

# VSC7449-01

#### 52-Port L2/L3 Enterprise Gigabit Ethernet Switch with 10 Gbps Links

Microsemi's next generation switch family delivers a flexible Enterprise and Industrial Ethernet solution.

The VSC7449-01 SparX-IV-90<sup>™</sup> device is a 90 Gbps SMB/SME Industrial Ethernet switch with up to 52 ports supporting a combination of 1G, 2.5G, and 10G Ethernet ports.

The device provides a rich set of Enterprise Ethernet switching features. Using multistage Versatile TCAM technology (VCAP™), it delivers VLAN and QoS processing that enables delivery of differentiated services, security through intelligent frame processing, and egress frame manipulation.

For industrial applications, VSC7449-01 integrates VeriTime™, Microsemi's patent-pending timing technology that delivers the industry's most accurate IEEE 1588v2 timing implementation.

A powerful 500 MHz CPU enables full management of a Layer 2 and Layer 3 Ethernet switch solution.

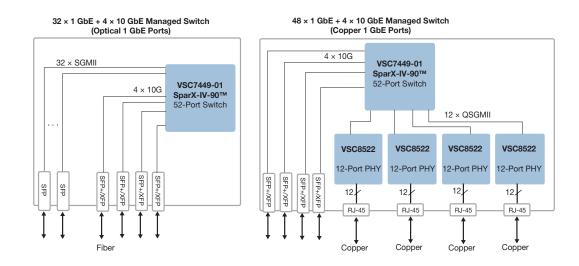
A comprehensive application programming interface (API) and software development package accelerates time-to-market for managed Ethernet applications. The software API package integrates easily with third-party software, preserving existing software investments.

# **Highlights**

- Up to 48 × 1G, 24 × 2.5G, and 4 × 10G Ethernet ports
- Fully managed L2 switching and L3 forwarding features
- Industrial temperature range
- Easy upgrade within SparX-IV family to higher bandwidth including 10 GbE port support

# Applications

- Fully managed L2/L3 switch
- Industrial Ethernet switch



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 patter 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.



# VSC7449-01

## 52-Port L2/L3 Enterprise Gigabit Ethernet Switch with 10 Gbps Links

#### **Features**

- Main port configurations: 36 × 1G SGMII, 32 × 1G SGMII + 4 × 10G (SFI/XAUI/RXAUI), 12 × QSGMII + 4 × 10G (SFI/XAUI/ RXAUI), 24 × 2.5G SGMII + 4 × 10G (SFI/XAUI/RXAUI)
- Additional 10/100/1000 Mbps SGMII/SerDes node processor
- Integrated 500 MHz MIPS 24KEc CPU with MMU and DDR3/ DDR3L SDRAM controller
- PCle 1.x CPU interface
- Internal shared memory buffer (8 queues per port)
- Jumbo frame support
- Strict priority and DWRR scheduler/shaper

### Layer 2 Switching and Layer 3 Forwarding

- 802.1Q VLAN switch with 32K MACs and 4K VLANs
- Push/pop/translate up to three VLAN tags on ingress and egress
- Policing with storm control and MC/BC protection
- RSTP and MSTP support
- Independent and shared VLAN learning (IVL, SVL)
- Hardware- and software-based learning
- TCAM-based classification and VCAP-II security
- Layer 3 unicast and multicast routing

# Multicast

- Layer 2
- IPv4 and IPv6
- IGMP and MLD

#### **Industrial Ethernet**

- Integrated timing: VeriTime<sup>™</sup> (1588v2) and SyncE support
- Ethernet ring protection switching (ERPS)

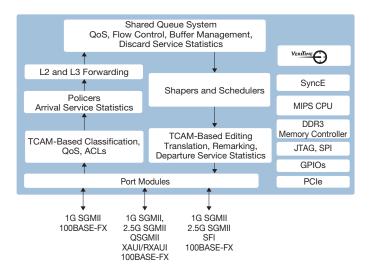
#### **Key Specifications**

- 27 mm × 27 mm FCBGA
- -40 °C to 110 °C operating temperature

# **Related Products**

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

- SparX-III nonstackable GbE switches with integrated copper PHYs
- VSC8512 and VSC8522 12-port copper PHYs
- Unified API, WebStaX™, and SMBStaX™ software





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 radiationhardened 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.

©2015–2016 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.