

VSC7440

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

The next-generation switch family from Microsemi delivers a flexible Enterprise and Industrial Ethernet solution.

The VSC7440 SparX-IV-34™ device is an SMB/SME Ethernet switch with up to 10 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, VSC7440 integrates VeriTime™, Microsemi's patent-pending timing technology that delivers the industry's most accurate IEEE 1588v2 time stamping. Combined with the PTP software and an advanced Servo algorithm, Microsemi offers the most accurate 1588 solution.

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

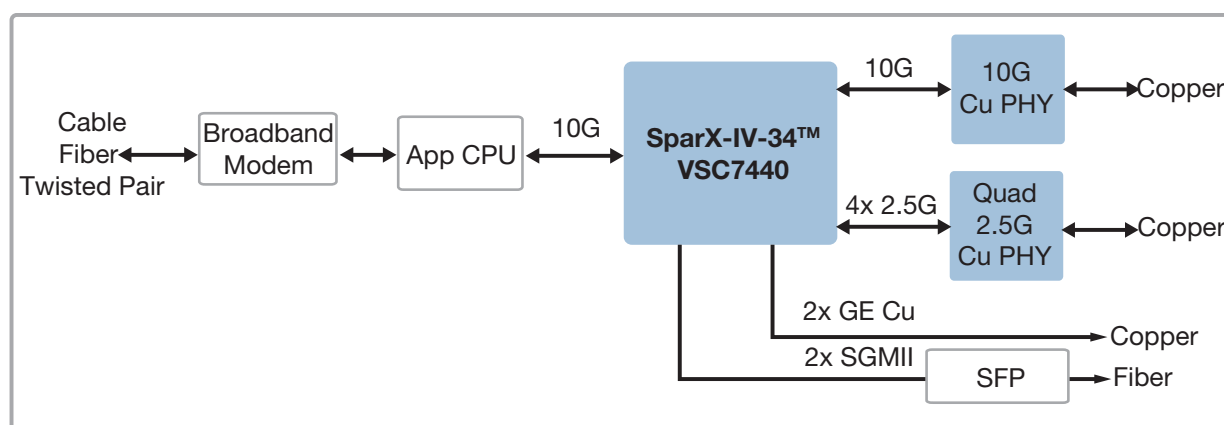
A comprehensive application programming interface (API) and a software development package (SDK) accelerate time-to-market for managed Ethernet applications. The software API package integrates easily with third-party software, preserving existing software investments.

Highlights

- Up to four 1G, four 2.5G, and two 10G ports
- Up to two integrated copper PHYs and two 10G SerDes
- Fully-managed L2 switching and L3 forwarding features
- Extended temperature range
- Easy upgrade within the SparX-IV family to higher bandwidth (including 10 GbE port support)

Applications

- High-end residential gateway, small-scale 11ac Wi-Fi aggregation
- Fully-managed L2/L3 switch
- SMB/SME Ethernet switches



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Features

- Four 10/100/1000 ports (up to two integrated copper PHYs)
- Four 10/100/1000/2500 ports
- Two 10/100/1000/2500/10000 ports
- Integrated shared packet memory
- Fully non-blocking wire-speed switching performance for all frame sizes
- 8 QoS classes per port
- Energy Efficient Ethernet (EEE)
- Priority-based control
- Integrated MIPS-24Kec CPU with DDR3 SDRAM controller
- PCIe for control/status register access

Layer 2 Switching

- 802.1Q VLAN switch
- Classify and modify up to three VLAN tags
- 512/256 IPv4/IPv6 multicast groups using snooping
- 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 (VL, SVL)
- Jumbo frame support

Layer 3 Routing

- 1K/256 IPv4/IPv6 table entries (LPM and hosts)
- 512/256 IPv4/IPv6 (S, G, V) or (*, G, V)

Multicast

- Layer 2
- IPv4 and IPv6
- IGMP and MLD

Industrial Ethernet

- VeriTime™ (1588v2) and SyncE support
- Ethernet ring protection switching (ERPS)

Key Specifications

- 19 mm × 19 mm BGA
- -40 °C to 110 °C temperature range

Related Products

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

- SparX-III GbE switches with integrated copper PHYs
- VSC8504 4-port copper PHYs
- Unified API, WebStaX™, and SMBStaX™ software

