

Ethernet Switch Modules

Benefits and Usage



An Ethernet switch module contains all the core switch electronics and software technology in a compact, proven solution. The module is intended to be used on a carrier board to implement the complete solution. For many applications, the carrier board requires only the "last inch" of magnetics and I/O connectors to complete the circuit. In this way an Ethernet switch module eliminates as much as 90 percent of the time, cost, and effort required to develop a custom form factor compact, rugged Ethernet switch solution. The small size makes these modules a perfect choice for use as a building block for creating custom Ethernet switch solutions in a variety of space-demanding applications, such as drones, ground and underwater vehicles, and robots.

Embedded Software

The embedded switch software includes Layer 3 routing and switching capabilities, along with support for IEEE1588 PTP. All features are monitored and controlled via a web-based graphical user interface as well as an RS-232 port command line interface.

Common Design for Upgradeability

Most of Diamond's Ethernet switch modules share a common form factor of 84 x 55mm / 3.3 x .2" with common board-to-board connector pinouts. This lets you start out with one module and migrate to a different module later for cost or functionality reasons, while the carrier board and all related parts of your system remain the same.

Designed for Rugged Applications

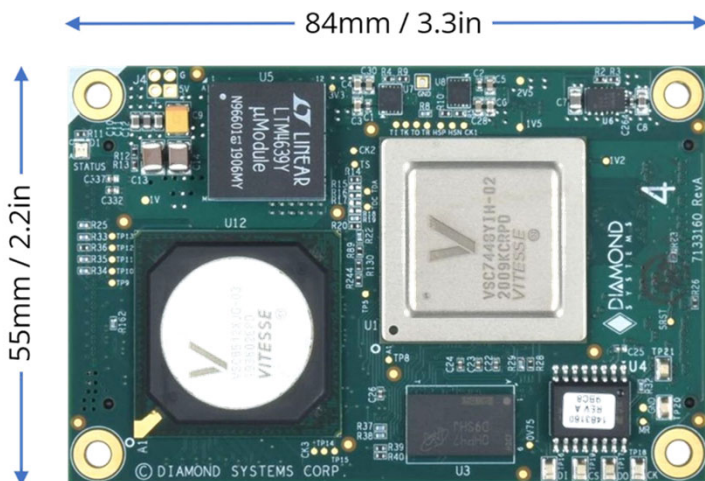
All Diamond Ethernet switch modules are functional over -40 to +85C temperature range, and many have been qualified to MIL-STD-202H or 810H, ensuring reliability in the most demanding environments.

Development Kit Speeds Up Your Project

A development kit is available providing a ready-to-use complete switch based on the selected module. It includes complete schematics for the carrier board along with a design guide. Custom branding of the GUI interface is included.

Complete Off-the-Shelf Board-Level Solutions

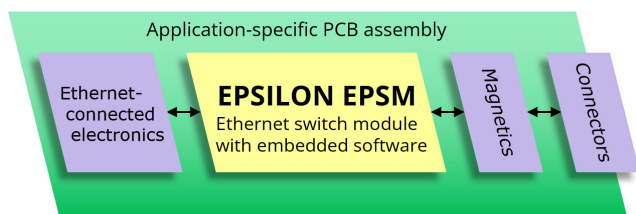
Customers looking for a complete off-the-shelf Ethernet switch solution can choose from a wide range of standard products from Diamond Systems in various sizes and port combinations. Diamond also offers custom carrier board design and manufacturing services to provide a perfect-fit solution for your application.



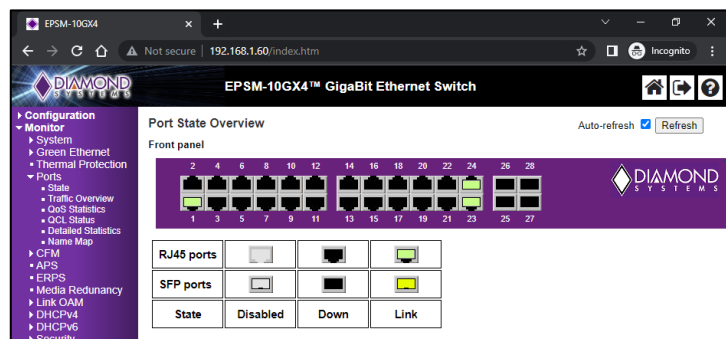
Diamond Ethernet switch module
(actual size)



Example switch module on carrier board



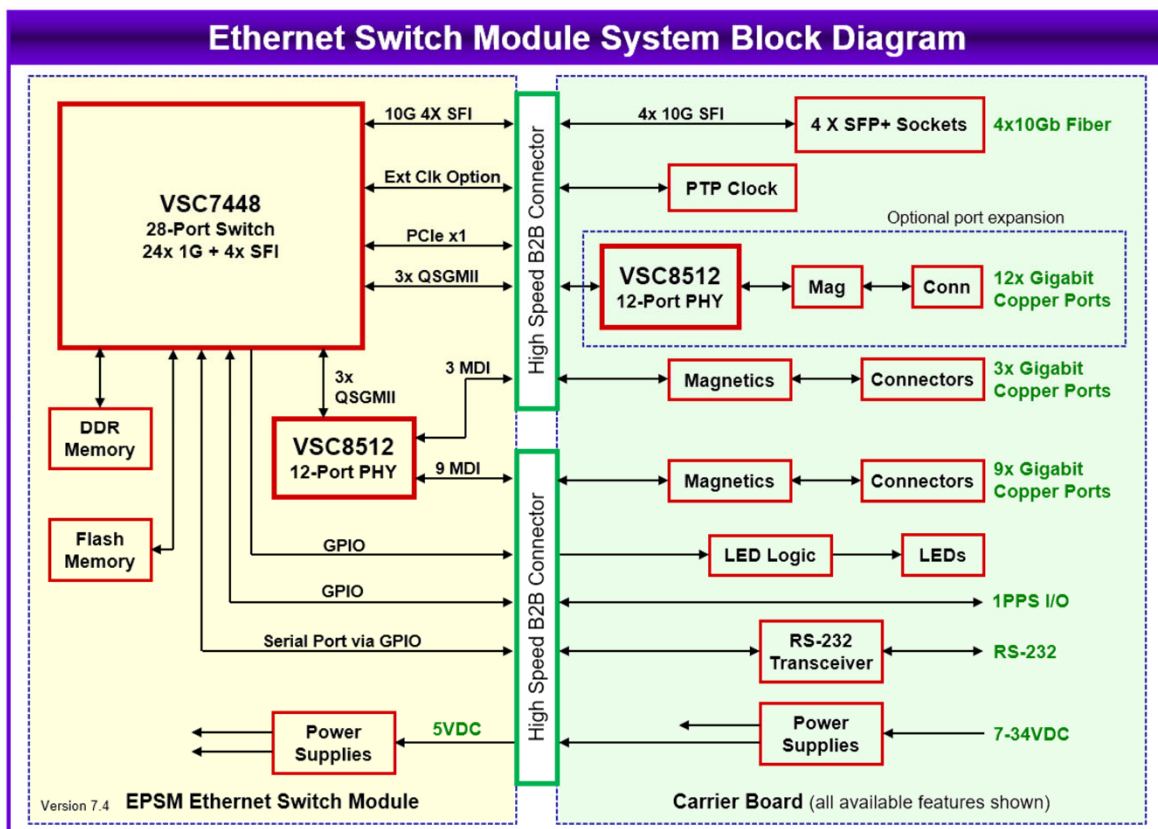
An Ethernet switch module dramatically simplifies product development.



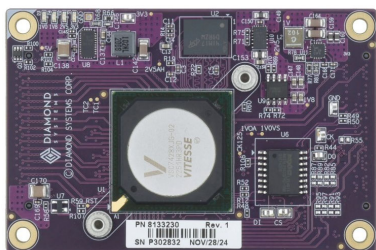
Embedded software with GUI

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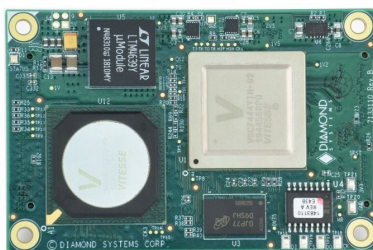
Architecture and Models



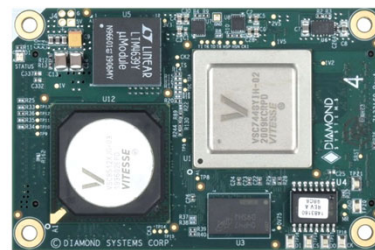
Diamond's Ethernet Switch Module Lineup



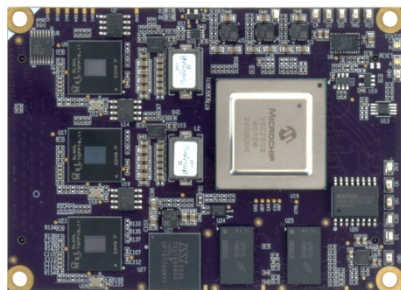
EPSM-8G2F
EPSM-12G2F



EPSM-10GX



EPSM-10GX4



EPSM-10GX12

Model	Ports Max	Copper Ports Max	Fiber Ports Max	Bandwidth Max	Size
EPSM-8G2F	10	8x 1G	2x 2.5G	13Gbps	84x55mm
EPSM-12G2F	14	12x 1G	2x 2.5G	17Gbps	84x55mm
EPSM-10GX	26	24x 1G	2x 10G	44Gbps	84x55mm
EPSM-10GX4	28	24x 1G	4x 10G	64Gbps	84x55mm
EPSM-10GX12	64	64x 2.5G	17x 10G	200Gbps	90x65mm