

Shaping the Future: TSN Hardware & TSN Software

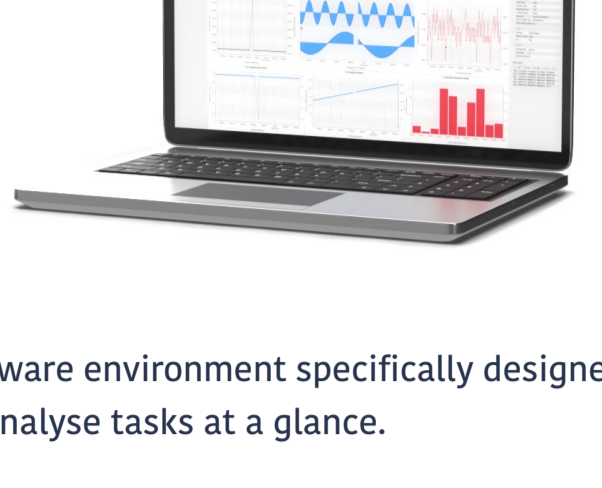
TSN Tools

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Overview

TSN Tools

Trust your eyes



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

Key Features

- Efficient analysis of complex network setups
- Unique and powerful approach for packet, timing and payload correlation
- Fast overview and deep dissection
- Efficient error track down
- Extensive SOME/IP support
- gPTP test suite
- AVB audio test suite

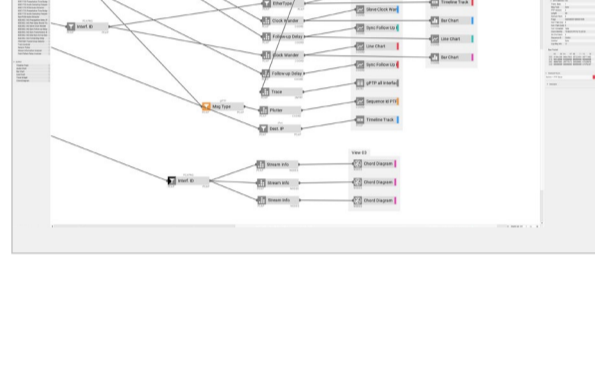
Features

TSN Tools can correlate, analyse and visualize various data. Scalable and flexible, it can be applied to a wide variety of scenarios. The following generic feature set provides solutions for even the most complex problems in modern time-sensitive network designs.

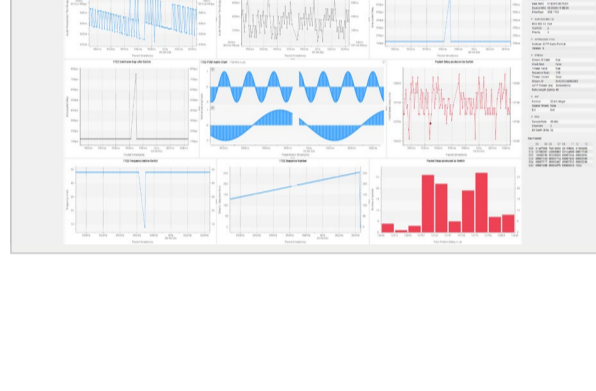
- Stream detection: logical recognition of coherent packets and their visualization in automotive and industrial networks
- PTP Analysis: in-depth analysis of PTP status per link and network-wide
 - 1PPS read-in support (precise analysis of SMA input events from TSN Box)
- Multimodal payload analysis:
 - Packet delay analyser
 - Generic plotter
 - Audio/Video content (AVB)
 - AVB Audio Suite (PCM, wave export, presentation time budget, 1722/1733 analysis)
 - Raw audio support for correlation of ETH PCM and analog audio (e.g. for audio amplifier analysis)
 - TSN analysis (support and special features for 802.1 Qbv, Qbu, Qci, CB and much more)
 - Extensive SOME/IP support (ARXML import, service discovery, TCP/IP, UDP, packet fragmentation)
 - Correlation between Ethernet and CAN bus
- RESTNet simulation (AVB/TSN Talker/Listener)
- SOME/IP service discovery, entity, controller

Examples of typical TSN Tools applications like gPTP, AVB, audio, SOME/IP analysis:

TSN Analysis



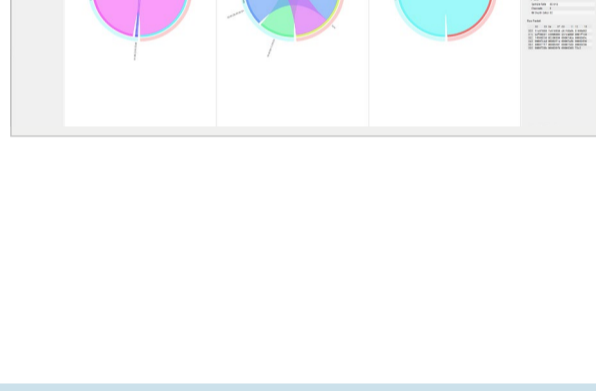
AVB Audio Test Suite



gPTP Analysis Suite



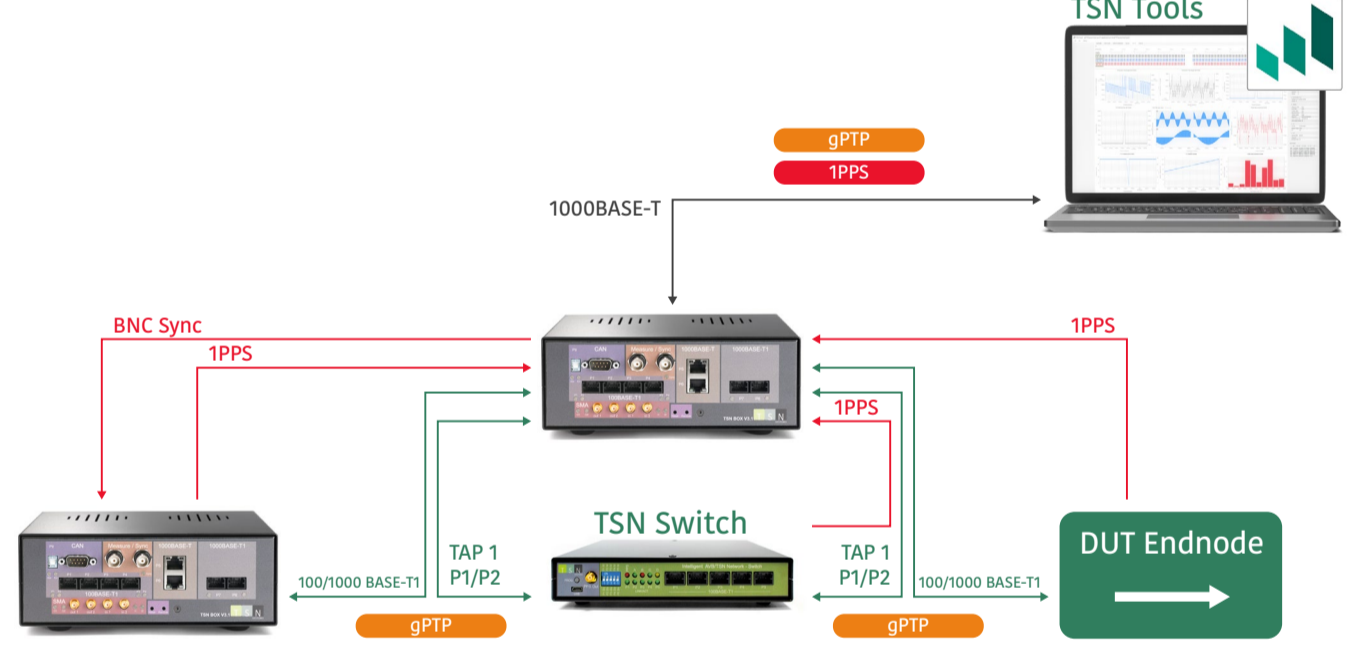
Network Overview



Use Cases

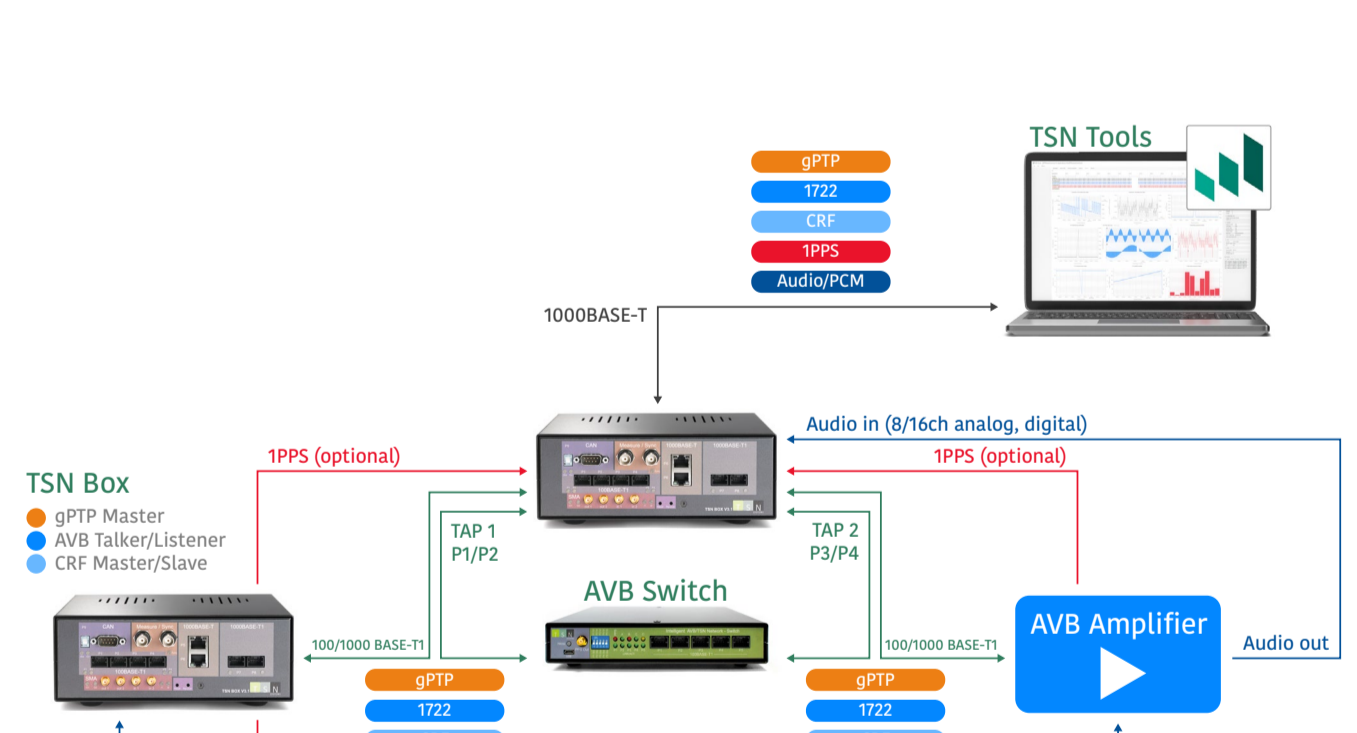
Use Case gPTP

Validating gPTP is essential in any time-sensitive network to provide a solid timing for any communication. A combination of TSN Tools and TSN Box provides a rich, precise and efficient feature set for quick and reliable system tests.



Use Case AVB

Even the most complex AVB scenarios can be handled by TSN Tools with its powerful dedicated analysers for audio and gPTP such as presentation time budget analysers and media clock quality metrics. The correlation of hardware related signals, such as 1PPS and audio with Ethernet packets on the same time base provides with unique system insights.



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 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 Switch

The TSN Switch is a highly flexible AVB/TSN capable switch intended for use in the lab, car or HIL. It is one of the most secure Automotive Ethernet switches available and offers a wide range of management capabilities.



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.

Get In Touch With Us



Tel.: +49 661 410 951 80
Mail: info@tsn.systems
Web: www.tsn.systems
LinkedIn: TSN Systems GmbH