Lab demonstration unit for next generation, state-of-the-art ruggedized avionics, TSN Ethernet switch for deterministic safety-critical applications

Flexible Network Configurations

- Switching core fabric provides a superset of switch functionality to support the widest possible range of customer applications
- Deterministic or non-deterministic network protocols
- Ethernet ports configurable to bandwidth needs
- Convenient 19” rack mount enclosure with industry standard lab interfaces

- IEEE 802.1 Time-Sensitive Network (TSN)
- IEEE P802.1DP/SAE AS-6675 TSN Aerospace Profile
- IEEE 802.3 Standard for Ethernet
Base development platform allows for easy transition to one of GE’s airborne capable network switches.
Critical Functionality Inherent to Design

- Extensive traffic policing, segregation, and priority mechanisms
- Ports can be used as mirror ports, flight test interfaces, or a variety of other functions
- Grand Master Clock functionality is able to sync to an external 1PPS GPS input or simulate a 1PPS output

Configuration Simplified

- Extensive toolset for configuration of the switch & network
- GE also offers a complete architecture and configuration toolset which includes networking (TSN, ARINC 664, Ethernet), ARINC 653 compute resources, and programmable Remote Data Concentrators

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Specifications

### Physical Characteristics
1U 19” rack mount chassis
115 VAC power input
Alternative port configurations are available, contact GE for custom needs

### Baseline Configuration
200Gbps non-blocking bandwidth
14x 1000Base-T
6x 10GBase-SR
1x Ethernet management port
NETCONF/YANG configuration for development use

### Features
- Deterministic Ethernet
- IEEE 802.1 Time-Sensitive Networking (TSN)
- IEEE P802.1DP/SAE AS-6675 TSN Aerospace Profile
- IEEE 802.1AS high accuracy generalized Precision Time Protocol (gPTP) Grand Master Clock
- Full Layer 2 capability
- IPv4 Layer 3 static forwarding/policing
- MAC Multi-Port Bridge and VLAN
- 802.1D, 802.1P, 802.1Q

### Tools
- GE Model Foundry System Architecture toolset
- Chronos TSN configuration tool
- Full architecture generation and analysis
- Graphical and report outputs
- Industry standard inputs with flexible inputs from modeling tools and manual input
- Industry standard and flexible outputs

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Note 1: Under development. Check availability with sales contact.

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