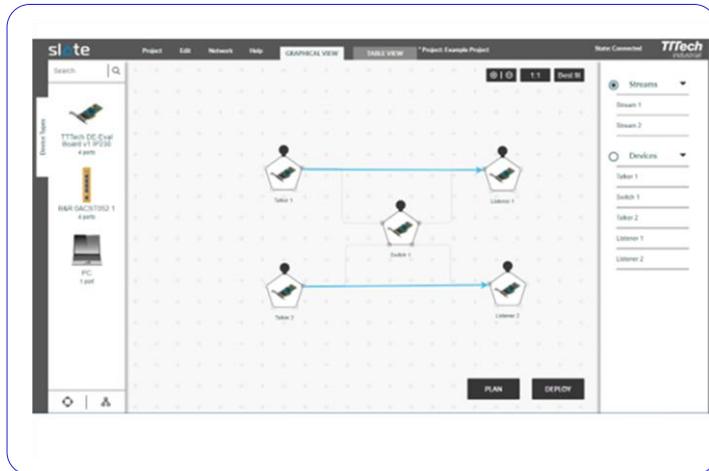


Slate XNS

TSN Network Planner with Browser-based Topology Modelling



KEY BENEFITS

- Eases TSN network configuration
- Intuitive graphical topology modelling
- Graphical modelling of data streams
- Open, standard configuration for any TSN device
- One-click planning and deployment for complex networks

Slate XNS is a browser-based, user-friendly software that makes it easy to model topologies, add streams and deploy configurations for TSN networks. Offline network configuration is made possible by the intuitive GUI which provides a topology view or table-based editor for managing network elements and data streams. Network configurations are calculated with just one click via TTTECH’s built-in planning engine, and network components are configured using open, standard YANG models.

Topology and Stream Modelling

Graphical

The graphical view is ideal for modelling small and medium sized network topologies. New components can be added by dragging and dropping into the topology. Data streams can also be represented as logical connections between components.

Table-based

The table editor is designed for modelling large network topologies and mass editing. Components, data streams and other parameters can be inputted into tables and viewed in graphical mode.

Status Monitoring

Status Viewer allows to online monitor basic status information on time synchronization of a connected TSN network.

Network Planner

One-Click Configuration Deployment

TTTECH’s high-performance planning engine is built-in to the Slate XNS software. After building the topology and defining the data streams, the network configuration can be created with just one click. With another click, it can be deployed to all devices of a TSN network.

Application Fields

- Aircraft
- Rotorcraft
- Space



Product Features

GENERAL	
Supported Operating Systems	<ul style="list-style-type: none"> → Windows 10, 11 → Linux: Ubuntu 22.04/24.04
Requirements	<ul style="list-style-type: none"> → Installed Browser (Google Chrome, Mozilla Firefox, Microsoft Edge), Microsoft Internet Explorer 11 is not supported → Intel-based CPU (x86 CPU, 4 GB RAM, 2 GB disk space) → Local administrator rights for installation → PDF viewer to access user manual
Product Deliverables	<ul style="list-style-type: none"> → Installer for Windows and Debian package installer → Installation Guide → User Manual
GUI	
Topology Builder	<ul style="list-style-type: none"> → Graphical topology builder: drag and drop from device type library into topology → Table-based topology builder: Add, edit, and delete devices and connections → Instant ring or star topology generation
Stream modelling	<ul style="list-style-type: none"> → Graphical and table-based stream modelling <ul style="list-style-type: none"> · Edit data streams (talker to single or multiple listeners) · Specify properties and constraints
Schedule viewer	Graphical representation of planned streams: devices/streams/connection view
Online Status View	<ul style="list-style-type: none"> → Status monitoring of a connected network <ul style="list-style-type: none"> · Show PTP-variables of devices in a project (time offset) · LLDP remote device port information
Device Type Library	Several included device types (TTTECH and 3 rd party)
NETWORK PLANNING	
Planning Engine	<ul style="list-style-type: none"> → Based on TTTECH Slate CNS planning core library → Support for different user defined constraints (802.1Qcc) <ul style="list-style-type: none"> · End-to-end delay · Stream protection/isolation · Transmit window constraint (for time aware streams) → Support for mixed line speeds and topologies → Vendor independent input and configuration output
NETWORK DEPLOYMENT	
Supported Devices	TSN switches and switched end points supporting Netcong/Yang configuration
Netconf	Netconf 1.0/1.1 client
Used Standards	<ul style="list-style-type: none"> → IEEE 802.1Qbv Time Aware Shaping → IEEE 802.1Qcp Bridges and Bridged Networks (YANG support) → IEEE 802.1Qci Filtering and Policing
Used YANG Models	ieee802-dot1q-sched, ieee802-dot1q-bridge, ieee802-dot1q-types, ietf-interfaces, ieee802-types, ieee802-dot1cb-stream-identification, ieee802-dot1cb-streamidentification-types, iana-if-type, ieee802-dot1q-psfp, ieee802-dot1q-stream-filters-gates, ietf-inet-types, ietf-yang-types
ORDER INFORMATION	
Order Number	<ul style="list-style-type: none"> → 12918 → 13193
Product Variants	<ul style="list-style-type: none"> → 12918: Slate XNS: Offline TSN network configuration (max. 5 nodes) → 13193: Slate XNS Unlimited: Offline TSN network configuration (unlimited nodes)

