

CPCI-6U-AC SERIES | COMPACT PCI

600–650 Watt Compact-PCI Power Supply

MODEL: CPCI-6U | CATEGORY: AC-DC | RATED POWER: 600W~650W | FORM: Rack Mount

PRODUCT OVERVIEW



Key Product Features

- Up to 650W output power
- 6U CompactPCI form factor
- Wide input: 85–264VAC
- High current outputs (+3.3V, +5V up to 80A)
- Accurate current sharing (up to 6 units)
- Internal ORing FETs for redundancy
- Power factor correction (>0.9 typical)
- High reliability in harsh environments
- PICMG 2.11 compliant

PRODUCT DESCRIPTION

The CPCI-6U AC-DC power supplies deliver up to 650W in a 6U CompactPCI form factor, offering high current outputs and reliable performance for industrial, telecom, and defense applications. Designed to meet PICMG 2.11 standards, these units support redundant architectures and high-efficiency operation in demanding environments.







RUGGEDIZED OPTION



Ruggedized AC-DC models are available for applications requiring enhanced durability and environmental protection. These versions are designed to operate reliably in harsh and mission-critical environments without altering the electrical performance of the standard units.

- Conformal coating added
- Enhanced shock & vibration performance
- Ruggedized construction for harsh environments
- Military/COTS positioning + Cage Code (59947)

Applications

- | | |
|--|--|
|  Defense and military systems |  Embedded computing platforms |
|  Telecom and networking infrastructure |  Data acquisition systems |
|  Industrial automation and control systems |  Mission-critical power systems |

ELECTRICAL SPECIFICATIONS

Model Information

Model	Input	Output Power	V1 Output	V2 Output	V3 Output	V4 Output
CPCI-AC-6U-600	85–264VAC	600W	+5V/70A	+3.3V/70A	+12V/7A	-12V/1.5A
CPCI-AC-6U-600R	85–264VAC	600W	+5V/70A	+3.3V/70A	+12V/7A	-12V/1.5A
CPCI-AC-6U-650	85–264VAC	650W	+5V/80A	+3.3V/70A	+12V/7A	-12V/1.5A
CPCI-AC-6U-650R	85–264VAC	650W	+5V/80A	+3.3V/70A	+12V/7A	-12V/1.5A

Input Specifications

Parameter	Specification
Input Voltage	85–264VAC, 47–63 Hz, auto range, single phase (MIL-STD-1399)
Power Factor	>0.90/0.95 typical @110/220VAC (standard) / up to 0.98 typical (R models)
Hold-Up Time	16 ms minimum
Inrush Current	<35/65A @110/230VAC (standard) / 14A max @115VAC (R models)
Brown-Out	70–300 VAC for 50 ms (R models only)
Efficiency	>80%
THD	<5% (R models only)
Operating Temperature	-5°C to +55°C full power (250–400 LFM airflow)
Current Sharing	10% sharing, up to 6 units

Output Specifications

Parameter	Specification
Max Output Power	650W (airflow dependent for lower power variants)
Line Regulation	±0.5%
Load Regulation	V1,V2 ±1% / V3,V4 ±5% (standard) / ±2% max (R models)
Ripple & Noise	V1,V2: 50–60mV / V3,V4: 100–120mV
Overload Protection	V1,V2: 125% / V3,V4: 200%
Reset Behavior	Auto recovery (standard) / recycle AC input required (600W+ R models)
Over Voltage Protection	110–130% latched shutdown
Turn-On Delay	1–2 seconds
Transient Response	±5%, <1 ms recovery
Temperature Protection	Shutdown at ~100°C, auto reset
Minimum Load	None required

For quotes and customization requests, contact Digital Power sales at (877) 634-0982 or sales@digipwr.com.

ELECTRICAL SPECIFICATIONS

EMC & Safety Certifications

Parameter	Specification
Safety	UL/cUL 60950-1, IEC/EN60950-1
ESD	EN61000-4-2 ±8kV air / ±4kV contact
Radiated Immunity	EN61000-4-3, 10V/m
EFT/Burst	EN61000-4-4 ±2kV
Surge	EN61000-4-5 ±2kV line-earth
Conducted Immunity	EN61000-4-6
Voltage Dips	EN61000-4-11
Harmonics	EN61000-3-2
Flicker	EN61000-3-3
Emissions	EN55022 Level B (standard) / Level A (R models with extra filter)
RoHS	Compliant

Environmental Specifications

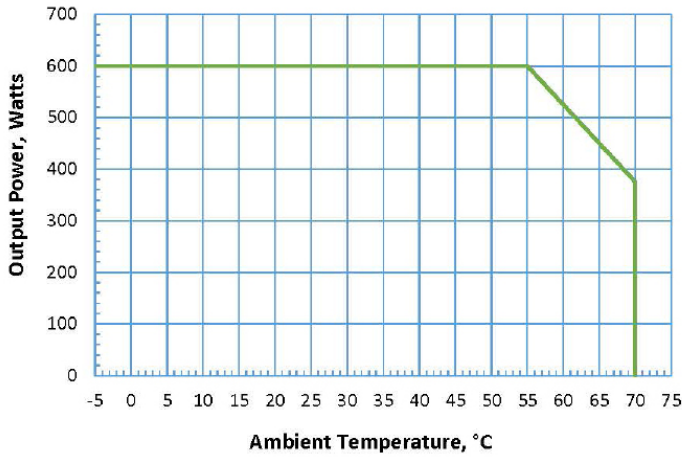
Parameter	Specification
Operating Temperature	-5°C to +55°C full load with airflow
Storage Temperature	-55°C to +125°C (R models) / -40°C to +85°C (standard)
Humidity	Up to 95% RH non-condensing
Shock	20g ±3g, 20 ms (R models only)
Vibration	20Hz–500Hz, 3 axis, 4GRMS (R models only)
Altitude	6,000 ft operating / 40,000 ft non-operating (R models only)
MTBF	250,000–400,000 hours
Conformal Coating	IPC-CC-830 (R models only)

Parameter	Specification
Remote Inhibit	Inhibited with GND or TTL "0" = Off
DC Fail	Open collector — Active Low signal; indicates one or more outputs below 90% of specified rating
Over Temperature Warning	Open collector Active Low nominally 10°C before shutdown
Remote Sense	Available V1 and V2; total voltage compensation up to 300 mV drop
Current Share	Single wire (V1 and V2) ±10% up to 6 parallel units
Front Panel Green LED	Outputs OK
Front Panel Red LED	Fault condition

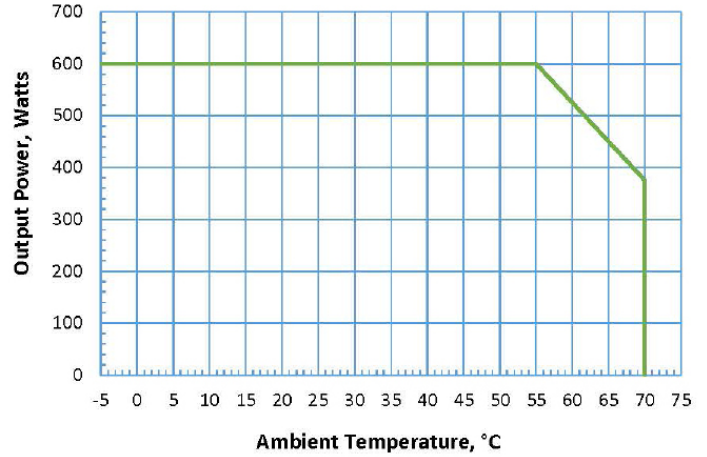
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MECHANICAL SPECIFICATIONS

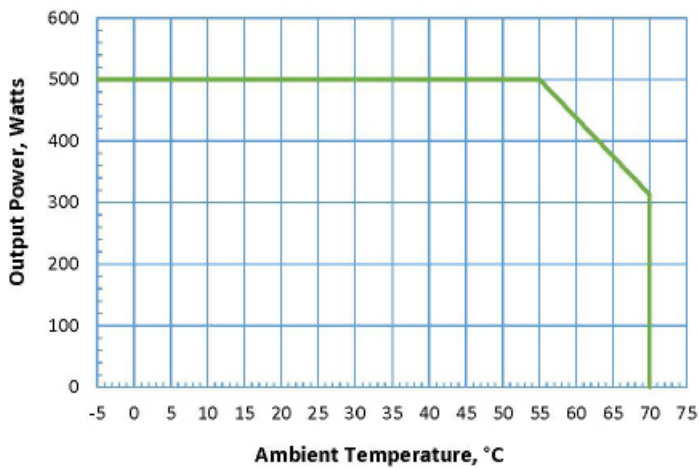
**Output Power Derating CPCI-XX-6U-600
400 LFM Airflow**



**Output Power Derating CPCI-XX-6U-600
400 LFM Airflow**



**Output Power Derating CPCI-XX-6U-500
250 LFM Airflow**



**Output Power Derating CPCI-XX-6U-400
250 LFM Airflow**

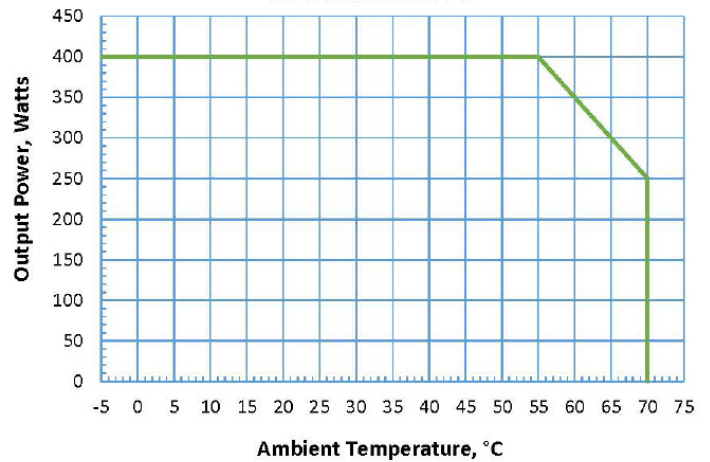
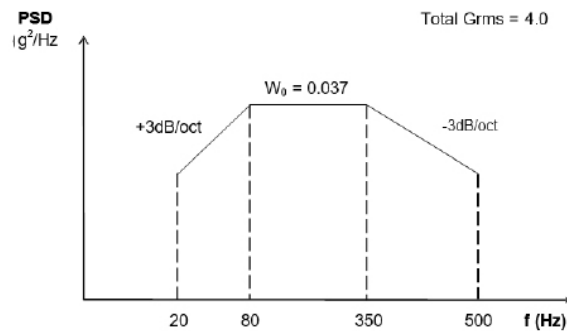


Figure 1

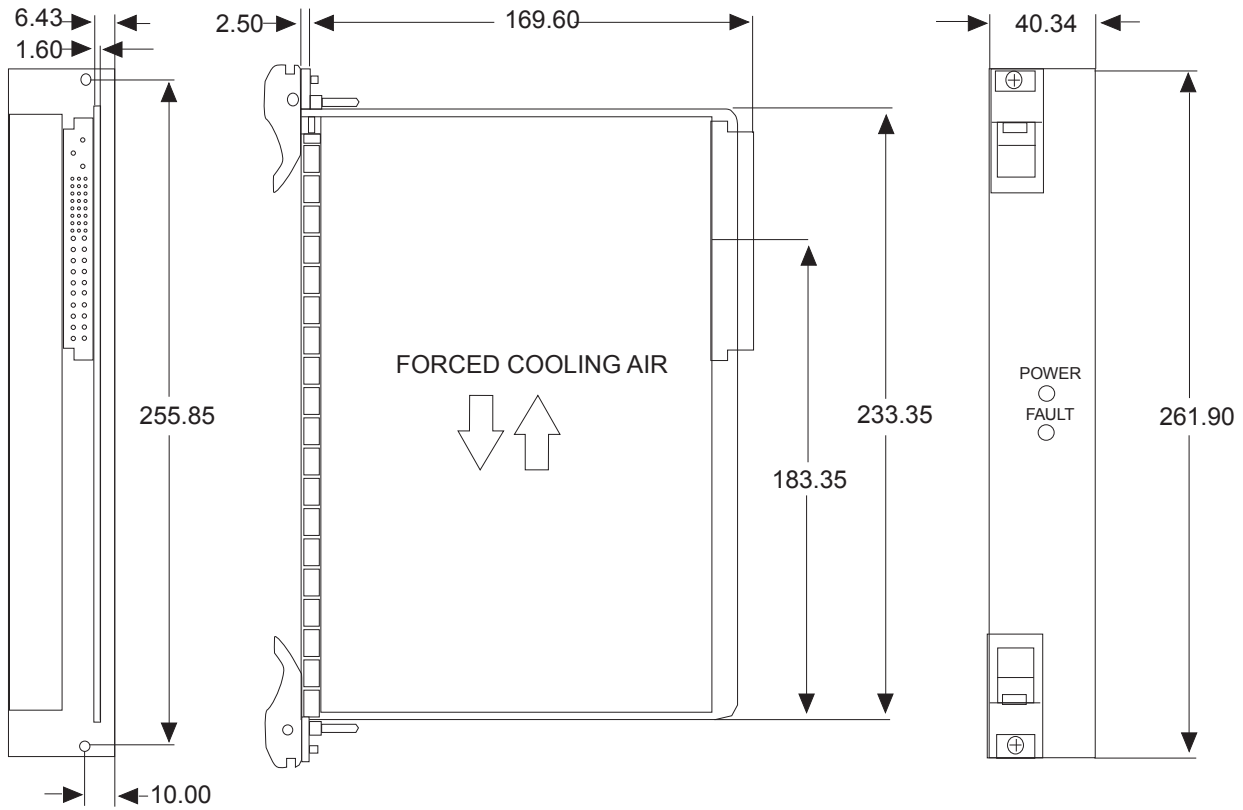


For Ruggedized Modes Only

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MECHANICAL SPECIFICATIONS

Mechanical Outline



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MECHANICAL SPECIFICATIONS

OUTPUT CONNECTOR - Positronic-PCIH47M400A1/AA PIN ASSIGNMENT

Pin	Pin Type	Signal Name	Description
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	RTN	Signal Return
24	Normal	RTN	V4 Return
25	Normal	GA-0	Geographic ADD-0 (option)
26	Normal	Reverse	Reverse
27	Short	EN#	Enable
28	Normal	GA-1	Geographic ADD-1 (option)
29	Normal	NC	Not Connected
30	Normal	V1 Sense	V1 Remote Sense
31	Normal	GA-2	Geographic ADD-2 (option)
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 (option)
38	Normal	DEG#	Degrade Signal
39	Normal	INH#	Open = ON, Low = OFF
40	Normal	IPMB_SDA	System Manager Bus (option)
41	Normal	V2 Share	V2 Current Share
42	Normal	FAL#	Fail Signal
43	Normal	IPMB_PWR	Power-System Manager (option)
44	Normal	NC	Not Connected
45	Long	Chassis GND	Chassis GND
46	Long	AC Neutral	AC Input Neutral
47	Long	AC Line	AC Input Line

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