VNetS-3200
High-Bandwidth TSN Network Switch

Next generation, state-of-the-art, ruggedized avionics high-bandwidth switch unit designed for safety critical applications when determinism matters

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
- Ruggedized for Commercial or Military aircraft usage

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

Designed to Open Standards
- IEEE 802.1 Time Sensitive Network (TSN)
- IEEE P802.1DP/SAE AS-6675 TSN Aerospace Profile
- IEEE 802.3 Standard for Ethernet

Configuration Simplified
- Extensive TSN toolset for configuration of the switch & Network
- Delivered in pre-configured state <or> user configured during integration
- 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
Baseline Configuration
- 12x 10GBase-SR Fiber Optic ports
- Option to upgrade to 25G
- 6x 10/100/1000Base-T copper ports
- 2x 10/100Base-T copper ports
- All ports MACsec encryption capable
- Trusted platform, including trusted boot
- 1PPS and 10MHz in and out

Deterministic Ethernet
- IEEE 802.1 Time Sensitive Networking (TSN)
- IEEE P802.1DP/SAE AS-6675 TSN Aerospace Profile
- IEEE 802.1AS generalized Precision Time Protocol (gPTP)
- Grand Master Clock with Stratum 3E stability
- Full Layer 2 capability
- IPv4 layer 3 static forwarding/policing
- MAC Multi-Port Bridge & VLAN
- 28V Primary power input - Dual Aircraft dataloader
- ARINC 615A dataload
- NETCONF/YANG configuration for development

Specifications
- LLRU form factor
- Operational Temperature -40°C to +70°C
- Altitude TBD
- Relative Humidity >95%
- Convention Cooling

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

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