

**Electrical  
Specification for:**

**CPCI-3U-AC-300W-R**

Rugged 300W AC Input 3U CompactPCI Power Supply

**TelkooR Part  
Number:**

900-4602-0000

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4602-DOC1-10	REV	A2
GENERAL	SCALE	RELEASE DATE	12/9/06	SHEET	1	OF	6

<b>REVISION HISTORY</b>					
<b>Rev Level</b>	<b>Rev Date</b>	<b>Change Made</b>	<b>Reason for Change</b>	<b>Effective</b>	<b>Approved By</b>
A	12/09/2006	Specification Release		12/09/2006	S. Sadot
A1	17/03/2008	Specification Updated	Updated Operation Temp. to -20°C (was -5°C)	17/03/2008	S. Sadot
A2	30/07/2012	Specification Updated	Updated Operation Temp. to -40°C to + 70 °C	30/07/2012	S. Sadot

<b>Approvals</b>		
	<b>Name</b>	<b>Date</b>
<b>Written by:</b>	<b>S. Sadot</b>	<b>12/09/2006</b>
<b>Engineering:</b>	<b>S. Sadot</b>	<b>12/09/2006</b>
<b>Sales &amp; Marketing:</b>	<b>M. Allon</b>	<b>12/09/2006</b>
<b>Management:</b>	<b>Y. Ben-Ami</b>	<b>12/09/2006</b>

<b>CUSTOMER</b>	<b>SIZE</b>	<b>CAGE CODE</b>	<b>S5417</b>	<b>DWG. NO.</b>	<b>4602-DOC1-10</b>	<b>REV</b>	<b>A2</b>
<b>GENERAL</b>	<b>SCALE</b>	<b>RELEASE DATE</b>	<b>12/9/06</b>	<b>SHEET</b>	<b>2</b>	<b>OF</b>	<b>6</b>

### INPUT SPECIFICATIONS

Parameter	Conditions/Description	Min	Nom	Max	Units
Input Voltage - AC	Continuous input range	90		250	VAC
Input Frequency		45		440	Hz
Input Protection	Non-user serviceable, internally-located input fuse				
Inrush Surge Current	Internally limited by thermistor			60	A @ 220V
Operating Frequency	Switching frequency of main output transformer	70		90	KHz

### Output Specifications

Output	Output Voltage	Adjustment Range	Output Current	Line Regulation	Load Regulation	Ripple & noise % <sub>ppK-pK</sub> (Note 1)
V1	+5V	4.8 ÷ 5.2	30A	0.5%	± 1%	60mV
V2	+3.3V	3.1 ÷ 3.5	40A	0.5%	± 1%	60mV
V3	+12V	N/A	5.0A	0.5%	± 4%	120mV
V4	-12V	N/A	1.0A	0.5%	± 4%	120mV

Notes: 1) maximum peak-to-peak expressed in mV @ 20MHz bandwidth.

2) Maximum power on V1 + V3 not to exceed 185W

3) Maximum power on V2 + V4 not to exceed 140W

Parameter	Conditions/Description	Min	Nom	Max	Units
Efficiency	Full rated load @ 110 VRMS	79			%
Minimum Load V1, V2, V3, V4	Minimum load required to maintain regulation	None			
Ripple and Noise	Full load, 20 MHz bandwidth			See above table	
Output Power	40CFM			300	W
Overshoot/Undershoot Regulation	Output voltages overshoot/undershoot at turn-on. Varies by output. Total regulation includes: line changes over the specified input range, changes in load starting at 50% load and changing to 100%			0	%
Turn-on Delay	Time required for initial output voltage stabilization		< 2		Sec
Hold up time	Hold up @ full load at 220VAC input		16		mSec
Output voltage rise time after Turn-on delay	Rise time of output voltage from 10% to 90% of its final value after initial turn-on delay		20		mSec
Initial Setting Accuracy for V1 & V2			± 1		%

**Fully compliant with the PICMG 2.11 CompactPCI specifications**

*CompactPCI and PCIMG are registered trademarks on the PCI industrial Computer Manufacturers Group.*

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4602-DOC1-10	REV	A2
GENERAL	SCALE	RELEASE DATE	12/9/06	SHEET	3	OF	6

### **INTERFACE SIGNALS AND INTERNAL PROTECTION**

<b>Parameter</b>	<b>Conditions/Description</b>	<b>Min</b>	<b>Nom</b>	<b>Max</b>	<b>Units</b>
Over-voltage Protection	Latch style over-voltage protection (V1, V2 & V3)	110		130	% Vnom
Overload Protection	Fully protected against output overload and short circuit. Automatic recovery upon removal of overload condition				
Over temperature Protection	System shutdown due to excessive internal temperature measured on the internal base plate, automatic restart.		90		° C
Power Fail (FAIL#)	TTL compatible signal. Open collector. Active low signal. Indicates outputs below 90% for V1 and/or V2 and/or V3				
Current Share	Accuracy of shared current with up to 6 parallel units. Single wire current share on V1 & V2.			10	%
Remote Sense	Available on V1 & V2. Total voltage compensation for cable losses with respect to the main output			200	mV
Inhibit (INH#)	TTL-compatible signal. Inhibited with GND or TTL "0"				
Enable (EN#)	Contact closure to external ground to start unit. On shortest pin (last make, first break) during normal operation pulled up to +5V internally.				
Over temperature Warning (DEG#)	Provides a warning window when power supply temperature exceeds rating and before over temperature protection shuts the unit off. TTL-compatible open				
Front Panel LED Status Indicator	A single bi-color LED - Input OK (Green), Output Failure (Red)				

(\*) Tested with an external TBD line filter

### **SAFETY, REGULATION AND EMI SPECIFICATION**

<b>Parameter</b>	<b>Conditions/Description</b>	<b>Min</b>	<b>Nom</b>	<b>Max</b>	<b>Units</b>
Agency Approvals	UL 60950-1 ,EN60950-1 & CE markings			Approved	
Dielectric Withstand Voltage	Input to Output per EN60950-1	4200			VDC
Electromagnetic Interference	EN55022/CISPR22 – Conducted & Radiated	B (*)			Class
Harmonic Current emission, voltage fluctuations	Per EN6100-3-2/3			In Compliance	
ESD Susceptibility	Per EN61000-4-2, level 4	8			KV
Radiated Susceptibility	Per EN61000-4-3, level 3	10			V/M
EFT/Burst	Per EN61000-4-4, level 3	±2	kV		
Input Surge	Per EN61000-4-5, level 3. Line to Line Line to Ground	1 2			KV
Conducted Disturbance	Per EN61000-4-6, level 2			3	V
Insulation Resistance	Input to Output		10		MΩ

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4602-DOC1-10	REV	A2
GENERAL	SCALE	RELEASE DATE	12/9/06	SHEET	4	OF	6

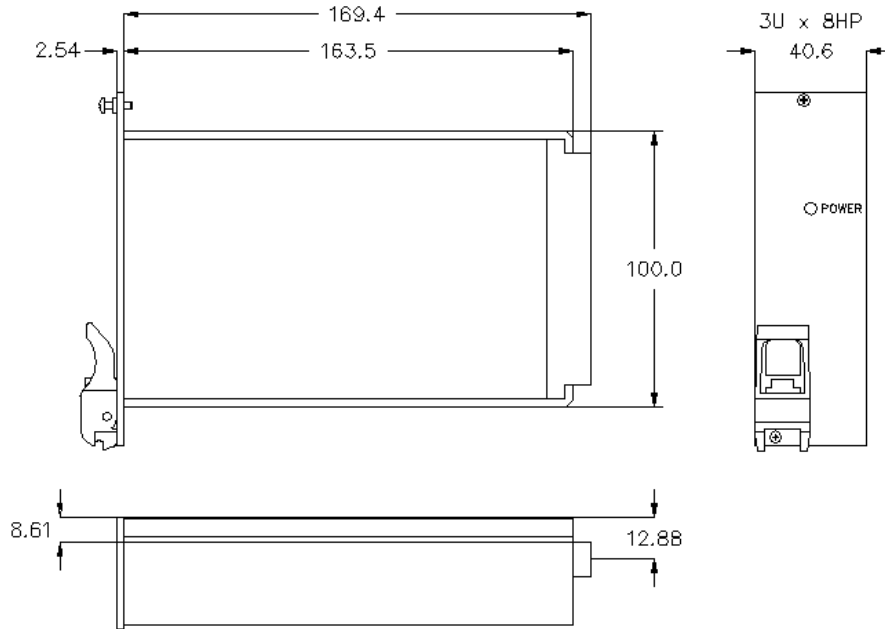
### ENVIRONMENTAL SPECIFICATIONS

Parameter	Conditions/Description	Min	Nom	Max	Units
Altitude	Operating			10K	Feet
	Non-Operating			50K	Feet
Operating Temperature	With 40CFM forced-air cooling At 100% load. De-rated linearly above 55°C by 2.5% per°C	-40		70	°C
Storage Temperature		-40		85	°C
Relative Humidity	Non-Condensing	5		95	%RH
Shock	Peak acceleration			20	GPK
Vibration	Random vibration, 10Hz to 500 Hz, 3 axis			2	GRMS

**OVERALL SIZE:** 5.07"H x 1.60"W x 6.40"D (128.7mm x 40.6mm x 162.5mm)

**WEIGHT:** 800 gr.

### Outline Drawing:



TOLERANCES  $\pm 0.3$  UNLESS OTHERWISE INDICATED

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4602-DOC1-10	REV	A2
GENERAL	SCALE	RELEASE DATE	12/9/06	SHEET	5	OF	6

**CPCI-3U-AC-300Watt**

**Connector PinOut**

<b>Pin #</b>	<b>Pin-Length Type</b>	<b>Signal Name</b>	<b>Description</b>
1-4	Normal	V1	V1 Output
5-12	Normal	RTN	V1 and V2 Return
13-18	Normal	V2	V2 Output
19	Normal	RTN	V3 Return
20	Normal	V3	V3 Output
21	Normal	V4	V4 Output
22	Normal	RTN	Signal Return
23	Normal	Reverse	Reverse
24	Normal	RTN	V4 Return
25	Normal	GA-0	Geographic ADD-0
26	Normal	Reverse	Reverse
27	Short	EN#	Enable
28	Normal	GA-1	Geographic ADD-1
29	Normal	NC	Not Connected
30	Normal	V1 Sense	V1 Remote Sense
31	Normal	GA-2	Geographic ADD-2
32	Normal	NC	Not Connected
33	Normal	V2 Sense	V2 Remote Sense
34	Normal	S RTN	Sense Return
35	Normal	V1 Share	V1 Current Share
36	Normal	NC	Not Connected
37	Normal	IPMB_SCL	System Manager Bus
38	Normal	DEG#	Degrade Signal
39	Normal	INH#	Open – ON Low - OFF
40	Normal	IPMB_SDA	System Manager Bus
41	Normal	V2 Share	V2 Current Share
42	Normal	FAL#	Fail Signal
43	Normal	IPMB_PWR	System Manager - Power
44	Normal	NC	Not Connected
45	Long	Chassis GND	Chassis Ground
46	Long	AC Neutral	AC Input Neutral
47	Long	AC Line	AC Input Line

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	4602-DOC1-10	REV	A2
GENERAL	SCALE		RELEASE DATE	12/9/06	SHEET	6	OF 6