



Unlocking the Power of TSN

TSN and PikeOS: A perfect Match for Next-Gen Systems

Time-Sensitive Networking (TSN) is revolutionizing the way industrial networks operate. As the convergence between IT and OT networks accelerates, TSN emerges as a critical enabler for Industry 4.0 and Industrial Internet of Things (IIoT) applications. But what exactly is TSN, and why is it so important? TSN is a collection of standards that enables deterministic messaging over standard Ethernet networks. It ensures non-negotiable time frames for end-to-end transmission latencies, making it ideal for real-time communication in industrial control applications. TSN offers several key benefits:

- **High-Speed Networking:** TSN facilitates large volumes of data transmission, highly accurate motion control, and low latency. It prioritizes network traffic, ensuring that time-critical data reaches its destination precisely when needed.
- **Convergence and Simplification:** TSN allows diverse applications to share a unified network, eliminating concerns about data delivery timing

- **Enhanced Network Security:** Accurate data transmission can be scheduled, preventing unauthorized data inflow. TSN provides a secure foundation for critical applications.

SOC-E: A Global Leader in TSN Solutions

At the forefront of TSN as one of its global leaders, SOC-E offers an extensive portfolio. From up-to 10G TSN switches and TSN endpoints, to industrial and rugged plug-and-play devices, SOC-E's solutions empower businesses to achieve seamless connectivity, determinism, and reliability, whether in industrial or harsh environments. Their TSN offerings have been deployed across various sectors, including aerospace, automotive, and industrial automation.

TSN and PikeOS: Accelerating New Generation Systems

Why combine PikeOS with TSN? The answer lies in achieving determinism, safety, and security-essential requirements for applications across diverse markets. PikeOS ensures a shared concept of time, synchronizing clocks among TSN devices.

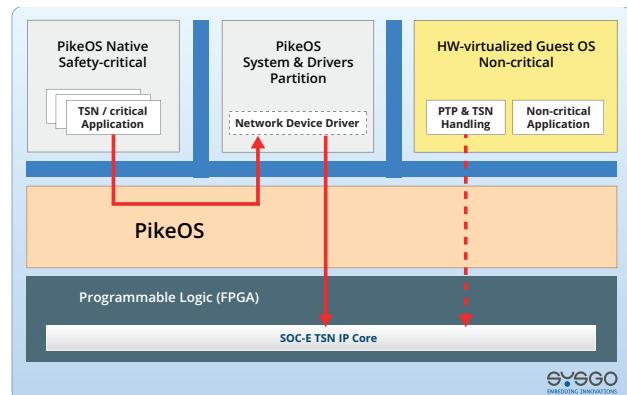


Figure 1: SOC-E TSN IP core integration with PikeOS

CUSTOMER ADDED VALUE

- **Deterministic Performance:** PikeOS guarantees timely delivery of critical data, enhancing TSN's capabilities.
- **Cost Efficiency:** Consolidate functions using PikeOS's hypervisor, saving hardware costs.

- **Certification Confidence:** Utilize PikeOS's certification kits and MILS architecture for efficient certification.
- **Long-Term Support:** SYSGO's commitment ensures software longevity and broad processor support.

About SOC-E - SoC-e is a worldwide leading supplier of Ethernet communication solutions based on FPGA technology. SoC-e is pioneer in developing a portfolio of IP cores that implement the leading-edge networking, synchronization and security technologies for critical systems in applications for the Electric, Industrial and Aerospace sectors. Contact us at info@soc-e.com

About SYSGO - Founded in 1991, SYSGO became a trusted advisor for Embedded Operating Systems and is the European leader in hypervisor-based OS technology offering worldwide product life cycle support. We are well positioned to meet customer needs in all industries and offer tailor-made solutions with highest expectations in Safety & Security. Contact us at sales@sysgo.com