PRESS RELEASE
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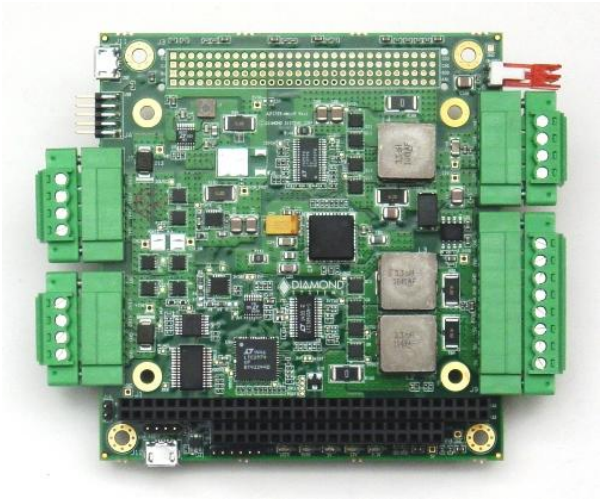
JUPITER-MM-5000 218W PC/104-*Plus* DC/DC Power Supply Family
Targets Rugged Networked Applications

Sunnyvale, CA — March 29, 2016 — Today Diamond Systems Corporation, a leading global supplier of compact, rugged, I/O-rich embedded computing solutions for real-world applications in a broad range of markets, announced the extension of its line of Jupiter-MM-5000 high-efficiency, high-precision family of DC/DC power supply modules. New intelligent members of this rugged power supply family offer up to 218W of +5VDC, 12VDC, and +3.3VDC power in either the compact PC/104 form factor or PC/104-*Plus* form factor and an advanced system controller for complete software control of all power supply functions.



Jupiter-MM-5000 power supplies consist of a PC/104 form factor module with complete DC-DC voltage regulator circuitry, integrated thermal solution, detachable screw terminal block I/O connections, and PC/104 bus connectors. The wide input voltage range of 7 to 34VDC is compatible with industry standard 12V, 24V, and 28V inputs. The Jupiter-MM-5000 uses a state-of-the-art design with the latest generation high efficiency components. It delivers efficiency as high as 95 percent, reducing input power requirements as well as heat generation.

Advanced System Controller
The intelligent Jupiter-5000 models include a system controller that offers advanced configuration, control, and monitoring features. The system controller is accessed via a USB port and is accompanied by benchtop configuration software as well as an application library for in-application real-time control.

- Individual supply on/off control for +12V, +5V, +5V standby, +3.3V, and +3.3V standby outputs
- Individual supply output voltage / current monitoring
- Output voltage sequencing and slew rate control
- Output voltage adjustment
- Input voltage monitoring
- Fault handling based on programmable limits with interrupt notification, including supply shutdown in case of overload or other programmed conditions
- Hiccup mode for auto-restart when fault conditions are removed
- Min / max voltage and temperature logging
- Secondary input cutover voltage selection

Jupiter-MM-5000 was engineered for rugged applications such as automotive or on-vehicle. Extended temperature operation of -40ºC to +85ºC is tested and guaranteed. Low-profile, surface mount components reduce susceptibility to shock and vibration. I/O connections are made with locking screw terminal blocks for the highest degree of ruggedness. The modules are compatible with MIL-STD-202G shock and vibration specifications.

Technical Specifications

- Six models: +5VDC, +12VDC & +3.3VDC outputs in a PC/104-*Plus* module
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  +5VDC & +12VDC outputs in a PC/104 module
  +5VDC output in a PC/104-*Plus* module
  +5VDC output in a PC/104 module
- Up to 218W total output power at 25ºC
- +5VDC at 20A maximum
- +12VDC at 8A maximum
- +3.3VDC at 5A maximum
- +5VDC standby at 1A maximum
- +3.3VDC standby at 0.1A maximum
- Extreme load stability: 0.35% maximum output voltage droop at 5V output, 0-20A load, V_{IN} = 12V, T_A = 25ºC
- Extremely low ripple: 12mV peak-to-peak ripple at 5V output, 0-20A load, V_{IN} = 12V, T_A = 25ºC
- High efficiency: 92-94% at 5V output, 0-20A load, V_{IN} = 12V, T_A = 25ºC
- Excellent transient load response: +/-72mV at 5V output, 25-75% load step, 2.5A/usec ramp rate, V_{IN} = 24V, T_A = 25ºC
- Extreme temperature stability: +/-0.5% at 5V output, 10A load, V_{IN} = 24V, T_A = -40ºC to +85ºC
- Programmable power management system
- Programmable output voltage adjustment, output sequencing, and slew rate
- Input protection circuit for over/under voltage, reverse polarity, surges, transients and reflected noise
- Output current limit and short circuit protection
- Wide input voltage range: +7VDC to +34VDC input
- Remote and programmable on/off control
- Heat sink or heat spreader cooling solutions
- Dual input option with auto-cutover (minimum order quantities apply)
- PC/104 form factor: 3.55” x 3.775” (90mm x 96mm)
- PC/104 and PC/104-*Plus* bus connector options
- Extremely rugged -40°C to +85°C operating temperature
- MIL-STD-202G shock and vibration compatible

Pricing and Availability

The Jupiter-MM-5000 DC/DC power supply modules are orderable now and shipping in volume in April, 2016. Single unit pricing starts at US$225 for the +5VDC PC/104 model. Contact Diamond Systems at sales@diamondsystems.com for quantity pricing, customization and special-order options. Additional models with complete software programmability will be available in Q1 2016.

About Diamond Systems
Founded in 1989 and based in Mountain View, California, Diamond Systems Corporation is a leading global provider of compact, rugged, board- and system-level real world embedded computing solutions to companies in a broad range of markets, including transportation, energy, aerospace, defense, manufacturing, medical, and research. The company is renowned as an innovator of embedded I/O standards and technologies; it originated the FeaturePak I/O modules standard, was an early adopter of PC/104 module technology, and holds a patent for a unique analog I/O autocalibration technique.

Diamond's extensive product line includes compact, highly integrated single-board computers (SBCs); an extensive line of expansion modules for analog and digital I/O, wired and wireless communications, GPS, solid-state disk, and power supply functions; and complete system-level solutions. In support of performance-critical embedded application requirements, these products are engineered to operate reliably over wide operating temperature ranges, such as –40°C to +85°C, and at high levels of shock and vibration. Additionally, the company offers a comprehensive hardware, software, and system integration and customization services.

For further information, please visit www.diamondsystems.com or call +1-800-367-2104 (USA).

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