GE Aerospace

VNetS-2240
Versatile Network Switch

Next generation, state-of-the-art, ruggedized avionics Ethernet 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 - ARINC 664 Deterministic Ethernet, TTE (Time Triggered Ethernet), best effort Ethernet

- Ethernet ports able to support various bandwidth needs

Critical Network Functionality Inherent to Design

- Configuration for up to 16 different vehicle locations in single unit

- Can be configured to support multiple protocols simultaneously

- Includes extensive traffic policing, segregation, and priority mechanisms to support the highest system safety levels

- Capable of supporting multiple virtual LANs for ability to employ separate domains

Installation Ready

- Lightweight and ruggedized unit is mountable directly to airframe structure

- Uses MIL-STD-38999 circular connectors

- Passively cooled chassis does not require direct cooling

- Reliable operations in high vibration environments

- Can support certification to Design Assurance Level (DAL) A for DO-254 and DO-178C

Configuration Simplified

- Extensive toolset for configuration of the switch

- Delivered in pre-configured state or user configured during integration
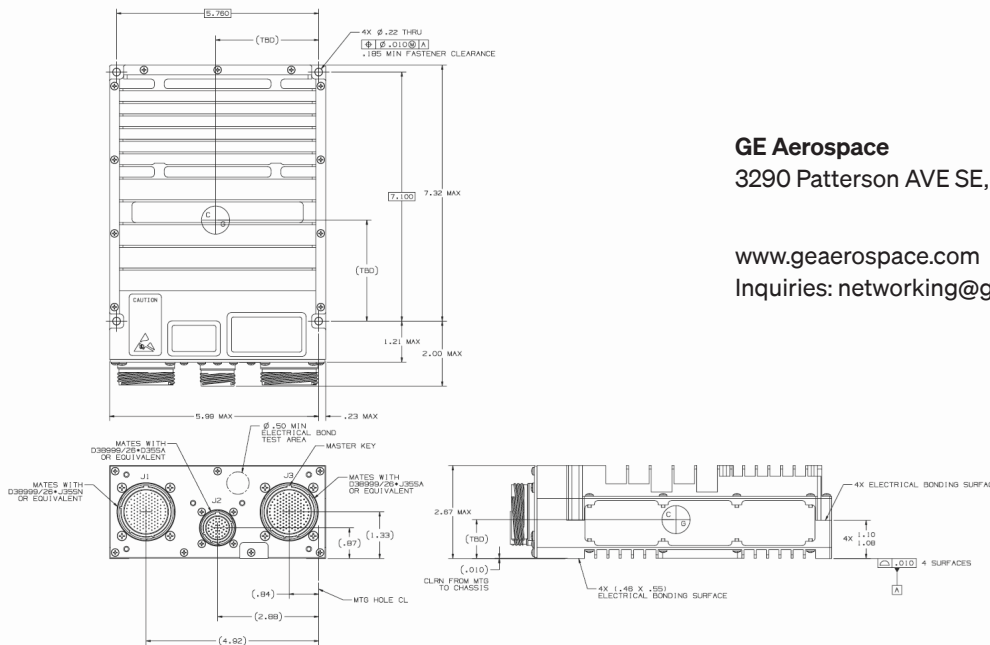
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Specifications

Physical Characteristics
8.5 × 6.2 × 2.7 inches
4.4 lbs

Reliability
BIT >95%
MTBF (@ 50ºC estimated): 40,000 hours
MTBF (@ 30ºC estimated): 137,000 hours

Baseline Configuration
6x 10/100/1000 ports, 18x 10/100 ports
- 10BASE-T, 100BASE-TX, 10000BASE-T

5x open/ground position inputs
1x open/ground parity input
1x unit status open/ground output
Dual 28V DC power inputs
- 18 watts
- 110 mS transient protection

Controller Software
- BIT >95%
- ARINC 615A-3 data loader
- SNMP MIB access

Chassis Details
3x MIL-STD-38999 connectors
Direct mount to airframe

Operating Environment
Temperature: -45ºC to +70ºC
Qualified to civil and military environmental conditions

Interface Signal Characteristics
Discrete output O/G: 40 mA
Discrete input O/G: >1M/<1.3K Ohm

Test signal Interfaces
Discretes: 3.3 voltage level
RS-232C: Maintenance

Protocol Support
802.1D multi-port MAC Ethernet bridging
802.1Q Virtual Local Area Network (VLAN) support
ARINC 664 part 7 deterministic Ethernet
IPv4 deterministic Ethernet forwarding
Frame-based & byte-based policing
SAE AS6802 Time-Triggered Ethernet