

Managed 8-port Gigabit Ethernet Switch Matches PC/104 Footprint ***Standalone module targets fixed and mobile applications in harsh environments***

San Jose, Calif. — May 2, 2011 — Diamond Systems Corporation, a leading global supplier of compact, rugged, embedded computing solutions for real-world applications in a broad range of markets, today unveiled Epsilon, a managed Layer 2 managed Ethernet switch module offering eight 10/100/1000Mbps copper twisted pair ports on a PC/104 form-factor board.

Epsilon can be used standalone, without any connection to a single board computer, or in conjunction with a host CPU. The module's built-in microcontroller handles configuration and management. On-board memory holds dual application images, boot code, MAC addresses, and other parameters, and can also be used for program execution.

An RS-232 serial port enables communication between the module's on-board management microcontroller and a host processor. Epsilon's built-in microcontroller is also accessible via a web management interface over one of the Ethernet ports.

Epsilon's key features and functions are tabulated below.



**Epsilon Managed 8-port
Gigabit Ethernet Switch**

Key Features and Functions

- Eight 10/100/1000Mbps Ethernet ports with nonblocking wire-speed performance
- 176KB onboard frame buffer
- DSCP remarking for IPv4 and IPv6 frames
- Jumbo frame support at all speeds
- Programmable multi-layer classifier with 4 QoS classes
- 8K MAC addresses and 4K VLANs (IEEE 802.1Q), as well as 8K IP multicast group support
- Flexible link aggregation support based on Layer-2 through Layer-4 information (IEEE 802.3ad)
- Full-duplex flow control (IEEE 802.3X) and half-duplex backpressure, symmetric and asymmetric
- Multicast and broadcast storm control, as well as flooding control
- Multiple protocol support: IEEE 802.1D, IEEE 802.1w, IEEE 802.1s, and IEEE 802.1X
- Built-in 8051 CPU for configuration and management
- RS-232 serial port provides out-of-band management interface
- Can operate autonomously or in conjunction with a host SBC
- Wide input voltage range: +5VDC or +7-36VDC input
- PC/104 form-factor (3.55 x 3.775 in.)

Epsilon provides a full PC/104 stackthrough bus interface, allowing it to be integrated into any PC/104 stack. However, the module does not interface to the PC/104 bus and does not require it for its operation. The PC/104 stackthrough connectors are not installed in the standard version, but are available as a special-order option.

Input power can be provided through the built-in, wide-range +7-36VDC power supply, enabling operation using industrial power sources. Alternatively, Epsilon can be powered from a +5VDC source. To support the temperature extremes of fixed and mobile applications in both indoor and outdoor environments, the module supports fanless operation over -40°C to +85°C.

Epsilon is supplied with all required firmware and drivers, enabling its immediate operation without any development effort. The included web interface provides an intuitive GUI for use in configuring and managing switch functionality.

Pricing and Availability

The Epsilon Managed 8-Port Gigabit Ethernet Switch Module is shipping now. Single unit pricing for the model EPS-8000-XT starts at US\$450. Contact Diamond Systems for quantity pricing and special-order options.

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.

MEDIA RESOURCES

- [Epsilon webpage](#)
- [Epsilon datasheet](#) (pdf)
- [Epsilon photo](#) (jpg)

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