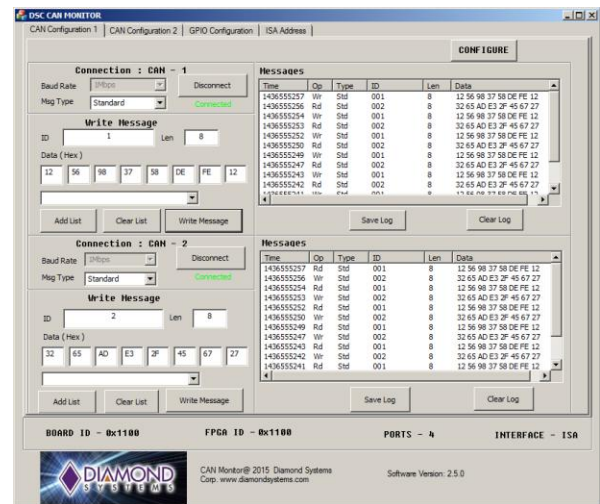# JANUS-MM-4LP 2- or 4-Port PC/104-*Plus* CAN I/O Module
Targets Rugged Networked Applications

Mountain View, CA — December 3, 2015 — 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, unveiled the Janus-MM-4LP family of CANbus 2.0 I/O modules. These rugged I/O modules offer 2 or 4 CAN ports and are available in either the compact PC/104 form factor or PC/104-*Plus* form factor.

The Janus-MM-4LP-XT family of I/O modules offers two or four opto-isolated CAN 2.0B ports plus 16 digital I/O lines. Models are available in both the PC/104-*Plus* and PC/104 form factors. An FGPA core houses the CAN controller and digital I/O logic providing CAN data rates up to 1Mbps. Each CAN port supports standard and extended frames as well as expanded TX and RX message queues for enhanced performance. Each port has its own combination isolator and transceiver chip. The module also offers 16 programmable digital I/O lines organized as two 8-bit digital I/O ports.

Windows 7 Monitor Program

The Janus-MM-4LP I/O modules come with a basic CAN driver for Windows Embedded 7 and Linux Ubuntu 12.04LTS and support dual-independent and dual-redundant modes. Also included with the product are Windows and Linux APIs and monitor programs. The monitor program allows the user to set, manage and observe all of the functions and traffic on the CAN ports and digital I/O lines.

Technical Specifications

- Four models: 2-port PC/104 CAN 2.0B I/O module
  4-port PC/104 CAN 2.0B I/O module
  2-port PC/104-*Plus* CAN 2.0B I/O module
  4-port PC/104-*Plus* CAN 2.0B I/O module
- Data rates up to 1Mbps
- Supports standard 11-bit identifier and extended 29-bit identifier frames
- Expanded TX and RX message queues for enhanced performance
- 16 8-byte transmit message queues
- 31 8-byte receive message queues
- 16 receive filters
- Galvanically isolated transceivers
- 500V port-to-host and port-to-port isolation
- Jumper selectable biased split termination for improved noise reduction
- 16 digital I/O lines
- Latching connectors for increased ruggedness
- PCI and ISA bus interfaces
- Basic CAN driver included with APIs and monitor program
- Supports Linux Ubuntu 12.04LTS and Windows Embedded 7
- PC/104-*Plus* form factor: 3.55" x 3.775" (90mm x 96mm)
- Extremely rugged -40°C to +85°C operating temperature
- MIL-STD-202G shock and vibration compatible

Janus-MM-4LP-XT CAN 2.0B I/O modules fit a wide variety of rugged and on-vehicle embedded networking application needs. The product was designed with harsh applications in mind including latching connectors to further improve reliability. Extended temperature operation of -40°C to +85°C is tested and guaranteed. The modules are compatible with MIL-STD-202G shock and vibration specifications.

Pricing and Availability
The Janus-MM-4LP CANbus modules are orderable now and shipping in volume in November, 2015. Single unit pricing starts at US$225 for the 2-port PC/104 model including all of the drivers and software. Separate cable kits are available for each model. Contact Diamond Systems at sales@diamondsystems.com for quantity pricing and special-order options.

MEDIA RESOURCES

- Janus-MM-4LP CAN I/O Module webpage
- Janus-MM-4LP CAN I/O Module datasheet (pdf)
- Janus-MM-4LP CAN I/O Module photo (jpg)

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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