



GE Aerospace

VNetS-0200

High-Bandwidth TSN Network Switch Demonstrator

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 P802.1DP¹/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.

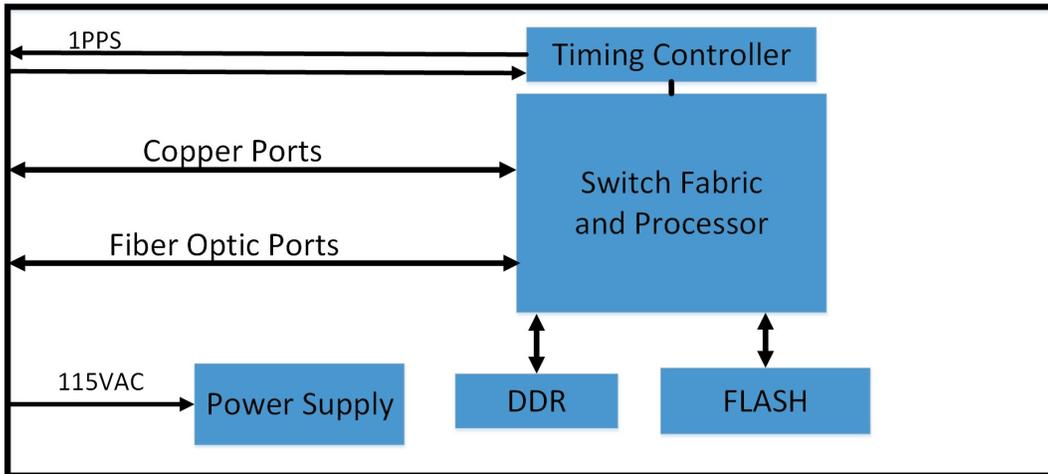


Critical Functionality Inherent to Design

- 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



Specifications

Physical Characteristics

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

Baseline Configuration

200Gps 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 P802.1DP¹/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

Note¹: Under development. Check availability with sales contact.

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