Industrial IoT Solutions
Robust Industrial Performance—Scalable, Low Power, and Secure

The Challenge

Machines and all kinds of equipment are increasingly connected and intelligent with information backhauled onto low-latency, reliable paths using Gigabit Ethernet. As a result, Industrial Internet of Things (IIoT) networking is adding new requirements for deeply embedded secure and performance optimized networking connectivity, accurate timing synchronization, ring protection, and line rate encryption, while demanding deterministic and reliable performance at low power.

The Solution

Microsemi's broad Ethernet Switch and PHY portfolio is inherently optimized to IoT Ethernet networking applications and needs. Unlike traditional Ethernet IC suppliers, Microsemi focuses on low bandwidth and high feature IC architectures that deliver sizeable low power advantages and fit IIoT market needs, such as port flexibility, long life cycle, deterministic behavior and stringent reliability.

To reduce your development costs and time to market, Microsemi also offers comprehensive software choices that enrich our device portfolio, including a comprehensive application software package and a reference system for evaluation.

The Value of Choosing Microsemi

Selecting an IC solutions provider that can meet your IoT networking product requirements today is an important choice. Microsemi is a long-term supplier of Ethern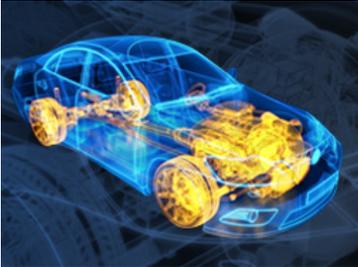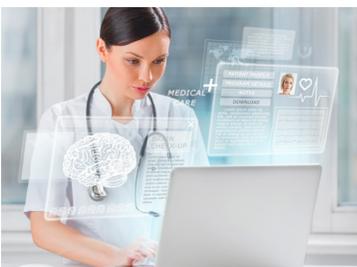et switching and PHY technology, with over 250 million Gigabit Ethernet ports shipped. With our expanding focus on switches, PHYs, PoE/Midspans, and Industrial Ethernet ecosystem solutions, Microsemi can readily serve your IIoT requirements with commercially available solutions today.

Contact us today to learn how you can get to market faster with your IIoT solutions.

Comprehensive Software to Expedite Time-to-Market

Microsemi's Ethernet software solutions have been deployed by more than 100 companies worldwide, significantly improving their ROI. In tandem with our broad IC portfolio, Microsemi's feature-rich software solutions deliver significant value with:

- Rapid Time to Market: Shorten your development cycles and lower costs with easily customizable turnkey applications.

- Standards-Based Comprehensive Solutions: Microsemi software meets IETF RFC, IEEE, and MEF standards. It has been certified at a variety of testing centers including UNH-IOL (University of New Hampshire InterOperability Lab), EANTC (European Advanced Networking Test Center), Tier-1 Telecom Labs, and Industry Interoperability Events and Plug fests.

- Mature, Flexible, and Fully Supported Packages: Ensure long term product success with Microsemi's ongoing software development and maintenance programs. Our real-time support enables quick alignment of your solutions to the latest standards and industry requirements.

Industrial IoT (IIoT)	Automotive	Communications	Cyber Security

Surveillance	Smart Buildings	Smart Energy	Healthcare

Power Matters.™

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Gigabit Ethernet Switches

Product Number	Ports	Managed	L2/L2+/L3-Aware	QoS/HQoS	1588	Ring Protection	Temp. Min. °C	Temp. Max. °C
VSC7420-02 SparX-III-10um™	10		L2	QoS			−40	125
VSC7421-02 SparX-III-17um™	17		L2	QoS			−40	125
VSC7422-02 SparX-III-25um™	25		L2	QoS			−40	125
VSC7423-02 Caracal Lite™	7	•	L2+		•		−40	125
VSC7424-02 SparX-III-10™	10	•	L2+	QoS			0	125
VSC7425-02 SparX-III-18™	18/16	•	L2+	QoS			0	125
VSC7427-02 SparX-III-26™	26	•	L2+	QoS			0	125
VSC7428-02 Caracal-1™	11	•	L2+	QoS	•		−40	125
VSC7429-02 Caracal-2™	26	•	L2+	QoS	•		−40	125
VSC7414 Serval-1™	11	•	L2+	H-QoS	•		−40	125
VSC7460 LynX-1™	24	•	L2+/L3-Aware	QoS	•		−40	125
VSC7462 Jaguar-1™	12	•	L2+/L3-Aware	QoS	•		−40	125
VSC7438 Serval-2™	12	•	L2+/L3-Aware	H-QoS	•	•	−40	125
VSC7464 LynX-2™	24	•	L2+/L3-Aware	H-QoS	•	•	−40	125
VSC7468 Jaguar-2™	48	•	L2+/L3-Aware	H-QoS	•	•	−40	125
VSC7442 SparX-IV-52™	52	•	L2+/L3-Aware	QoS	•		−40	110
VSC7444 SparX-IV-44™	26	•	L2+/L3-Aware	QoS	•		−40	110
VSC7448 SparX-IV-80™	52	•	L2+/L3-Aware	QoS	•		−40	110

Gigabit Ethernet PHYs

Product Number	Ports	MAC Interfaces	Cu-Only or Dual Media	256/128-Bit MACsec	SyncE	1588v2 Accuracy	Temp. Min. °C	Temp. Max. °C
VSC8501-03	1	RGMII/GMII/MII	Cu		•		−40	125
VSC8502-03	2	RGMII/GMII/MII	Cu		•		−40	125
VSC8514-03	4	QSGMII	Cu		•		−40	125
VSC8514-14	4	QSGMII	Cu				−40	125
VSC8562-14	2	QSGMII/SGMII	Dual Media	•	•		−40	125
VSC8564-14	4	QSGMII/SGMII	Dual Media	•	•		−40	125
VSC8572-04	2	QSGMII/SGMII/RGMII	Dual Media		•	±10 nS	−40	125
VSC8574-04	4	QSGMII/SGMII	Dual Media		•	±10 nS	−40	125
VSC8575-14	4	QSGMII/SGMII	Dual Media		•	±4 nS	−40	125
VSC8582-14	2	QSGMII/SGMII	Dual Media		•	±4 nS	−40	125
VSC8584-14	4	QSGMII/SGMII	Dual Media	•	•	±4 nS	−40	125

Note: All Gigabit Ethernet PHYs are also available in 0° C to 125° C temperature range.

![Microsemi logo]

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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 radiation-hardened 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.

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