

Time-Sensitive Networking (TSN) Profiles (Selection and Use of TSN tools)

Audio Video Bridging
[802.1BA]

Fronthaul
[802.1CM/de]

Industrial Automation
[IEC/IEEE 60802]

Automotive In-Vehicle
[P802.1DG]

Service Provider
[P802.1DF]

Aerospace Onboard
[IEEE P802.1DP / SAE AS6675]

TSN Components

(Tools of the TSN toolset)

Time synchronization:
Timing and Synchronization [802.1AS-2020]
(a profile of IEEE 1588)
Hot Standby [P802.1ASdm]
YANG [P802.1ASdn]
Inclusive Terminology [P802.1ASdr]
Support for half-duplex [P802.1ASds]

Synchronization

High availability / Ultra reliability:
Frame Replication and Elimination [802.1CB]
Path Control and Reservation [802.1Qca]
Per-Stream Filtering and Policing [802.1Qci]
Hot Standby [P802.1ASdm]

Reliability

Latency

Bounded low latency:
Credit Based Shaper [802.1Qav]
Frame Preemption [802.1Qbu & 802.3br]
Scheduled Traffic [802.1Qbv]
Cyclic Queuing and Forwarding [802.1Qch]
Asynchronous Traffic Shaping [802.1Qcr]
Shaper Parameter Settings [P802.1Qdq]
QoS Provision [P802.1DC]
Cut-Through Forwarding [P802.1DU]
Enhancements to CQF [P802.1Qdv]

Resource Management

Dedicated resources & API:
Stream Reservation Protocol [802.1Qat]
Link-local Registration Protocol [802.1CS]
TSN Configuration [802.1Qcc]
Foundational Bridge YANG [802.1Qcp]
YANG for CFM [802.1Qcx]
YANG for 802.1Qbv/Qbu/Qci [P802.1Qcw]
YANG for CBS [P802.1Qdx]
YANG for LLDP [P802.1ABcu]
YANG & MIB for FRER [P802.1CBcv]
Extended Stream Identification [P802.1CBdb]
LLDPv2 for Multiframe Data Units [P802.1ABdh]
Resource Allocation Protocol [P802.1Qdd]
TSN Configuration Enhancements [P802.1Qdj]
Multicast and Local Address Assignment [P802.1CQ]

Zero congestion loss =
Bounded latency

Note: A 'P' in front of '802.1' indicates an ongoing Project.