New Family of PC/104 16-Bit Analog I/O Modules Excels in Rugged Applications

Sunnyvale, California — February 27, 2017 — Today Diamond Systems, a leading global supplier of compact, rugged, I/O-rich embedded computing solutions for real-world applications in a broad range of markets, unveiled its latest additions to its industry-leading Diamond-MM family of 16-bit analog I/O modules, **DMM-16R-AT** and **DMM-16RP-AT**. These rugged I/O modules offer 16-channels of 16-bit analog input, 4-channels of 12-bit analog output and 16 programmable digital I/O lines. The new I/O modules work with both PC/104 and PC/104-*Plus* form factors. The built-in autocalibration feature provides highest measurement accuracy regardless of time and ambient temperature.

The DMM-16R/RP-AT features top performance and flexibility at a mid-range price. It has 16 single-ended / 8 differential analog inputs with both unipolar and bipolar input ranges and programmable gain. It has a maximum sampling rate of 100KHz, supported by a 512-sample FIFO with a 256-sample threshold for gap-free high-speed A/D sampling. Both single-channel and multi-channel scan sampling modes are supported. The A/D can be triggered with a software command, the on-board programmable timer, or an external signal. All these features give these boards greater adaptability to real world applications.

The DMM-16R-AT is the PC/104 ISA bus version of the product. The DMM-16RP-AT adds the PCI-104 PCI connector to provide dual ISA and PCI interface options with automatic bus selection and manual override. Both ISA and PCI buses offer the same 100KHZ A/D performance.

The DMM-16R/RP-AT modules offer full backward compatibility with Diamond's existing DMM-16-AT board in terms of mechanical design, connector pinout, and software interface, offering customers a cost-reduced means of extending the lifecycle of their existing applications. Diamond's Universal Driver programming library offers full support for these boards including example programs with source code. A unique graphical control panel program for Windows and Linux provides instant access to all of the board's features and enables quick prototyping and system diagnostics.

These Diamond analog I/O modules were designed for rugged applications and harsh environments such as mobile, on-vehicle, factory floor or outdoor applications. Extended temperature operation of -40ºC to +85ºC is tested and guaranteed. The modules are compatible with MIL-STD-202G shock and vibration specifications.
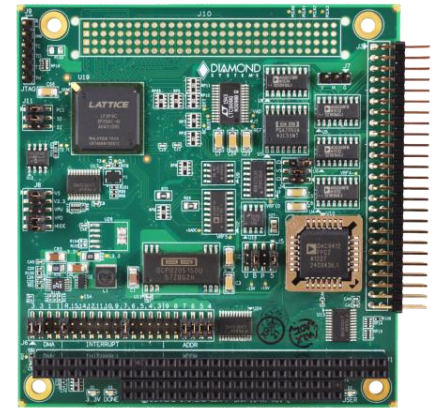
**DMM-16R-AT Analog I/O module
(PC/104 ISA model)**
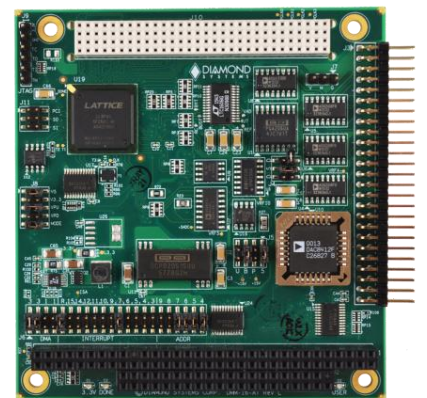
**DMM-16RP-AT Analog I/O module
(PC/104-Plus PCI model)**

(Continued)

<div style="border:1px solid black; padding:10px;">

Key Technical Specifications

- 16 analog inputs, 16-bit resolution
- 100KHz maximum sampling rate
- Programmable gain and range
- Interrupt-based A/D data transfer with FIFO support
- 4 12-bit analog outputs
- Programmable analog output range
- Multi-range Autocalibration for highest accuracy
- 16 programmable digital I/O lines
- +5V power supply
- PC/104 form factor: 3.55" x 3.775" (90mm x 96mm)
- -40°C to +85°C operating temperature
- MIL-STD-202G shock and vibration compatible
- Fully backward compatible with Diamond Systems' Diamond-MM-16-AT

</div>

Pricing and Availability

Single unit pricing starts at US$475 for the Diamond-MM-16R-AT and US$500 for the Diamond-MM-16RP-AT PC/104-*Plus* analog I/O module. Both modules are orderable now and shipping at the end of February. Contact Diamond Systems at sales@diamondsystems.com for quantity pricing, customization and special-order options.

<div style="background:#eee; padding:10px;">

MEDIA RESOURCES

- [DMM-16R-AT Web Page](#)
- [DMM-16RP-AT Web Page](#)
- [DMM-16R-AT Image](#), Top, (jpg)
- [DMM-16RP-AT Image](#), Top, (jpg)

</div>

About Diamond Systems

Founded in 1989, Diamond Systems Corporation designs and manufactures compact, rugged, board- and system-level real world embedded computing solutions in a broad range of markets, including transportation, energy, aerospace, defense, manufacturing, medical equipment, industrial controls, and research. Diamond's products are designed and engineered to operate in rugged environments with wide temperature ranges, −40°C to +85°C, and at high levels of shock and vibration. Their solutions include single-board computers (SBCs); 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.

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

DIAMOND SYSTEMS MEDIA CONTACT:

Mark Wilson
mwilson@diamondsystems.com
Direct: +1-650-810-2514