imall

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VSC7511 4-Port Layer-2 Gigabit Ethernet Switch

Microsemi's industrial Ethernet switch device delivers the industry's lowest power Gigabit Ethernet (GbE) switching solution.

The VSC7511 is a fully-integrated 4-port GbE switch with four copper PHYs or four SGMIIs in a single package.

The VSC7511 leverages Microsemi's SimpliPHY[™] technology, resulting in the one of the most cost-effective and lowest power consumption devices in the industry. The single-chip solution utilizes the most advanced Energy Efficient Ethernet features for bringing low-power and high-performance solutions to market.

The VSC7511 provides a rich set of unmanaged Ethernet switching features such as Layer-2 forwarding with basic VLAN and QoS processing, enabling the delivery of differentiated services. The VSC7511 contains an 8051 CPU for configuration of the switch.

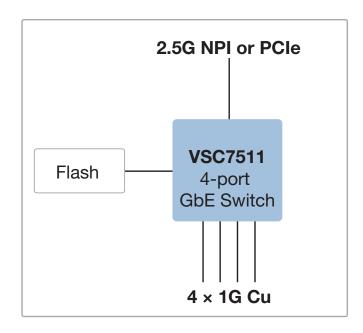
A comprehensive application software package is provided for LED control, loop indication, device overheat protection, and other enhanced functions.

Highlights

- Low-power and single-chip industrial switch
- Four ports, either integrated copper PHYs or SGMII ports
- 2.5G SGMII NPI port or PCIe

Applications

- Industrial Ethernet switches
- SME and SMB switches
- Customer-premise Equipment (CPE) and Network Termination Equipment (NTE)



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VSC7511 4-Port Layer-2 Gigabit Ethernet Switch

Best-In-Class Power Consumption

- Single IC reduces overall power requirements
- Optimal power consumption for all link speeds

Features

- 4 x 1G SGMII or integrated copper PHY ports
- Integrated 250 MHz 8051 CPU with 64 KB internal storage
- PCIe and 2.5G SGMII NPI for external CPU register access
- Device overheat protection
- Hardware loop detection
- Integrated fan controller
- 4K MAC addresses and 4K VLAN support

Layer 2 Switching

- 4-port GbE switch with nonblocking wire-speed performance
- Link aggregation (IEEE 802.3ad) with programmable traffic distribution based on Layer 2 through Layer 4 information
- Wire-speed hardware-based learning and CPU-based learning configurable per port
- Independent and shared VLAN learning
- Jumbo frame support up to 12.2 KB with per-port programmable MTU
- Q-in-Q tagging support
- 1.75 Mb of integrated shared packet memory

QoS

- Eight QoS queues per port with strict or deficit-weighted round robin scheduling
- QoS classification based on IEEE 802.1p and IPv4/IPv6 DSCP
- Data rate shaper and policer per-queue, per-port for both ingress and egress directions
- Full-duplex flow control (IEEE 802.3x) and half-duplex backpressure, symmetric and asymmetric
- Multicast and broadcast storm control with flooding control

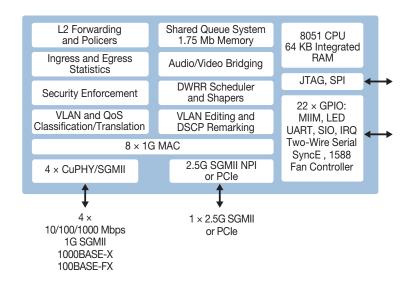
Key Specifications

- 13 mm × 13 mm DRQFN package
- -40 °C to 125 °C temperature range

Related Products

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

- Ethernet switches
- 1G copper PHYs





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 & 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, setting the world's standard for time; voice processing devices; RF solutions; discrete components; enterprise storage and communication solutions, security technologies and scalable anti-tamper products; Ethernet solutions; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, Calif., and has approximately 4,800 employees globally. Learn more at www.microsemi.com.

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