

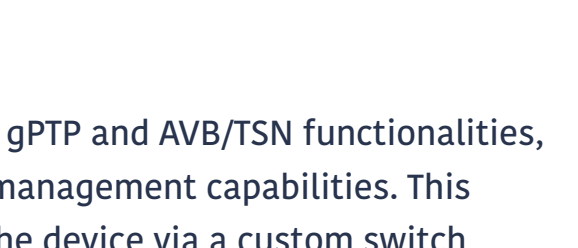
Shaping the Future: TSN Hardware & TSN Software

TSN Switch

- Overview
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Overview

Highly flexible AVB/TSN capable secure automotive switch intended for use in the lab, car or HIL



The Q50 Switch offers solid and predictable gPTP and AVB/TSN functionalities, including 1PPS output and a wide range of management capabilities. This provides easy access and configuration of the device via a custom switch editor for Windows with integrated automatic discovery.

Key Features

- 8-port Ethernet switch
- Wide range of 100/1000 Mb/s and BASE-T/T1 connectivity
- All ports are fully compliant to IEEE802.3 automotive standards
- Automotive gPTP support, including 1PPS output
- AVB (Qav shaping)
- MAC address blacklisting and whitelisting available on all ports

Features

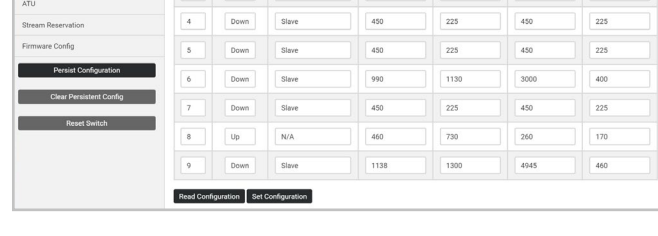
The Q50 Automotive Ethernet Switch is flexible and highly optimized for precise and demanding applications in the lab, in HIL and in test vehicles.

- 5x IEEE 100BASE-T1 ports
- 2x IEEE 1000BASE-T1 ports
- 1x configurable port: 1000BASE-T1 or 1000BASE-T
- gPTP due to IEEE 802.1AS, fully configurable with editor
- Fully configurable independent port matrix with PTP filter and injector
- VLAN, fully configurable with editor
- Credit-based shaper (e.g. IEEE802.1Qav), fully configurable with editor
- Editable ATU, fully configurable with editor
- Onboard diagnostics (link status, data throughput, packet statistics)
- Instantaneous boot for in-vehicle usage
- Wide 12-42VDC input power range for use in practically any application
- 1PPS output via SMA, 50Ω
- Compact dimensions, robust metal chassis
- Wide range of LEDs and buttons for standalone control and feedback
- Underlying AUTOSAR OS
- AVNU Alliance Ethernet Functional Specification v1.4, certified
- PTP IEEE 802.1 AS, conformant to AutoCDS v.1.4
- Firmware update via Ethernet with editor, base firmware with USB

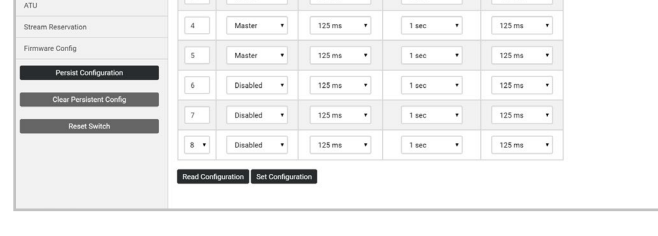


All parameters are fully configurable and storable via the custom switch editor for Windows.

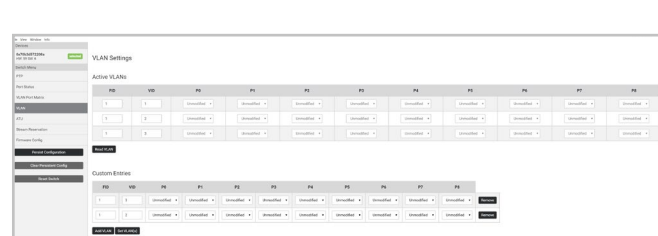
Port Status



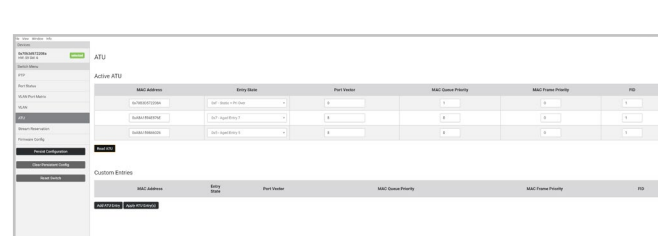
PTP Settings



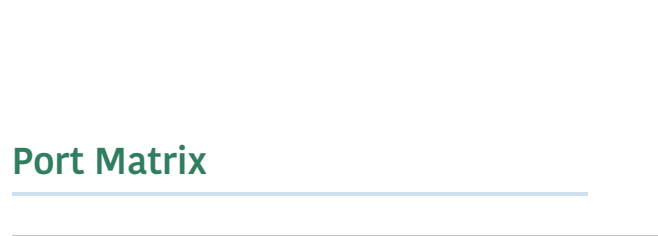
VLAN Settings



ATU



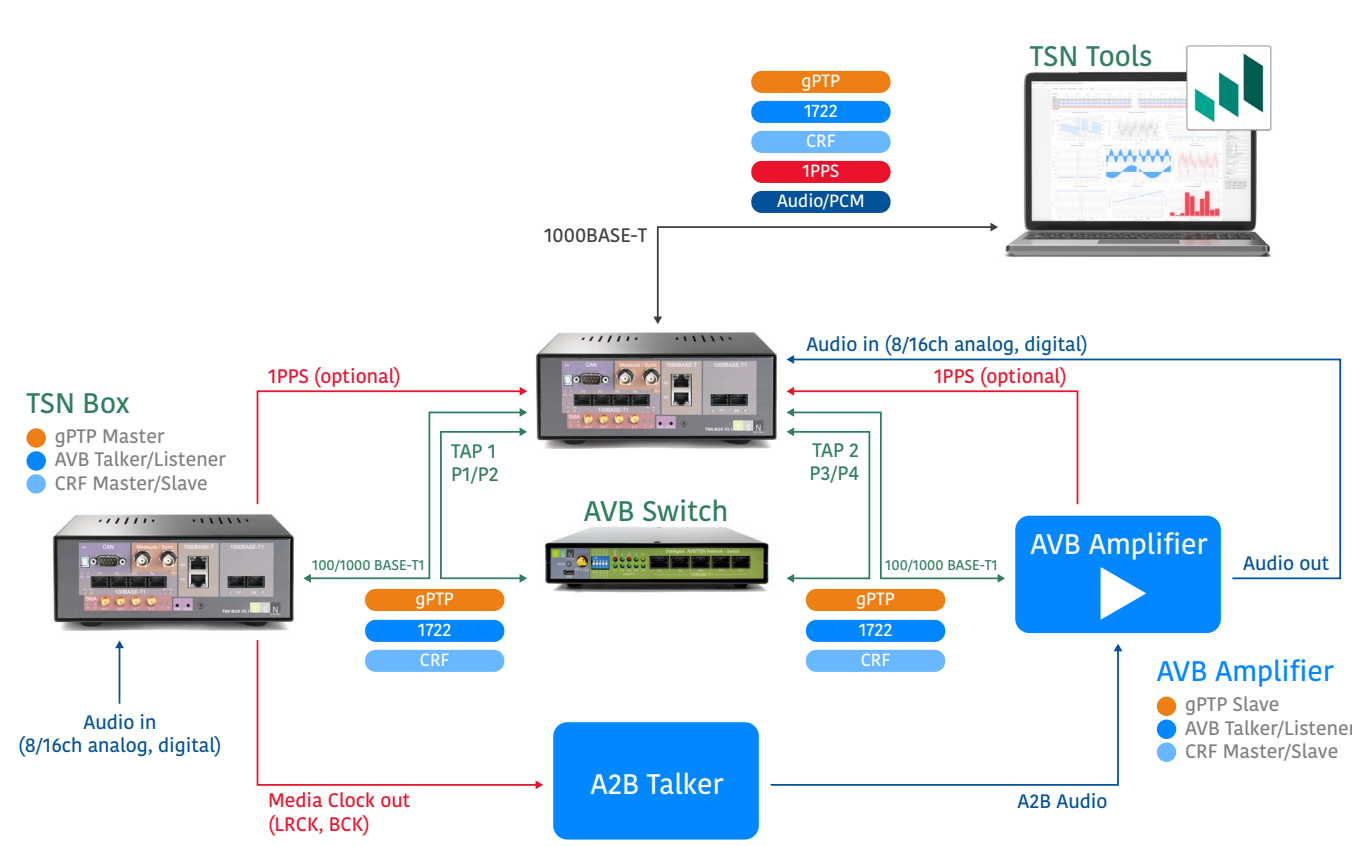
Port Matrix



Use Case

Use Case AVB

The Q50 Switch can serve in many test scenarios in the lab to simulate in-ECU switches with gPTP and time-sensitive capabilities. A further typical application is providing stable gPTP grand master synchronisation in test vehicles.



Products

Our product range covers a variety of precision measurement and analysis tools. To find the right solutions for your special use cases, please have a look at our additional product flyers.

TSN Tools

TSN Tools is a platform-independent software environment specifically designed to capture complex measurements and analyse tasks at a glance.



TSN Box

The TSN Box 3.1 is designed to assist with automotive network development, particularly in the context of next generation zonal architectures, as well as with planning and analysis of modern industrial automation systems based on TSN and OPC-UA.



TSN Media Converter

The Media Converter M10 is a simple, small and highly flexible tool that can be used in different scenarios. For convenience, all settings are intuitively hardware adjustable without a tethered configuration PC.



Time Matters.

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