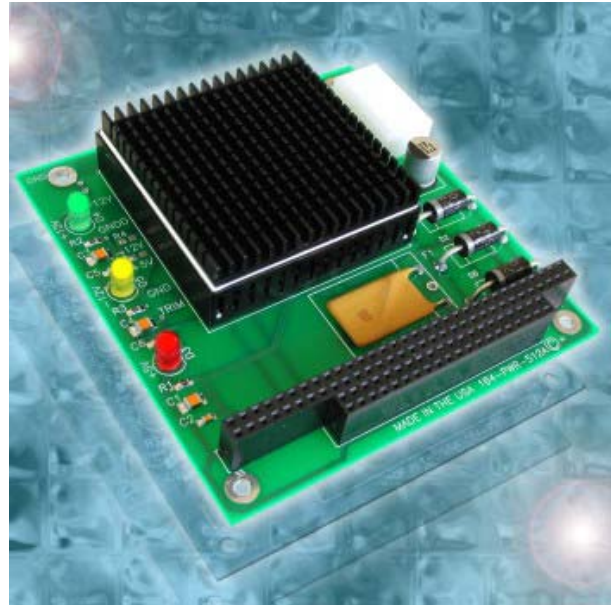




### 104-PWR-512A - Triple Output DC/DC PC/104 Power Module

#### FEATURES

- PC/104 Bus 30/40Watt DC/DC Power Supply
- Up to 85% Efficiency
- Three Input Voltage Versions:
  - 12V Nominal, 9VDC-18VDC (30W)
  - 24V Nominal, 18VDC-36VDC (40W)
  - 48V Nominal, 36VDC-75VDC (40W)
- Triple Output Voltage:
  - (12V version is 30Watt Max)
  - +5VDC up to 5A
  - +12VDC up to 800mA (not to exceed 30W total)
  - 12VDC up to 800mA (not to exceed 30W total)
- Voltage Status LEDs
- Reverse Power Protection on Inputs
- Resettable Fused Input Line
- Fully Protected Outputs
- Can be populated on either side of the board to allow for heat-sinking in fanless application requirements
- Temperature range with heatsink -40 to +50°C, up to 105°C with derating of 1.3% per °C (no air flow)



#### FUNCTIONAL DESCRIPTION

The design incorporates a 16-bit pass through PC/104 connector, molex power input connector and voltage status LED's. Since heat is always a factor to consider in any system design project, the DC/DC converter can be populated on either side of the board to facilitate heat sinking to one end of an enclosure, with the CPU heat sinking to the other end of the enclosure.

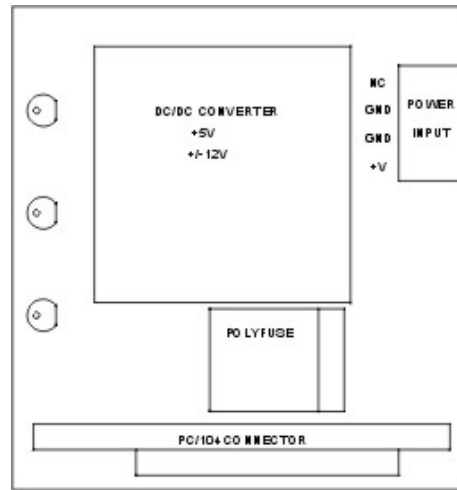
This triple output version can be ordered with or without a heatsink. At up to 85% efficiency, a dynamic input range and full protection on inputs and outputs, this power supply is very versatile and appropriate for many PC/104 based applications.

The Input Power Connector is a Four-pin standard Molex type connector at the edge of the board. It's the same connector as used on a CD-ROM so it's easy to set up and test a system with a local +12V computer power supply.

Fully software transparent, the 104-PWR-512 occupies no resources; zero I/O memory locations, IRQs, DMA channels or bandwidth of any types are consumed. Compatible with all operating systems and software.



## Block Diagram



## Specifications

<b>Output Characteristics</b>				
Output Voltage Set Point on 5V	±1% Factory set			
Output Voltage Set Point on ±12V	±5% Factory set			
Ripple/Noise on 5V	1% P-P measured at 20MHz bandwidth			
Ripple/Noise on ±12V	1% P-P measured at 20MHz bandwidth			
Short Circuit Protection	Continuous			
Overvoltage Protection	135% Clamp type			
<b>Input Characteristics</b>				
Input Characteristics	<b>12</b>	<b>24</b>	<b>48</b>	<b>Unit/Comments</b>
Input Voltage	9-18	18-36	36-75	VDC
Under Voltage Shut Down	8	16	30	VDC (min)
Over Voltage Shut Down	25	45	80	VDC (max)
Minimum Input Current	660	330	185	A (min)
Full Load Input Current	3.541	2.00	0.992	A (max)
Efficiency by Model	80	83	85	% (typ)
Switching Frequency	360 to 440	360 to 440	360 to 440	KHz Factory set
Operating Temperature	-40 to +50	-40 to +50	-40 to +50	°C up to 105°C with derating of 1.3% per °C (no air flow)
Storage Temperature	-55 to +125	-55 to +125	-55 to +125	°C
Relative Humidity	5 to 95	5 to 95	5 to 95	% non-condensing

Note: CE testing & approval must be done at the system level, in the designed enclosure, and is not done on individual boards.

## Ordering Information

104-PWR-512A-12      12V power supply  
 104-PWR-512A-24      24V power supply  
 104-PWR-512A-48      48 V power supply

NOTE - Specify "-HS" to include heatsink as an extra-cost option. Specify "-R" for population of DC/DC converter on reverse side of board.