

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.

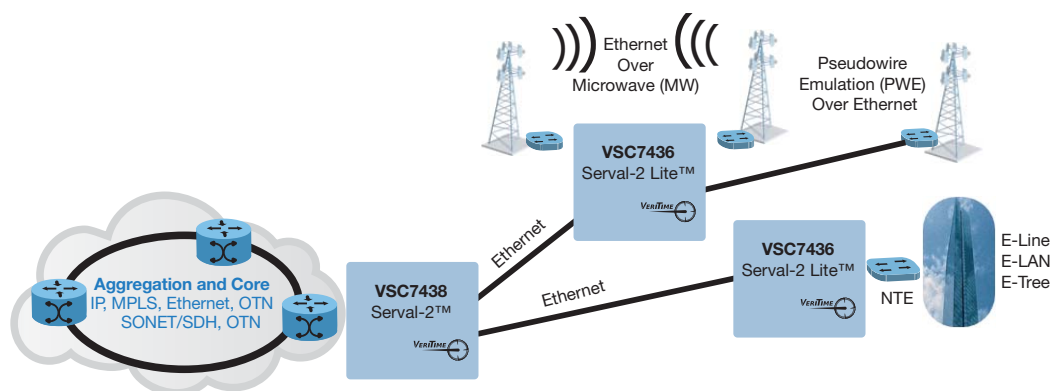
VSC7436 supports Microsemi's application programming interface for easy integration with third-party application software. The device also supports Microsemi's CEServices application software, dramatically reducing time-to-market.

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



Microsemi makes no warranty, representation, or guarantee regarding the information contained herein or the suitability of its products and services for any particular purpose, nor does Microsemi assume any liability whatsoever arising out of the application or use of any product or circuit. The products sold hereunder and any other products sold by Microsemi have been subject to limited testing and should not be used in conjunction with mission-critical equipment or applications. Any performance specifications are believed to be reliable but are not verified, and Buyer must conduct and complete all performance and other testing of the products, alone and together with, or installed in, any end-products. Buyer shall not rely on any data and performance specifications or parameters provided by Microsemi. It is the Buyer's responsibility to independently determine suitability of any products and to test and verify the same. The information provided by Microsemi hereunder is provided "as is, where is" and with all faults, and the entire risk associated with such information is entirely with the Buyer. Microsemi does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other IP rights, whether with regard to such information itself or anything described by such information. Information provided in this document is proprietary to Microsemi, and Microsemi reserves the right to make any changes to the information in this document or to any products and services at any time without notice.

VSC7436

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

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

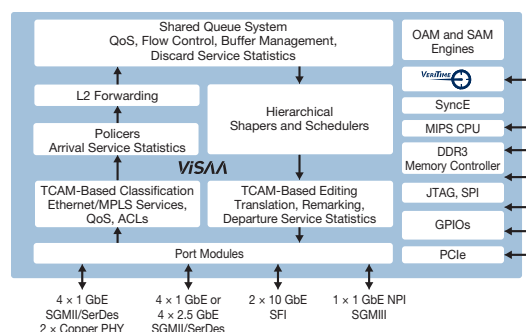
Key Specifications

- 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



Microsemi

Microsemi Corporate Headquarters
 One Enterprise, Aliso Viejo, CA 92656 USA
 Within the USA: +1 (800) 713-4113
 Outside the USA: +1 (949) 380-6100
 Sales: +1 (949) 380-6136
 Fax: +1 (949) 215-4996
 email: sales.support@microsemi.com
www.microsemi.com

Microsemi Corporation (Nasdaq: MSCC) offers a comprehensive portfolio of semiconductor and system solutions for communications, defense and security, aerospace, and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs, and ASICs; power management products; timing and synchronization devices and precise time solutions; voice processing devices; RF solutions; discrete components; enterprise storage and communications solutions, security technologies, and scalable anti-tamper products; Ethernet solutions; Power-over-Ethernet ICs and midspans; custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, California, and has approximately 4,800 employees worldwide. Learn more at www.microsemi.com.

©2014–2016 Microsemi Corporation. All rights reserved. Microsemi and the Microsemi logo are registered trademarks of Microsemi Corporation. All other trademarks and service marks are the property of their respective owners.

VPPD-03831. 1.0. 4/16.