

COM Express Mini 26-port Gigabit Ethernet Switch Module

Ultra-small managed layer 2/3 switch module fits vehicle and other harsh environment applications

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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 industries, today unveiled the **EPSM-10GX** Gigabit Ethernet switch module with managed Layer 2/3 switch capabilities in an ultra-compact COM Express Mini 2.2" x 3.3" (55 x 84mm) form factor. Featuring 24 10/100/1000Mbps copper twisted pair ports and 2 10Gbps SFI ports, the EPSM-10GX is a perfect choice for use as a building block for creating custom Ethernet switch solutions in a variety of spacecritical applications, such as drones, ground and underwater vehicles, and robots.



EPSM-10GX Ethernet Switch Module

The EPSM-10GX offers managed layer 2+ performance (layer 3 capable with software upgrade) via its built-in 500MHz MIPS processor and comprehensive suite of software features. All features are manageable via any Ethernet port or an auxiliary "out of band" serial interface. The switch operates at non-blocking wire-speed performance, meaning all ports can operate at full speed simultaneously, resulting in a 44Gbps total throughput capability.



Like a Computer-on-Module, the EPSM-10GX provides the complete core Ethernet switch functionality in a proven solution, vastly simplifying the effort required to design a complete Ethernet switch solution. The module is intended to be mounted on a carrier board, which requires only the necessary power supplies and "final inch" of magnetics, I/O connectors, and SFP+ sockets for the ports. In this way the EPSM-10GX enables customers to quickly design Ethernet switching solutions in custom form factors as well as industry standard form factors such as VPX.

For a complete off-the-shelf solution, Diamond Systems also introduced the **EPS-24G2X** (EPSM-10GX combined with carrier board) which provides access to all features of the module to create an off-the-shelf complete solution in the industry standard 3.5 inch form factor. For rapid development of custom solutions, Diamond offers under NDA a complete design package for the EPS-24G2X, enabling customers to quickly and easily design a custom solution with minimum risk.

The EPSM-10GX is designed to meet the demands imposed by harsh environments and is tested and guaranteed to MIL-STD-202G shock/vibration levels and can be operated in temperatures from -40°C to 85°C.

The EPSM-10GX includes the following key features and functionality:

- 24 10/100/1000Mbps copper Ethernet ports
- Integrated 500 MHz MIPS 24KEc CPU
- Serial port for out of band management and software updates
- IEEE802.1Q switch with 4K VLANs and 32K MAC table entries
- Multiple protocol support: IEEE 802.1d, IEEE 802.1w, IEEE 802.1s, and IEEE 802.1X
- Flexible link aggregation support based on Layer-2 through Layer-4 information (IEEE 802.3ad)
- Multicast and broadcast storm control, as well as flooding control
- COM Express Mini, Type 10 Form Factor (2.2"x3.3" / 55mm x 84mm)
- Power input: 5VDC
- -40°C to +85°C (-40°F to +185°F) operating temperature

EPSM-10GX is supplied with all required firmware pre-installed and pre-configured, enabling immediate operation without any software development effort.

Availability

The EPSM-10GX managed 26-Port Gigabit Ethernet Switch Module is shipping now. Contact Diamond Systems at sales@diamondsystems.com for quantity pricing and special-order options.

About Diamond Systems

Diamond Systems Corporation is a global provider of rugged, I/O-rich <u>embedded computing</u> <u>solutions</u> for companies in a <u>broad range of markets</u>, including transportation, energy, aerospace, defense, manufacturing, medical and research. Diamond's extensive <u>product</u> <u>line</u> includes compact, highly integrated <u>single board computers (SBCs)</u>; an extensive <u>line of</u> <u>expansion modules</u> for analog and digital I/O, wired and wireless communications including multiprotocol serial ports and Ethernet switches; and complete, <u>rugged, system-level</u> <u>solutions</u>. For further information, please visit <u>www.diamondsystems.com</u>.

Web Resources

- EPSM-10GX Ethernet switch module product page: <u>http://www.diamondsystems.com/products/epsm10gx</u>
- EPSM-10GX Datasheet: <u>http://www.diamondsystems.com/products/display_datasheet.php?handle=espm10gx</u>
- EPS-24G2X Ethernet switch product page: <u>http://www.diamondsystems.com/products/eps24g2x</u>
- EPS-24G2X Datasheet: <u>http://www.diamondsystems.com/products/display_datasheet.php?handle=eps24g2x</u>

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