Versatile Network Switching

VNetS-3200 High-Bandwidth TSN Network Switch

Our 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

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

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 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

geaviation.com
Performance specifications

Baseline Configuration
- 200Gbps non-blocking bandwidth
- 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 high accuracy 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
- Optional High-Performance Processing
  - GE Developed System on Module
    - High performance FPGA fabric
    - Multiple processor cores
- Enables additional functionality – For example:
  - Cross Domain Solution for security
  - Health Management
- Aircraft dataloader
- ARINC 615A dataload
- NETCONF/YANG configuration for development
- 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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>LRU</td>
</tr>
<tr>
<td>Operational Temperature</td>
<td>-40°C to +85°C ambient</td>
</tr>
<tr>
<td>Altitude</td>
<td>TBD</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>&gt;95%</td>
</tr>
<tr>
<td>Cooling</td>
<td>Convection</td>
</tr>
</tbody>
</table>

Travis Kissane
Travis.Kissane@ge.com

GE Aviation
3290 Patterson Ave. SE
Grand Rapids, MI 49512
616-241-7000
www.geaviation.com

The information contained in this document is GE proprietary information and is disclosed in confidence. It is the property of GE and shall not be used, disclosed to others or reproduced without the express written consent of GE, including, but without limitation, it is not to be used in the creation, manufacture, development, or derivation of any repairs, modifications, spare parts, designs, or configuration changes or to obtain FAA or any other government or regulatory approval to do so. If consent is given for reproduction in whole or in part, this notice and the notice set forth on each page of this document shall appear in any such reproduction in whole or in part.