

# VSC7512

## 10-Port Layer-2 Gigabit Ethernet Switch

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

The VSC7512 is a fully-integrated 10-port GbE switch with four copper PHYs in a single package.

The VSC7512 leverages Microsemi's SimpliPHY™ technology, resulting in 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, high-performance solutions to market.

The VSC7512 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 VSC7512 contains an 8051 CPU for configuration of the switch.

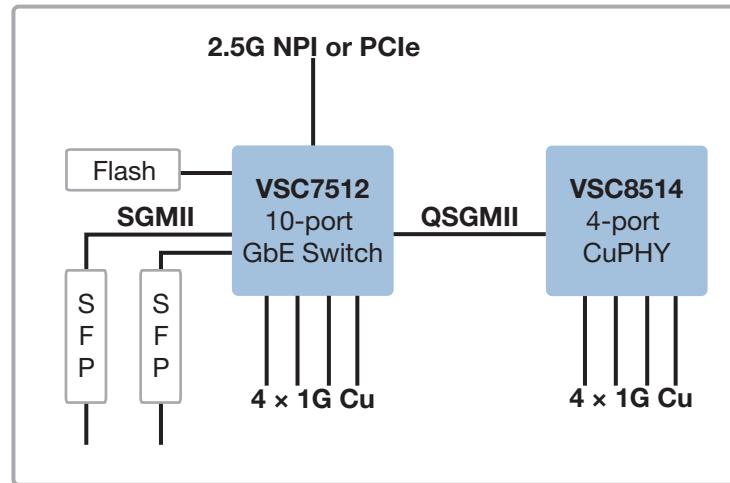
A comprehensive application software package is provided for LED control, loop indication, device overheat protection, and other enhanced functions.

## Highlights

- Low-power and single-chip industrial switch
- Four integrated copper PHY 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)



# VSC7512

## 10-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 integrated copper PHY ports
- 2 x 1G SGMII ports
- 2 x 2.5G SGMII ports (one port configurable as QSGMII)
- Integrated 250 MHz 8051 CPU with 64 KB internal storage
- PCIe and 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

- 10-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

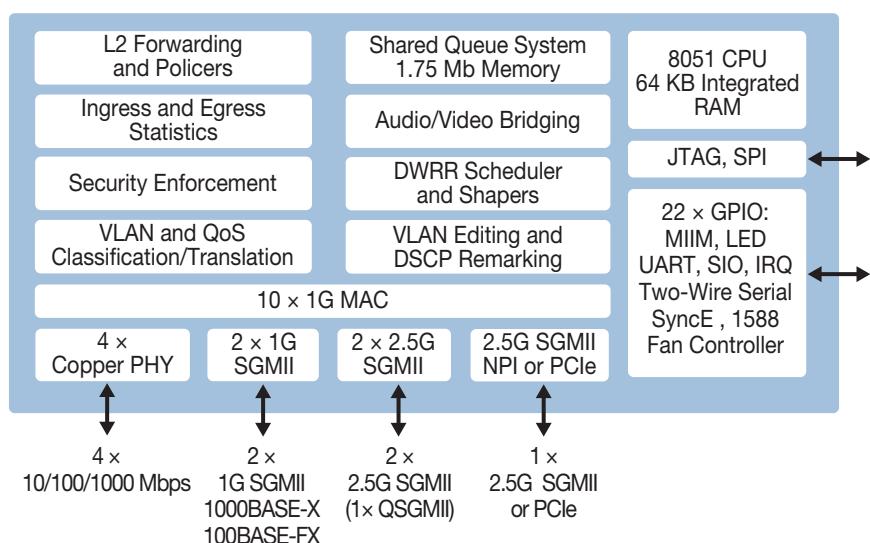
### Key Specifications

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

### Related Products

Visit [www.microsemi.com](http://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](mailto:sales.support@microsemi.com)  
[www.microsemi.com](http://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](http://www.microsemi.com).



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

#### Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помошь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помошь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: [org@eplast1.ru](mailto:org@eplast1.ru)

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.