

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]

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

Time synchronization:

Timing and Synchronization [802.1AS-2020]
(a profile of IEEE 1588)
Hot Standby [802.1ASdm]
YANG [802.1ASdn]
Inclusive Terminology [802.1ASdr]
Support for half-duplex [P802.1ASds]
Optional Announce [P802.1ASeb]
Fault-Tolerant Timing [P802.1ASed]

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]
Enhancements to CQF [P802.1Qdv]
QoS Provision [802.1DC]
Cut-Through Forwarding [P802.1DU]

TSN Components

(Tools of the TSN toolset)

Synchronization

Reliability

Latency

Resource Management

Zero congestion loss =
Bounded latency

High availability / Ultra reliability:

Frame Replication and Elimination [802.1CB]
Path Control and Reservation [802.1Qca]
Per-Stream Filtering and Policing [802.1Qci]

Dedicated resources & API:

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

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