

VSC7436

10-Port Carrier Ethernet Switch with ViSAA™, VeriTime™, and Integrated Gigabit Ethernet PHYs

Microsemi's Carrier Ethernet switch family offers the highest performance, market-ready solution for MEF CE 2.0 service delivery.

The VSC7436 Serval-2 Lite™ switch targets IP Edge demarcation and access equipment to deliver Enterprise and Mobile Backhaul. VSC7436 is based on Virtual Service Aware Architecture (ViSAA™), a silicon implementation that offers an unmatched level of Service Edge and Carrier Ethernet (CE) networking features. ViSAA achieves wirespeed performance for even the most feature-rich Carrier Ethernet services. VSC7436 also integrates VeriTime™, Microsemi's patent-pending timing technology that delivers the industry's most accurate IEEE 1588v2 timing implementation.

The VSC7436 Carrier Ethernet switch contains four 10/100/1000 Mbps ports (up to two copper ports), four 10/100/1000/2500 Mbps ports, and two 10 Gbps ports. VSC7436 provides a rich set of Carrier Ethernet switching features such as hierarchical QoS, hardware-based OAM (Ethernet and MPLS/MPLS-TP) and SAM, protection switching, and Synchronous Ethernet. Using provider bridging (Q-in-Q) and MPLS/MPLS-TP technology, VSC7436 delivers MEF CE 2.0 EVCs. The Versatile Content Aware Processor (VCAP™) architecture is scalable and flexible for secure applications. It features advanced TCAM classification in both ingress and egress. Per-EVC features include a rich set of statistics, OAM for end-to-end performance monitoring, and dual-rate policing and shaping.

VSC7436 supports IPv4/IPv6 Layer-3 (L3) routing and IPv4/IPv6 L3 multicast groups. L3 security features include source guard and unicast Reverse Path Forwarding (uRPF) tasks.

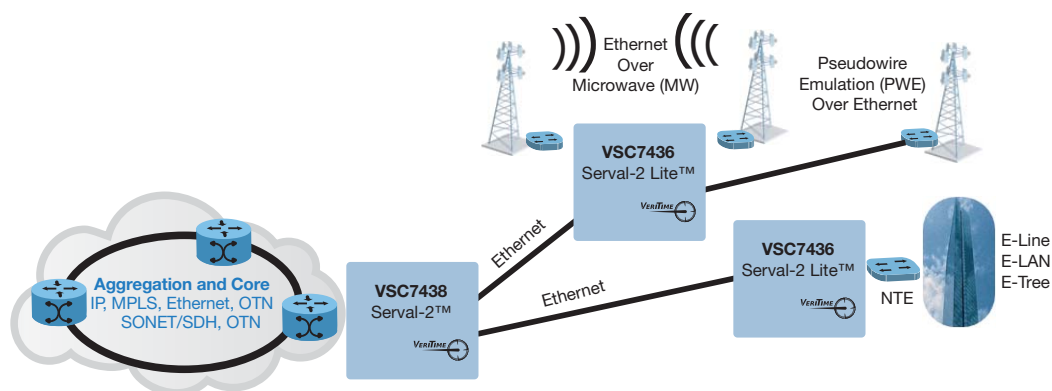
VSC7436 supports Microsemi's application programming interface for easy integration with third-party application software. The device also supports Microsemi's CEServices application software, dramatically reducing time-to-market.

Highlights

- Virtual Service Aware Architecture (ViSAA™)
- Integrated timing VeriTime™ SyncE
- MPLS/MPLS-TP and Layer-3 routing support
- MEF UNI and NNI functionality
- Hardware-based Ethernet OAM, performance monitoring, and Service Activation Measurement (SAM)
- Network demarcation
- Hierarchical QoS priority for queuing and subscriber separation
- Service protection (linear, ring)

Applications

- Wireless and Mobile Backhaul
- Ethernet/MPLS demarcation
- Network Interface Device



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Features

- 4 × 10/100/1000 ports (up to two copper)
- 4 × 10/100/1000/2500 ports
- 2 × 10/100/1000/2500/10000 ports
- Integrated shared packet memory
- Fully nonblocking wire-speed switching performance for all frame sizes
- 8 QoS classes with thousands of H-QoS queues
- Energy Efficient Ethernet (EEE)
- Priority-based flow control
- Integrated MIPS-24KEc CPU with DDR3 SDRAM controller
- PCIe for control/status register access

Layer 2 Switching

- 802.1Q VLAN switch
- Classify and modify up to three VLAN tags
- 512/256 IPv4/IPv6 multicast groups using snooping
- Policing with storm control and MC/BC protection
- RSTP and MSTP support
- Hardware- and software-based learning
- Link aggregation (IEEE 802.3ad)
- Independent and shared VLAN learning (IVL, SVL)
- Jumbo frame support

Layer 3 Routing

- 1K/256 IPv4/IPv6 table entries (LPM and hosts)
- 512/256 IPv4/IPv6 (S, G, V) or (*, G, V)

VeriTime™ Features

- IEEE 1588v2
- L1 Synchronous Ethernet
- Boundary clock and transparent clock

ViSAA™ and Carrier Ethernet Features

- Provider bridging (Q-in-Q) and MPLS/MPLS-TP
- Linear and ring protection switching
- MEF CE 2.0 ready: 8 COS EVCs with per-EVC dual-rate policing and shaping, queueing, and statistics

- Advanced security and per-service classification available through multistage TCAM engines
- Hardware-based Ethernet and MPLS-TP OAM: Up-MEPs and Down-MEPs, Four layers of nested MEPs, Hardware-based Y.1564 service activation test

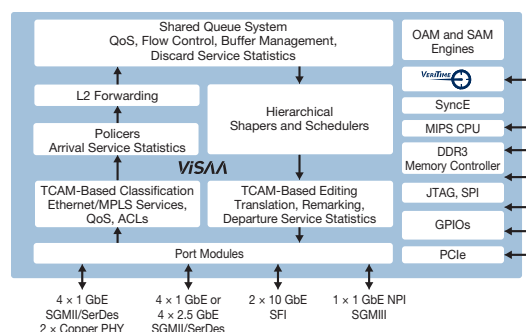
Key Specifications

- 19 mm × 19 mm BGA
- Low power dissipation
- Operating temperature –40 °C to 125 °C

Related Products

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

- VSC7468 Jaguar-2™ and VSC7464 LynX-2™ 24-port and 12-port Carrier Ethernet switches with VeriTime™
- VSC7438 Serval-2™ 32 Gbps Carrier Ethernet switch with ViSAA™, VeriTime™, MPLS-TP, and L3 routing support
- VSC7416 Serval-Lite™ 6-port Carrier Ethernet switch with MPLS-TP Support and VeriTime™
- Unified API and CEServices application software



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