VSC7431

28-Port Layer 2/Layer 3 Managed Ethernet Switch

Microsemi's next-generation switch engine delivers a multilayer, scalable Enterprise Ethernet solution.

The VSC7431 E-StaX-III-28 Enterprise Ethernet switch contains twenty-four 10/100/1000 Mbps Ethernet ports and two 12G interconnect ports that can be configured to provide 28 ports (24× 1G and 4× 1G). Two VSC7431 devices can support up to a fifty-six 10/100/1000 Mbps configuration using the 2× 12 Gbps interconnect ports.

VSC7431 provides a rich set of Enterprise Ethernet switching features. Using multistage Versatile TCAM technology (VCAP), it delivers VLAN and QoS processing, enabling the delivery of differentiated services, security through intelligent frame processing, and egress frame manipulation.

A powerful 416 MHz CPU in the VSC7431 device enables full management of a standalone switch without the need for an external CPU.
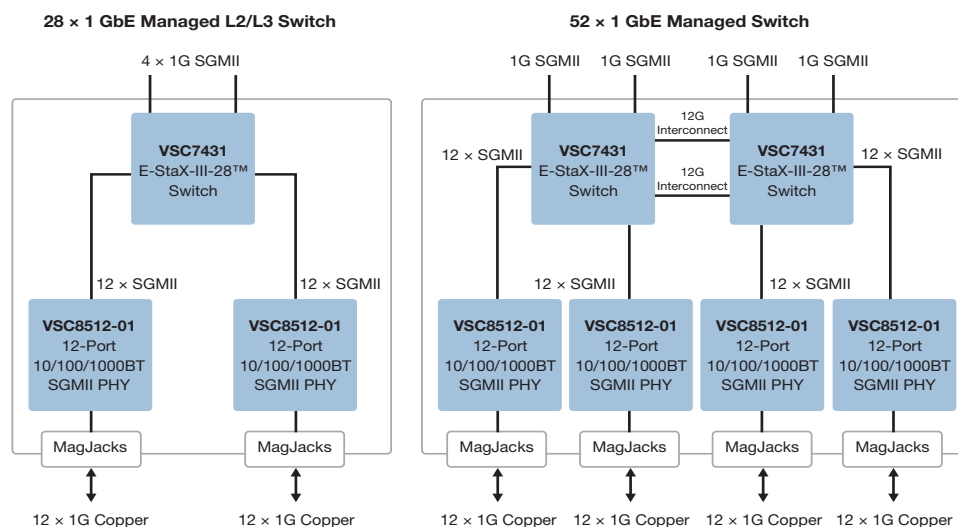
A comprehensive application programming interface (API) and software development package is available for managed Ethernet applications for faster time-to-market. The software API package integrates easily with third-party software, preserving existing software investments.

Highlights

- 28 SGMII/SerDes ports support direct optical connectivity for 1G/1000 Mbps operation
- 2× 12G interconnect ports support dual-chip 56-port solution
- Layer 3 unicast/multicast routing
- New shared buffer memory architecture

Applications

- Fully managed L2/L3 switch

28 × 1 GbE Managed L2/L3 Switch

52 × 1 GbE Managed Switch

Features

- 28× 1 GbE or dual-chip 56× 1 GbE ports with SGMII, 1000BASE-X, 100BASE-FX, or SerDes
- Internal shared memory buffer (8 queues per port)
- Jumbo frame support
- Strict priority and DWRR scheduler/shaper
- Integrated 416 MHz MIPS CPU
- 27 mm × 27 mm FCBGA

Layer 2 Switching and Layer 3 Forwarding

- 802.1Q VLAN switch with 16K MACs and 4K VLANs
- Push, pop, and translate ingress/egress
- Policing with storm control and MC/BC protection
- RSTP and MSTP support
- Independent and shared VLAN learning (IVL, SVL)
- Hardware and software-based learning
- TCAM-based classification and VCAP-II security
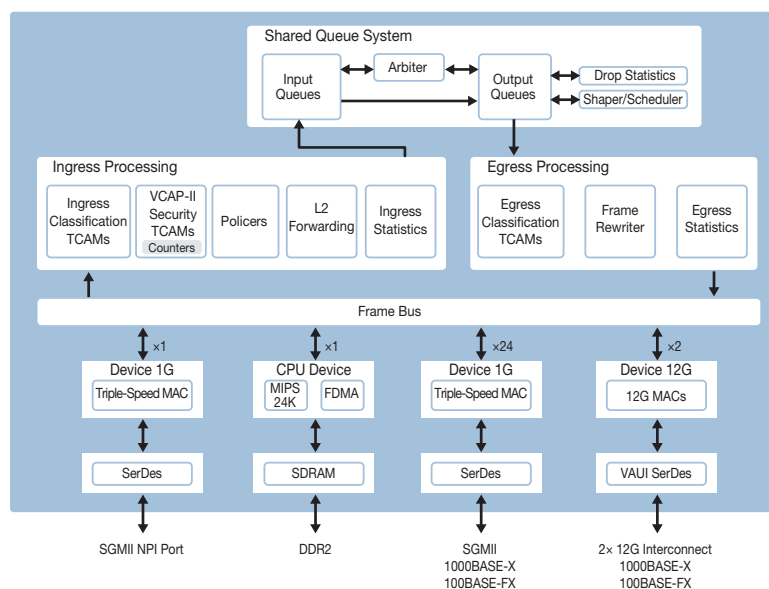- Layer 3 unicast and multicast routing

Multicast

- Layer 2
- IPv4 and IPv6
- IGMP and MLD

Related Products

Visit www.microsemi.com for information about these related products:
- SparX-III and E-StaX-III Gigabit Ethernet switches with integrated copper PHYs
- VSC8512-01 12-port copper PHY

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