VSC7435

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

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

The VSC7435 Serval-TE™ switch targets IP Edge demarcation and access equipment to deliver Enterprise and Mobile Backhaul. VSC7435 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. VSC7435 also integrates VeriTime™, Microsemi's patent-pending timing technology that delivers the industry's most accurate IEEE 1588v2 time stamping. Combined with PTP software and an advanced Servo algorithm, Microsemi offers the most accurate 1588 solution

The VSC7435 Carrier Ethernet switch contains four 10/100/1000 Mbps ports (up to two copper ports), and two 10/100/1000/2500 Mbps ports. An integrated DPLL simplifies system design, and provides proven interoperability between switch and DPLL. VSC7435 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, VSC7435 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.

VSC7435 supports IPv4/IPv6 Layer-3 (L3) routing and IPv4/IPv6 L3 multicast groups. L3 security features include source guard and unicast Reverse path Forwarding (uRFP) tasks.

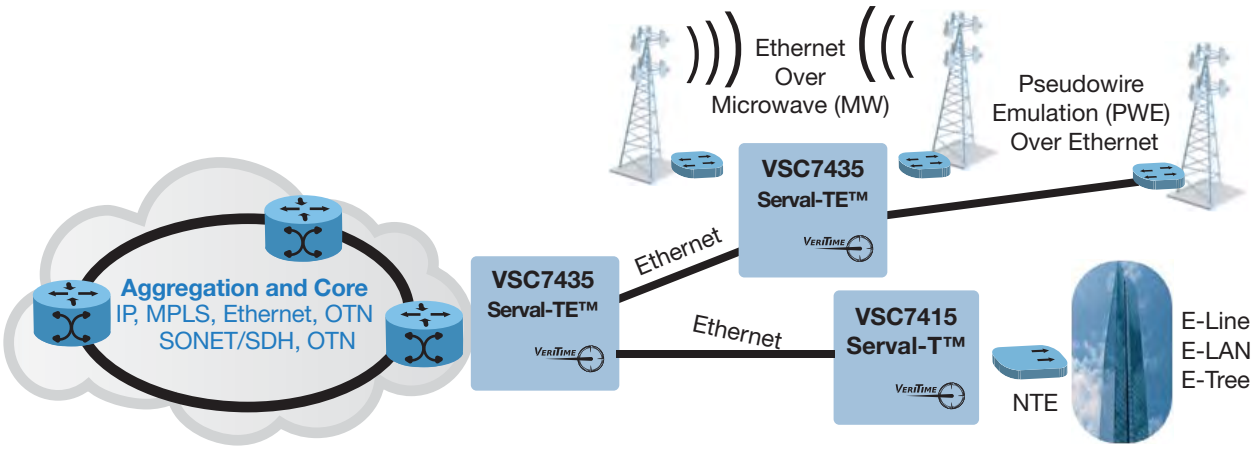
VSC7435 supports Microsemi's application programming interface for easy integration with third-party application software. The device also supports Microsemi's CEServices application software, dramatically reducing time-to-market.

Highlights

- Virutal Service Aware Architecture (ViSAA™)
- Integrated timing
  VeriTime™
  SyncE
  DPLL
- 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

- Microcell, femtocell, and picocell base stations
- Small cell backhaul systems
- Network Interface Device



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Features

- 4 × 10/100/1000 ports (up to two copper), 2 × 10/100/1000/2500 ports
- Integrated DPLL and 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) multicast groups
- Simultaneous L3 routing with Provider Bridging and MPLS/MPLS-TP service switching

VeriTime™ Features

- IEEE 1588v2
- L1 Synchronous Ethernet
- 1588 Slave PEC and SyncE EEC
- Boundary clock and transparent clock
- PTP software and advanced Servo algorithm

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

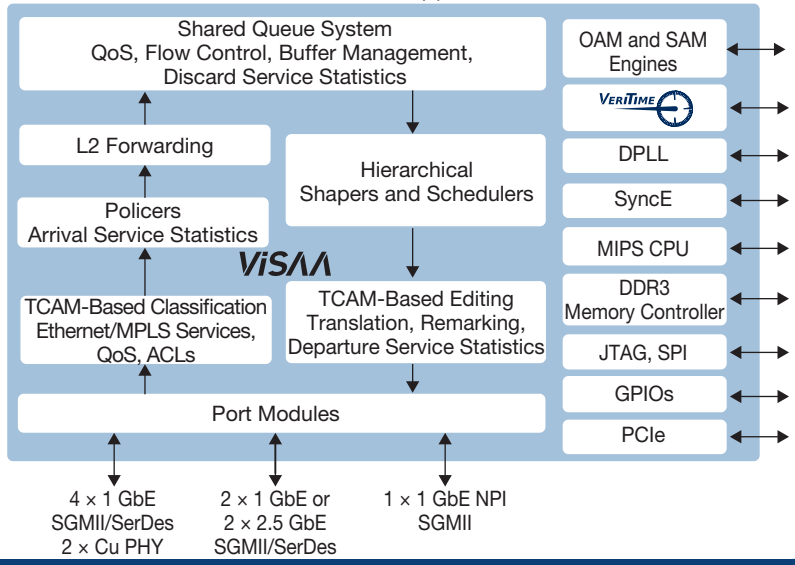
Key Specifications

- 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
- VSC7415 Serval-T™ 6-Port SGMII Gigabit Ethernet Switch with VeriTime™, Integrated DPLL, and Gigabit Ethernet PHYs
- Unified API and CEServices application software



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