

PCM-DC-AT512-P

PC/104 +5V and $\pm 12V$
DC/DC Power Supply

Features

- Wide input range: 10V to 50VDC
- Voltage output: +5V, +12V, and -12V
- No minimum load required for regulation
- Outputs with short circuit and overload protection
- LEDs provide visual status of power
- Two Phoenix® terminal blocks for accessory power
- High efficiency design
- Fast transient response
- No fan or heatsink required
- -40° to +85°C operation supported
- Small size: 3.6 x 3.8 inches (90 x 96mm)
- Custom OEM configurations available
- RoHS compliant



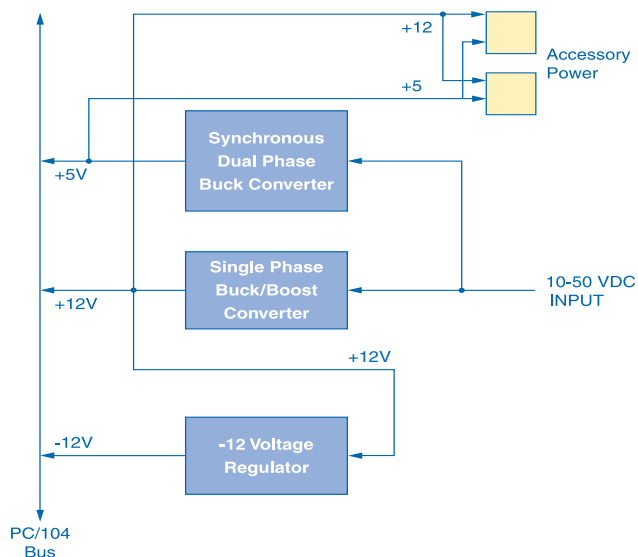
Product Description

WinSystems' PCM-DC-AT512-P is a triple output, DC/DC power supply that can mount anywhere in a PC/104 stack. It features a very wide voltage input range from 10 to 50 volts DC. This allows the unit to operate with 12, 24, or 48 volt battery or distributed DC power systems. It opens up a wide array of applications including transportation, Mil/COTS, security, solar-powered, and telecommunications.

The design has fast transient time and low ripple on the outputs. Each output is short circuit protected and current limited. A minimum load is not needed to bring the supply into regulation.

When power is applied to the board, three LEDs will illuminate providing a visual status that power is available for the +5V, +12V, and -12V outputs. If one of these LEDs is not lit or is pulsing, then the respective supply voltage is not in regulation. A pulsating LED is an indication that the respective converter is in current limit.

The PCM-DC-AT512-P is designed to operate at extended temperatures without forced air cooling or heatsink. This maximizes reliability and reduces weight for the module and the system it powers.



PCM-DC-AT512-P Block Diagram

PCM-DC-AT512-P: +5V and ± 12 V DC/DC PC/104 Power Supply

The board is populated with low-profile, soldered down, surface mount components which keep the overall height of the board low.

Input Connector - A Phoenix Combicon connector allows power to be easily and securely brought to the board with a quick way to remove it if necessary. The mating connector is shipped with each standard board.

PC/104 Connector - Ground, +5V, +12V, and -12V are wired directly to their respective pins on the PC/104 connector. Traces are also run to the pads for the PCI-104 connector, which is not populated on the standard model of this board.

Accessory Power - There are two, four-pin Phoenix Contact terminal blocks at the edge of the board to provide +5V and +12V to accessories.

Fanless - No fans or heatsinks are required to meet the extended operating temperature range of -40° to $+85^{\circ}\text{C}$.

Other Standard Configurations - WinSystems offers this board in other models. The PCM-DC-AT500 card is a single +5V power supply.

ISM-DC-AT512-P is a stand alone DC/DC power supply with +5V and +12V.

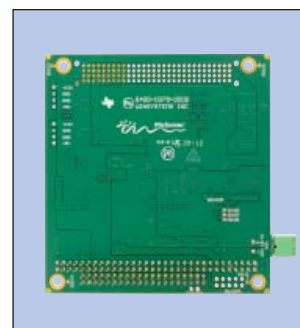
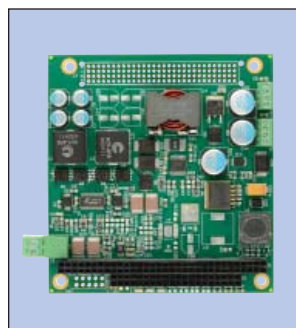
The PPM-DC-ATX-P is a PC/104-*Plus* power supply that supports the ATX power convention. Output voltages are +5V, +3.3V, +12V, -12V, and +5V Standby.



PPM-DC-ATX-P Power Supply

Please reference the specific data sheets for details on the other DC/DC power supplies.

Custom Configurations - WinSystems offers additional ruggedized options and custom configurations for OEMs. Please contact an Applications Engineer to discuss your specific requirements.



Front and Back Picture of PCM-DC-AT512-P

Technical Specifications

Electrical

Input

Voltage (V_{IN}) 10 to 50VDC

Output

Voltage/current +5V @ 20A
(at $V_{IN} = +12\text{V}$) +12V @ 3A
-12V @ 800mA
Load regulation 30 mV
Line regulation 20 mV
Ripple <150 mV

Environmental

Operational from -40° to $+85^{\circ}\text{C}$
RoHS compliant

Mechanical

Dimensions 3.6 x 3.8 inches (90 x 96mm)
PC Board 0.078 inches, four layer FR4
PC/104 Bus 16-bit stackthrough
Weight 4 oz. (114 gm)

Ordering Information

Visit www.WinSystems.com for complete ordering details

PCM-DC-AT512-P Triple output +5V and ± 12 V
PC/104 DC/DC power supply
ISM-DC-AT512-P Dual output +5V and +12V DC/DC
power supply
PCM-DC-AT500 Single +5V output, PC/104 DC/DC
power supply
PPM-DC-ATX-P PC/104-*Plus* ATX power supply

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