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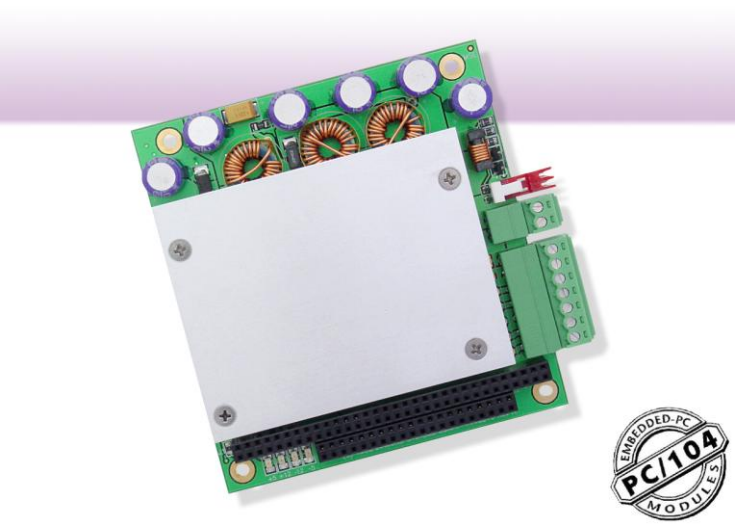
Find the *Diamond Systems JMM-512-V512* at our website: ***Click HERE***

JUPITER-MM

DIAMOND SYSTEMS CORPORATION

DC/DC Power Supply PC/104 Module

For Vehicle Applications



- Models with 25W or 50W maximum output power
- 50W model outputs
  - +5V at 10A maximum
  - +12V at 2.0A maximum
  - -5V at 0.15A maximum (optional)
  - -12V at 0.8A maximum (optional)
- 25W model output: +5V at 5A maximum
- Output indicator LEDs
- Remote on/off control
- Short circuit protection
- Custom configurations available
- PC/104 form factor
- Extremely rugged -40°C to +85°C (-40°F to +185°F) operating temperature

High Efficiency Design

The Jupiter-MM power supply delivers efficiency as high as 92 percent, lowering input power requirements as well as heat generation.

Air or Ground Vehicle Applications

Jupiter-MM was designed specifically for air and ground vehicle applications. It has a complete DC/DC voltage regulator circuitry and its 7 to 34VDC input range makes it suitable for use with either 12V and/or 24V systems.

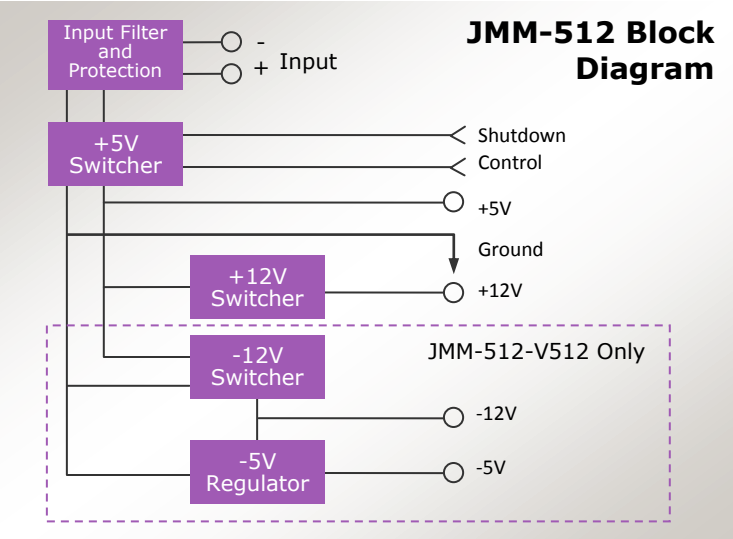
Easy System Integration

Jupiter's low profile and PC/104 expansion bus means you can build the power supply module right into your PC/104 system. 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.

Rugged Design

Jupiter-MM was engineered for rugged applications such as automotive or on-vehicle. Extended temperature operation of -40°C to +85°C is tested and guaranteed. Low-profile, surface mount components reduce susceptibility to shock and vibration. An aluminum heatsink with new compressible thermally-conductive material mounted underneath wicks heat away more efficiently.

JMM-512 Block Diagram



JUPITER-MM: DC/DC Power Supply Module

DIAMOND SYSTEMS CORPORATION

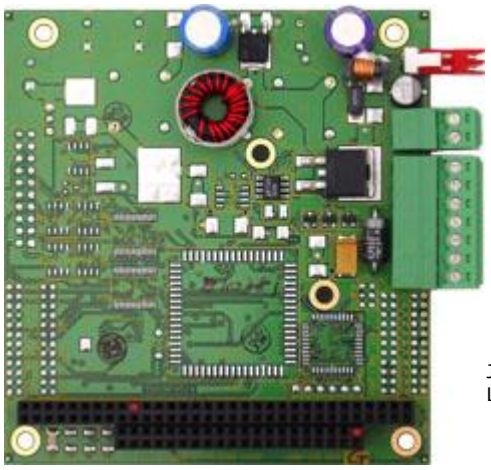
Specifications

INPUT	50WATT	25WATT
Input voltage	7 – 34VDC	
Input ripple	<100mV RMS	<200mV RMS
Transient protection	1500W transient voltage suppressor	
Transient cutoff	31V nominal	
OUTPUT	**50WATT**	**25WATT**
Output voltage/current	+5V at 10A +12V at 2A -5V at 0.15A (model V512 only) -12V at 0.8A (model V512 only)	+5V at 5A
Output protection	Current limit /short circuit protection	
Output ripple	<50mV RMS (+5V output at 50% load)	
Load regulation	±3%	
Efficiency	80% to 92% varies with load and input voltage	
GENERAL	**50WATT**	**25WATT**
Dimensions	PC/104 form factor 3.55" x 3.775" (90mm x 96mm)	
PC/104 bus	16-bit stackthrough ISA bus	
Operating temperature	-40°C to +85°C (-40°F to +185°F)	
Operating humidity	5 to 95% non-condensing	
Weight	5.0oz (142g)	4.0oz (113g)
RoHS	Compliant	

Low Cost Model

Jupiter-MM-LP is a low-cost DC/DC power supply ideal for PC/104 applications with lower power requirements. This supply is the lightest-weight PC/104 DC/DC supply available anywhere, due to the fact that it requires no heatsink. Jupiter-MM-LP provides 25 watts of total output power with output voltage of 5VDC +/-5% at 5A max. Input voltage range is 7 to 30VDC, making it suitable for use with both 12V and 24V systems.

Due to a new improved power supply circuit design, Jupiter-MM-LP's design eliminates the heat sink, reducing the board's weight to the absolute minimum. It is ideal for use in small enclosures such as Diamond's Pandora enclosure, since no forced-air or other cooling is required to maintain safe operation.



Jupiter-MM-LP
Low cost 25W Power Supply

Key Features

Jupiter power supplies 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. Every Jupiter supply has an input voltage range is 7 to 34VDC, 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 (+5V, +12V) and quad output (+5V, +12V, -5V, -12V) 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 four outputs.

System Integration

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

I/O Connectivity

Jupiter-MM has five I/O connectors. The J1 and J2 connectors are standard PC/104 bus headers, and all output voltages from the supply are fed to their designated pins on these headers. The shutdown input is on a 2-pin friction lock header. The main power input is on a 2-position detachable screw terminal that accepts wire sizes as large as 18AWG. An auxiliary I/O connector is also provided with all input and output voltages on it, so all wiring may be attached using a single harness.

Ordering Information

JMM-512	Jupiter-MM 50 Watt DC/DC Power Supply, +5V & +12V outputs
JMM-512-V512	Jupiter-MM 50 Watt DC/DC Power Supply, +5V, -5V, +12V & -12V outputs
JMM-LP-XT	Jupiter-MM 25 Watt DC/DC Power Supply

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