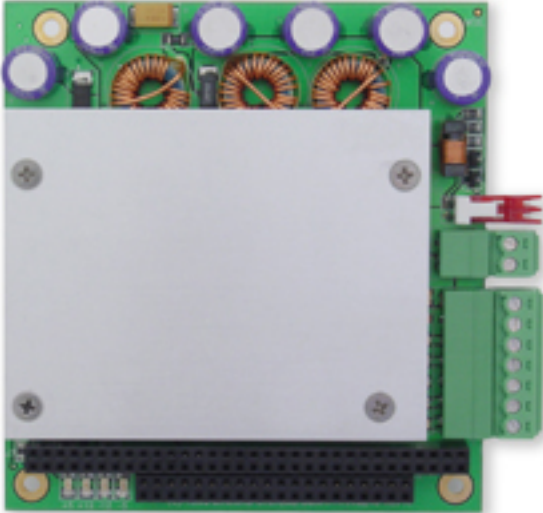


# JUPITER-MM

## 50 Watt PC/104 DC/DC Power Supply for Vehicle Applications



- 25 - 50 Watts max output power
- +5V @ 10A max
- +12V @ 2.0A max
- -5V @ 150mA max
- -12V @ 1.0A max

### DESCRIPTION

This rugged, extended-temperature DC/DC power supply is designed specifically for air and ground vehicle applications. It consists of a PC/104 form factor module with complete DC-DC voltage regulator circuitry, heat sink, input and output connectors, power-good indicator lamps, and both 8-bit and 16-bit PC/104 bus headers. Input voltage range is 7 to 30VDC, making it suitable for use with both 12V and 24V systems.

Output power is provided directly onto the PC/104 bus connectors, as well as on an auxiliary connector for external tapping. Both dual output (+5, +12) and quad output (+5, +12, -5, -12) versions are available. Up to 10 amps can be provided on the +5 output, or the 50 watts of total power can be distributed across the 4 outputs.

The low-profile SMT design guarantees that you can add other PC/104 modules on top of this board without any worries of mechanical interference. Simply stack your CPU and other cards on top or below the power supply module to provide power to your PC/104 system.

### SPECIFICATIONS

Feature	JMM-512 / JMM-512-V512
<b>Input voltage</b>	7-30VDC
<b>Transient protection</b>	1500W transient voltage suppressor
<b>Transient cutoff</b>	31V nominal
<b>+ 5v Output</b>	10A
<b>+12V Output</b>	2A
<b>-5V Output</b>	0.15A (Model V512 only)
<b>-12V Output</b>	0.8A (Model V512 only)
<b>Output protection</b>	Current limit / short circuit protection
<b>Output ripple</b>	<50mV RMS (+5V output, 50% load)
<b>Load regulation</b>	±3%
<b>Efficiency</b>	80% to 92%, varies with load and input voltage
<b>Dimensions</b>	3.55" x 3.775" (90mm x 96mm)
<b>PC/104</b>	J1 (64 pins) and J2 (40 pins) stackthrough connectors installed
<b>Operating Temperature</b>	-40 to +85°C
<b>Weight</b>	5.0oz / 142g

## Surface Mount Components

To the maximum extent possible, surface mount components have been used in the design, to lower the profile and improve ruggedness. An additional benefit to SMT technology is the improved ability to use the PCB planes as a heat sink.

## High Efficiency, High-Frequency Design

Efficiency is as high as 92 percent, lowering input power requirements as well as heat generation. The 200KHz switching circuit allows the use of smaller inductors, reducing size and weight and allowing the board to fully fit within the PC/104 height requirements.

## Advanced Heat Sink Technology

A new compressible thermally-conductive material mounted under the aluminum heat sink makes it possible to wick heat away effectively from varying height components. Also, the use of surface mount components and careful PCB design enhance the dissipation of heat through the PCB planes.

## Remote On/Off Control

The supply can be turned on and off with an external contact closure through an auxiliary connector.

## ORDERING INFORMATION

Part No.	Description
<b>JMM-512</b>	50 Watts, +5V, +12V outputs
<b>JMM-512-V512</b>	50 Watts, $\pm 5V$ , $\pm 12V$ outputs

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