

VSC7460 and VSC7462

24x 1-GbE + 4x 10G Port and 12x 1-GbE + 4x 10G Port Carrier Ethernet Switches with VeriTime™

Microsemi's next-generation switch family delivers a comprehensive end-to-end Carrier Ethernet solution.

Jaguar-1 (VSC7460) is a Carrier Ethernet switch that contains 24 10/100/1000 Mbps Ethernet ports and four 10 Gbps XAUI Ethernet ports. Optionally, two XAUI ports can support up to eight 2.5 Gbps Ethernet ports.

LynX-1 (VSC7462) contains 12 10/100/1000 Mbps Ethernet ports and four 10 Gbps XAUI Ethernet ports. Optionally, two XAUI ports can support up to eight 2.5 Gbps Ethernet ports.

The devices provide a rich set of Carrier Ethernet services, Ethernet switching, and Ethernet transport features. Advanced TCAM-based QoS processing using versatile content-aware processing (VCAP-II) enables the delivery of differentiated services with per-service SLA guarantees.

Comprehensive service and transport support is provided for networks based on Provider Bridge (PB), Provider Backbone Bridge (PBB), Provider Backbone Bridge with Traffic Engineering (PBB-TE), and Multiprotocol Label Switching (MPLS-TP) protocols.

For critical network timing applications, VSC7460 and VSC7462 use VeriTime™, Microsemi's patent-pending distributed timing technology that delivers the industry's most accurate IEEE 1588v2 timing implementation.

A powerful embedded MIPS processor, tightly integrated with Carrier Ethernet switch functions, enables the implementation of Ethernet OAM, VeriTime™, and switch management using a single device, eliminating the need for an external processor in many cases.

A comprehensive application programming interface (API) and software package are provided for switch applications. The software package integrates easily with third-party software, preserving existing software investments while adding new, enhanced carrier functionality.

The Microsemi Carrier Ethernet family also includes two pin-compatible MACs, VSC7364 and VSC7366, for aggregation applications requiring hierarchical traffic management and the advanced features of a Carrier Ethernet switch.

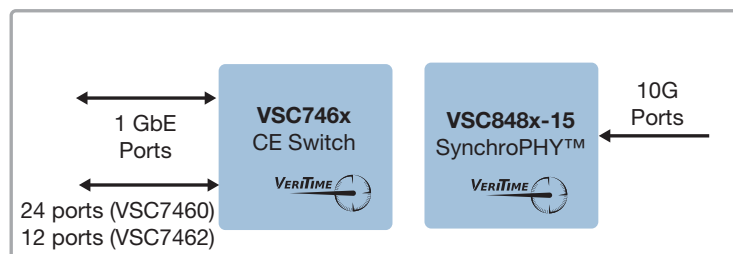
Highlights

- Service-aware architecture
- Hierarchical quality of service (QoS)
- Integrated timing: VeriTime™, SyncE
- Ethernet OAM and protection switching

Applications

- Metro Ethernet transport (MSPP/ MSTP)
- Carrier Ethernet switch/router (CESR)
- Mobile wireless backhaul

GbE Switch Card or Pizzabox Application



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Features

- 24x or 12x 1 GbE ports with SGMII, 1000BASE-X SerDes, 100BASE-FX, and external frame insertion/extraction support
- Up to 8x 2.5 GbE ports
- 4x 10 GbE XAUI ports
- Four-lane 10 Gbps XAUI
- Internal shared memory buffer (8 queues per port)
- Jumbo frame support
- Strict priority and DWRR scheduler/shaper
- Integrated 400 MHz MIPS CPU

Layer 2 Switching and Layer 3 Forwarding

- 802.1Q VLAN switch with 32K 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

Multicast

- Layer 2
- IPv4 and IPv6
- IGMP and MLD

Key Specifications

- 27 mm × 27 mm FCBGA
- Operating temperature –40 °C to 125 °C

VeriTime™ Features

- L2 IEEE 1588v2
- Boundary clock and transparent clock

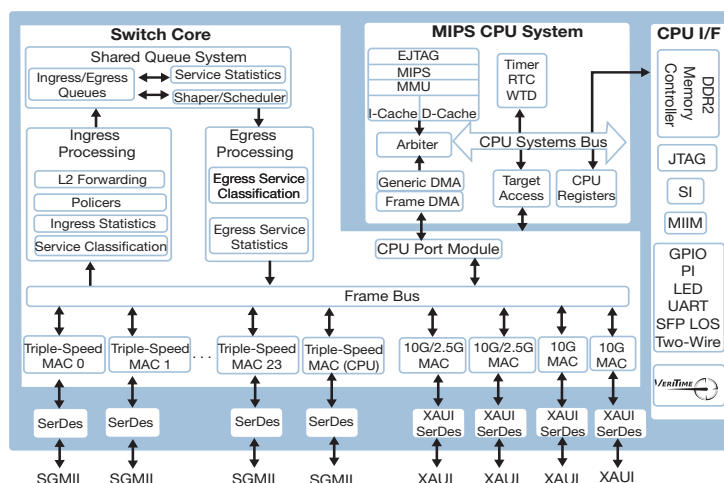
Carrier Ethernet

- Provider Bridge (PB), Provider Backbone Bridge (PBB), Provider Backbone Bridge with Traffic Engineering (PBB-TE), and MPLS-TP
- MEF E-LAN, E-LINE, E-TREE services
- UNI-N, I-NNI, and E-NNI interface support
- Dual leaky bucket policers with remarking and statistics
- Hardware and software-based Ethernet OAM and protection switching
- L1 Synchronous Ethernet
- Enhanced Carrier Ethernet software API

Related Products

Visit www.microsemi.com for information about these related products:

- VSC9138 10 Gbps Multiservice High Order/Low Order Virtual Concatenation Mapper
- VSC7364 and VSC7366 Carrier Ethernet MACs
- VSC8487-15 and VSC8488-15 SynchroPHYs™ with VeriTime™



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