



RELY-TSN-BRIDGE

Time-Sensitive Networking Switch

Time-Sensitive Networking (TSN) allows to merge OT and IT worlds and guarantees the interoperability and standardization of all the devices in a deterministic Ethernet network.

This technology offers a significant cost reduction in equipment investment, maintenance, seamless integration of advanced analysis services and a reduction of dependence on a single vendor.

All the above advantages make Time-Sensitive Networking the reference technology in the Ethernet networks of the future.

RELY-TSN-BRIDGE is Relyum's first TSN switch design for seamless implementation of Deterministic Ethernet networks. Based on SoC-e*'s TSN technology, this device benefits from a robust and field proven design used

in the most demanding sectors (railway, aerospace, automotive, industrial automation, etc.).

This device can be used as a **TSN Bridge** providing 4 multi-media Gigabit Ethernet ports and 1 internal ports.

RELY-TSN-BRIDGE supports the largest number of TSN standards in the market, which makes it suitable for any specific profile.

These key features makes RELY-TSN-BRIDGE platform the most reliable and multipurpose networking device for critical environments.

*Selected as one of the 17 key industry players in the Automotive Ethernet Markets to 2024 Report

Specifications



Communications

- 4x Ethernet port
- Media options (SFP cages):
 - » 10/100/1000Base-T
 - » 1000Base-X
 - » 100Base-FX
- 1 x 10/100/1000BaseTX Ethernet Service port
- RSTP IEEE802.1w
- LLDP support
- VLAN support
- IEEE 802.1P Traffic prioritization
- 1 x USB port

TSN features

- IEEE 802.1AS – Timing and Synchronization
- IEEE 802.1Qbv – Enhancements for Scheduled Traffic
- IEEE 802.1Qav – Forwarding and Queuing Enhancements for Time-Sensitive Streams
- IEEE 802.1Qcc – Enhancements for Stream Reservation Protocol
- IEEE 802.1CB – Frame Replication and Elimination for Reliability
- IEEE 802.1Qci* – Per-Stream Filtering and Policing
- IEEE 802.1Qbu* & IEEE 802.3br* – Interspersing Express Traffic (IET) and Frame Preemption

Processing performance

- On-board UltraScale™ FPGA for high-speed network switching and PTP timestamping
- Multi-core CPU unit to support autonomous software applications

Rugged devices

- Fanless design and full metal enclosure
- Power Supply: 6VDC to 36 VDC
- Operating temperature: -40°C to +70°C
- Storage temperature: -40°C to +85°C
- Optional mounting: DIN rail

Configuration and Management

- SNMPv3, SSH, Netconf support
- On-board integrated Web Server to provide HTML5-GUI configuration access:
 - » Accessible through HTTP(S)
 - » Configuration profiles and Firmware updates
 - » Real-time network monitoring

*Interoperability test pending.