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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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VSC7428-12

11-Port L2 Ethernet Switch with 8 Fully Integrated Copper PHYs and Embedded MIPS CPU

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

VSC7428-12 is the industry's most integrated 11-port Ethernet switch with three SGMII ports, eight Fast Ethernet copper PHYs, and two 1G/2.5G SGMII uplink ports. One SGMII port can be dedicated to the CPU for packet insertion and extraction. VSC7428-12 meets the IEEE 802.3az requirements for green energy efficient Ethernet through Microsemi's ActiPHY™ and PerfectReach™ energy efficient modes. A powerful embedded 416 MHz MIPS processor 32-bit CPU with DDR2 external memory and DMA-based frame extraction and insertion supports VeriTime™, Ethernet OAM, and performance monitoring.

For critical network timing applications, VSC7428-12 uses VeriTime™, Microsemi's patent-pending distributed timing technology that delivers the industry's most accurate IEEE 1588v2 timing implementation.

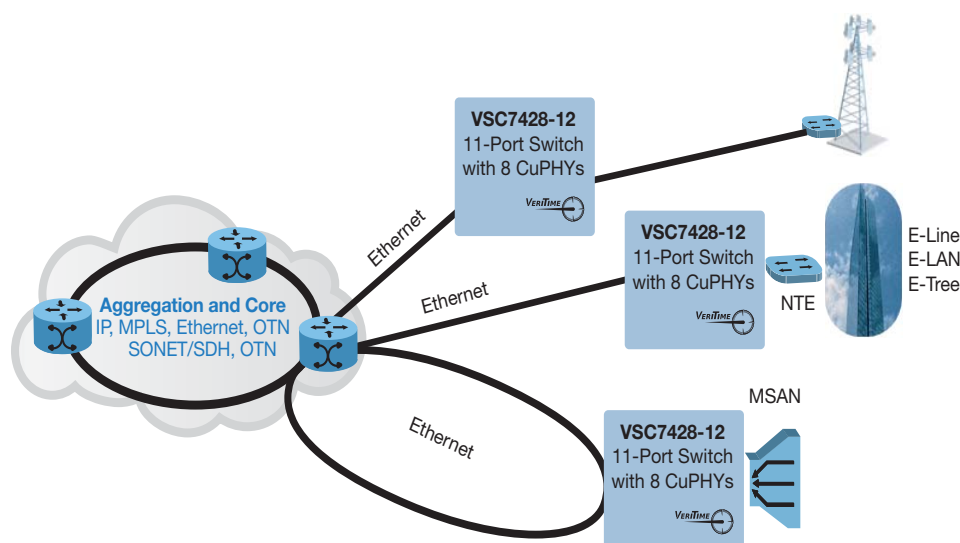
A comprehensive application programming interface (API) and software development package accelerates time-to-market for managed Ethernet applications. The software API package integrates easily with third-party software, preserving existing software investments.

Highlights

- Fully integrated Fast Ethernet copper PHYs
- Integrated timing: VeriTime™, SyncE
- Supports IEEE 802.3az and green energy efficiency modes with ActiPHY™ and PerfectReach™

Applications

- Industrial switches and routers
- Carrier Ethernet switches



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11-Port L2 Ethernet Switch with 8 Fully Integrated Copper PHYs and Embedded MIPS CPU

I/O Configurations

- 8 × 10/100 Cu PHY
- 1 × 10/100/1000 SGMII
- 2 × quad-speed 10/100/1000/2500 Mbps SGMII
- Up to three ports supporting 100BASE-FX or 1000BASE-X SerDes

Architecture

- Shared memory buffer with per-port and CoS memory management
- 4 Mb packet memory
- Hierarchical MEF compliant policing and scheduling
- 8 priorities and 8 CoS queues per port with strict or deficit-weighted round robin scheduling
- Shaping/policing per queue and per port
- Advanced security and prioritization available through a multi-stage TCAM engine
- 8 integrated 10/100 Mbps Ethernet copper transceivers (IEEE 802.3ab compliant) with ActiPHY™ and PerfectReach™ power management and VeriPHY™ cable diagnostics
- Integrated 416 MHz MIPS CPU with DDR2 and serial flash interface

Layer 2 Switching

- 802.1Q VLAN switch with 8K MACs and 4K VLANs
- Push/pop up to two VLAN tags
- IPv4/IPv6 multicast
- 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

Carrier Ethernet Features

- Provider Bridging (PB)
- MEF E-Lane, E-Line, and E-Tree services
- Dual leaky bucket policers with remarking and statistics
- OAM and protection switching
- L1 Synchronous Ethernet
- Enhanced Carrier Ethernet API

VeriTime™ Features

- L2 IEEE 1588v2
- Boundary clock and transparent clock

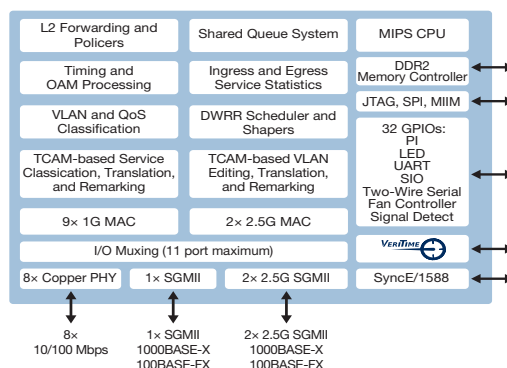
Key Specifications

- 27 mm × 27 mm BGA thermally enhanced package
- Operating temperature –40 °C to 125 °C

Related Products

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

- VSC7460/VSC7462 24/12-Port Gigabit Ethernet Carrier Ethernet Switch with VeriTime™
- Unified API, WebStaX™, SMBStaX™, and CEServices™ software
- VSC7429 26-Port Layer 2 Gigabit Ethernet Switch with VeriTime™, 12 Copper PHYs, and Embedded CPU



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