

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 SGMII 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.

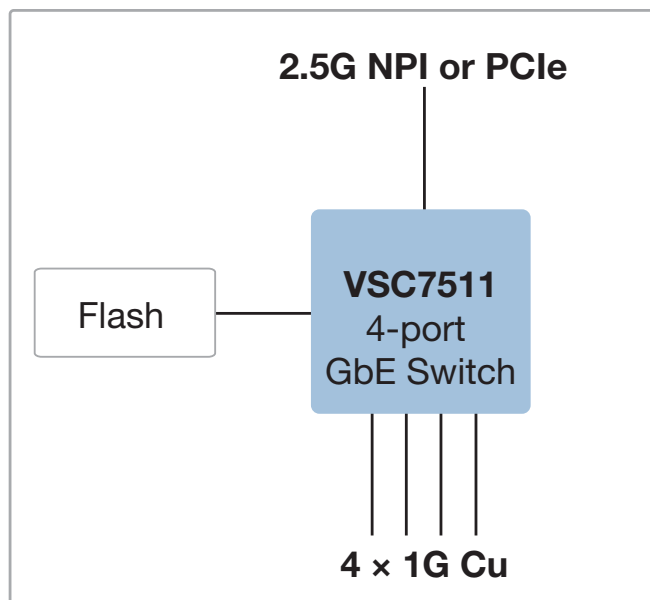
A comprehensive application software package is provided for LED control, loop indication, device overheat protection, and other enhanced functions.

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)



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 back-pressure, symmetric and asymmetric
- Multicast and broadcast storm control with flooding control

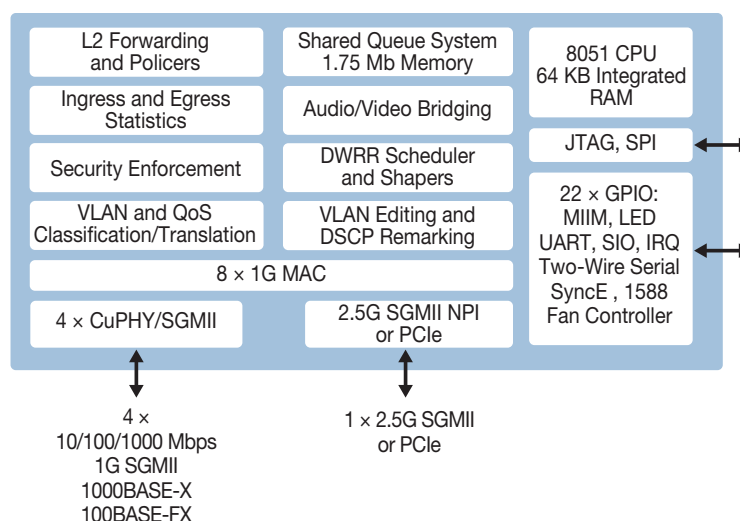
Key Specifications

- 13 mm x 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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Microsemi:](#)

[VSC7511XMY](#)