

EPSILON-24000™ 26-Port Gigabit Ethernet Switch Targets Rugged Networked Applications

Mountain View, CA — March 26, 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 Epsilon-24000 family of gigabit Ethernet switches. These rugged, managed Layer 2+ Ethernet switch modules offer up to 24 10/100/1000 Mbps copper twisted pair ports plus two small form factor pluggable (SFP) sockets in the compact PC/104 form factor measuring 4.5 x 3.8 inches (96 x 116 mm).



The new EPS-24000 family of switches operates standalone without any host computer interface. A microprocessor embedded directly into the switch manages all switch functions. The processor is accessed via an in-band web interface over one of the Ethernet ports or via an out-of-band command-line interface over an RS-232 serial port. The integrated web interface provides an intuitive GUI for configuring and managing all switch functionality. On-board memory holds dual application images, boot code, MAC addresses and other parameters, and can also be used for program execution. Epsilon-24000 comes with all the required firmware preconfigured, enabling immediate operation without any development effort.

Two models of the switch are available: The EPS-24016 (shown in photo above) includes 16 10/100/1000 copper ports, and the EPS-24026 (shown on photo 2) contains 24 10/100/1000 ports plus 2 SFP sockets. Both models use a conduction cooling heat spreader for efficient thermal dissipation and mounting to the system enclosure. A heat sink accessory is also available.

Designed for use in rugged applications including industrial, on-vehicle and military environments, the Epsilon-24000 family operates over an extended temperature range of -40°C to +85°C. All I/O connectors are latching, providing enhanced reliability over the RJ-45 connectors used in commercial grade products. A 50% thicker PCB provides better protection against vibration in vehicle environments. The +5V to +34V wide range DC/DC power supply is compatible with all common vehicle and industrial power sources.

Technical Specifications

- Two models: 16 10/100/1000Mbps Ethernet ports
 24 10/100/1000Mbps Ethernet ports plus 1 1G and 1 2.5G SFP socket
- Built-in microcontroller for configuration and management
- RS-232 serial interface for out-of-band management interface
- +5V to +34V wide range DC/DC power supply
- PC/104 form factor (96 mm x 116 mm)
- -40°C to +85°C operating temperature

Advanced Ethernet Features

- Dual leaky bucket policers with remarking and statistics
- Jumbo frame support at all speeds
- 8K MAC addresses and 4K VLANs (IEEE 802.1Q)
- 8K IPv4 and IPv6 multicast group support
- Flexible link aggregation support based on Layer-2 through Layer-4 information
- Multicast and broadcast storm control, as well as flooding control
- Rapid Spanning Tree protocol (RSTP) and MSTP
- 8 priorities and 8 QoS queues per port with scheduling
- Shaping/policing per queue and per port
- Multiple protocol support: IEEE 802.1d, IEEE 802.1w, IEEE 802.1s, IEEE 802.1X

The switch's two SFP sockets interface to 1G fiber Ethernet networks. One port can operate at an enhanced 2.5Gbps to support efficient connection to high speeds network backbones.

Pricing and Availability

The Epsilon-24000 family is shipping in April 2015. Single unit pricing starts at US \$880 for the 16-port model. Development Kits are available that include an Epsilon-24000 switch, cable kit, and LED accessory board. Separate cable kits are available for each model. Contact Diamond Systems at sales@diamondsystems.com for quantity pricing and special-order options.

MEDIA RESOURCES

- [Epsilon-24000 Switch webpage](#)
- [Epsilon-24000 Switch datasheet](#) (pdf)
- [Epsilon-24000 Switch 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 $+85^{\circ}\text{C}$, 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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