +3.3Vdc	198	W	Refer Table 2 (Outputs)
Max +5Vdc	300	W	Refer Table 2 (Outputs)
Max +12Vdc	36	W	Refer Table 2 (Outputs)
Max -12Vdc	36	W	Refer Table 2 (Outputs)

Product Highlights

This dual slot pluggable slide-in 8HP wide 6U high ac-dc power converter card has four factory set outputs (+3.3Vdc, +5Vdc, +12Vdc, -12Vdc) with 564W combined output power available. This custom solution works well for satellite up/down communications links and other communication electronic racks.

AEGIS Power Systems, Inc. specializes in the front end design, development, and manufacture of Rapid Response Custom Switching Power Supplies and VME power converters for military Mil-COTS, defense, industrial, telecomm, aircraft, shipboard, rack mount, electric powered vehicle, and other industrial and military power supply applications. Contact Aegis for specific details on what portions of a particular military standard is offered for a particular military power supply or power converter.

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SPECIFICATIONS

(Typical at 25°C, nominal line and 75% load, unless otherwise specified.)

Input voltage:	105Vac to 132Vac, 47Hz to 63Hz.
Input current:	11A Maximum @ 105Vac. Inrush current 40A Maximum @ 115Vac.
Input power:	750W @ Maximum.
Power factor:	0.6 Minimum.
Output power:	564W Maximum combined total output. See Table 2.
Holdup time:	10msec Minimum from input power failure.
Output voltages:	+3.3Vdc, +5Vdc, +12Vdc, and -12Vdc. See table 2 for details.
Remote sense:	0.25V compensation (+3.3V, +5V, & +12V).
Redundancy:	All outputs diode isolated. Current share (+3.3V, +5V, & +12V).
Efficiency:	69% minimum @ 115VAC.
Output ripple:	2% Maximum Vpk-pk (20Mhz BW). See table 2 for details.
Current Limit:	105-135%. Short circuit protected with automatic recovery.
Start up time:	1 Second Maximum.
Voltage set point:	± 0.5% (+5V), ±1.3% (+3.3V), ±4% (+12V), and +/-4% (-12V).
Line/Load regulation @ 105-132Vac:	+3.3V and +5Vdc: ±0.5% @ 10-100% Load. ±1.0% @ 0-100% Load. +12V and -12Vdc: ±0.5% @ 10-100% Load. ±5.0% @ 0-100% Load.
Temperature regulation:	± 0.02% / °C.
Temperature:	-20°C to +40°C Operating. -40°C to +100°C Non-Operating.
Cooling:	Forced fan cooling. 500LFM across attached cooling fins.
Package:	Pluggable slide in rack card.
Dimensions:	6U x 8HP (1.6") x 160mm (see mechanical drawing).
Weight:	4.5 lbs.
Connector:	PCI38M400A1 (Mates to Positronic PCI38F300A1) (see pin assignment page).
Vibration:	Designed to meet 0.04G _{rms} /Hz 80-350 Hz Random Vibration.
Shock:	Designed to meet 15G 11msec half sine wave pulse, three shocks each axis.
Humidity:	0 – 95% non-condensing.
EMI:	Designed to meet FCC Class A EMI Emissions requirements.
Miscellaneous:	Front Panel LED Indicators: AC OK, +3.3V OK, +5V OK, +12V OK, -12V OK. Designed to meet UL1950 as installed in Chassis.

Specifications subject to change without notice.

Table 2: Voltage Outputs

ST80981A	V1	V2	V3	V4
Voltage	+3.3Vdc	+5Vdc	+12Vdc	-12Vdc
Current	60A	60A	3A	3A
Power	198W	300W	36W	36W
Ripple	100Vpk-pk	66Vpk-pk	240Vpk-k	240Vpk-pk
Maximum total output power is 564W (all DC outputs combined).				

Connector Information and Pin Out(+3.3V, +5V, & +12V). (+3.3V, +5V, & +12V). (+3.3V, +5V, & +12V).:

ST8091A Connector							Rev A01 04/19/10
38 Pin Positronic PCI38M400A1 Pin assignments							
Pin #	Size	Amp Rated	Amp Derated	Max Amp Used	Signal Name	Mating	Comments
38	16	20	12.5	11 @ 105VAC	AC Line	2nd to Mate	105-132VAC Hot
37	16	20	12.5	11 @ 105VAC	AC Neutral	2nd to Mate	105-132VAC Neutral
36	16	20	12.5	11 @ Fault	Chassis GND	1st to Mate	Safety Ground
35	20	7.5	4.5	<0.05	FAL#	2nd to Mate	Open Collector, DC PWR OK Pulled Low = DC PWR FAIL
34	20	7.5	4.5	<0.05	+12V I Share	2nd to Mate	
33	20	7.5	4.5	<0.05	+3.3V I Share	2nd to Mate	
32	20	7.5	4.5	<0.05	+5V I Share	2nd to Mate	
31	20	7.5	4.5	<0.05	INH#	2nd to Mate	Connect to GND to Inhibit
30	20	7.5	4.5	<0.05	+12V Sense	2nd to Mate	
29	20	7.5	4.5	<0.05	Ishare_RTN	2nd to Mate	+5 & +3.3 current share rtn
28	20	7.5	4.5	<0.05	Not Used	Last to Mate	Not Used
27	20	7.5	4.5	<0.05	+3.3V Sense	2nd to Mate	
26	20	7.5	4.5	<0.05	GND Sense	2nd to Mate	
25	20	7.5	4.5	<0.05	EN#	Last to Mate	Connect to GND to Enable
24	20	7.5	4.5	<0.05	+5V Sense	2nd to Mate	
23	20	7.5	4.5	0.5	GND	2nd to Mate	
22	20	7.5	4.5	0.5	GND	Last to Mate	
21	20	7.5	4.5	0.5	-12V	2nd to Mate	
20	16	20	12.5	12.5	+5V	2nd to Mate	
19	16	20	12.5	12.5	+3.3V	2nd to Mate	
18	16	20	12.5	12.5	+12V	2nd to Mate	
17	16	20	12.5	12.5 *	GND	2nd to Mate	
16	16	20	12.5	12.5	+3.3V	2nd to Mate	
15	16	20	12.5	12.5	+3.3V	2nd to Mate	
14	16	20	12.5	12.5	+3.3V	2nd to Mate	
13	16	20	12.5	12.5	+3.3V	2nd to Mate	
12	16	20	12.5	12.5 *	GND	2nd to Mate	
11	16	20	12.5	12.5 *	GND	2nd to Mate	
10	16	20	12.5	12.5 *	GND	2nd to Mate	
9	16	20	12.5	12.5 *	GND	2nd to Mate	
8	16	20	12.5	12.5 *	GND	2nd to Mate	
7	16	20	12.5	12.5 *	GND	2nd to Mate	
6	16	20	12.5	12.5 *	GND	2nd to Mate	
5	16	20	12.5	12.5 *	GND	2nd to Mate	
4	16	20	12.5	12.5	+5V	2nd to Mate	
3	16	20	12.5	12.5	+5V	2nd to Mate	
2	16	20	12.5	12.5	+5V	2nd to Mate	
1	16	20	12.5	12.5	+5V	2nd to Mate	