

Versatile Network Switching



VNetS-2240 Versatile Network Switch

Our 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
- 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



Photo: USAF



Performance specifications

Baseline Configuration

- 6 x 10/100/1000, 18 x 10/100 ports (10BASE-T, 100BASE-TX, 1000BASE-T)
- 5x Open/Ground Position Inputs
- 1x Open/Ground Parity Input
- 1x Unit Status Open/Ground Output
- Dual 28V DC Power Inputs
 - MIL-STD-704F
 - 110 mS Transient Protection
- Controller Software
 - BIT > 95%
 - ARINC 615A-3 Data Loader
 - SNMP MIB access
- Reliability
 - BIT > 95%
 - MTBF (@50 °C ARW, estimated): 40,000 hours
 - MTBF (@30 °C ground, estimated): 137,000 hours

Chassis Details

- 3x MIL-STD-38999 Connectors
- Direct mount to airframe

Operating Environment

- Temperature: -45 °C – +70 °C
- Altitude: to 25,000 feet. (7.6 km)
- Decompression to 50,000 ft., 30 minutes
- Relative Humidity: >95%
- Lightning DO-160G A3/B2K2XX

Interface Signal Characteristics

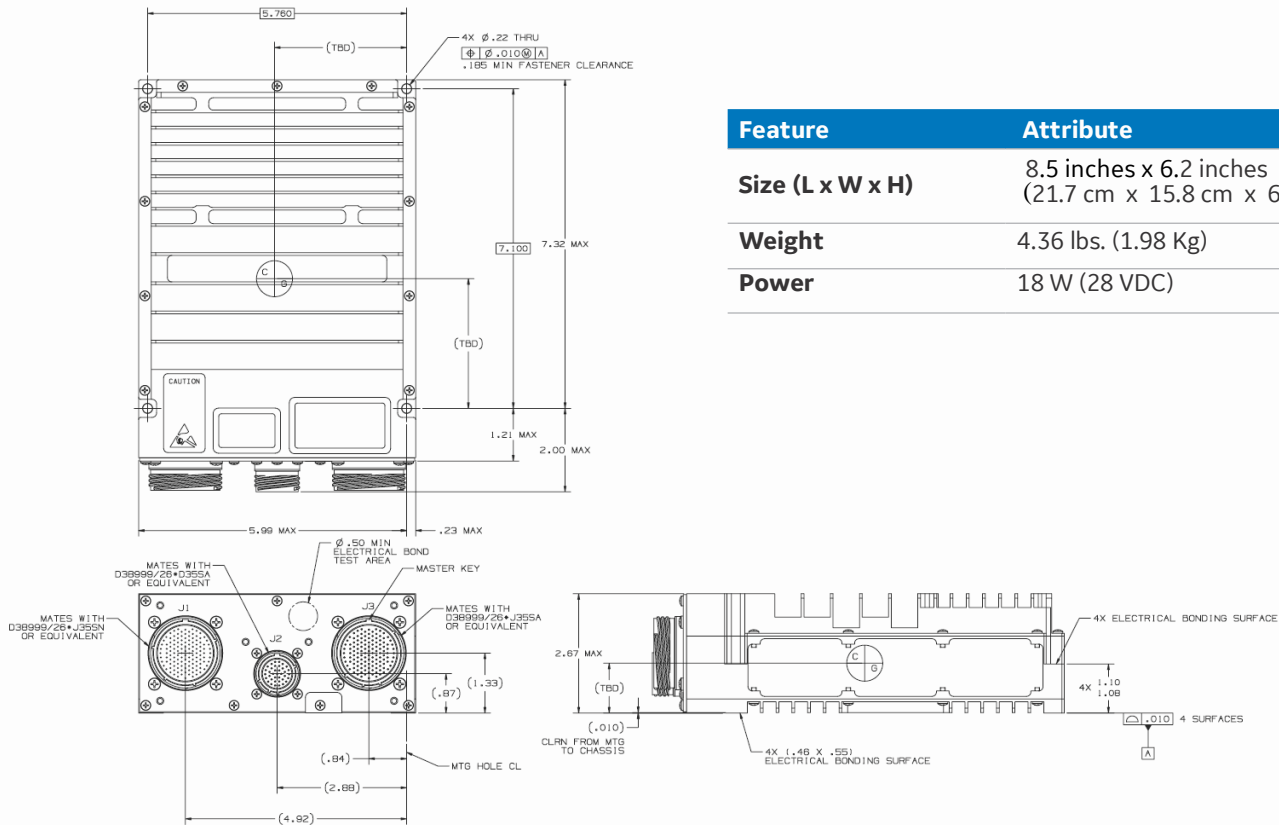
- Discrete Output O/G: 40 mA
- Discrete Input O/G: >1M/<1.3K Ohm

Test Signal Interfaces

- Discretes: 3.3 voltage level
- RS-232-C: (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-Trigged Ethernet



| Feature | Attribute |
|------------------|--|
| Size (L x W x H) | 8.5 inches x 6.2 inches x 2.7 inches (21.7 cm x 15.8 cm x 6.8 cm) |
| Weight | 4.36 lbs. (1.98 Kg) |
| Power | 18 W (28 VDC) |

GE Aviation
 3290 Patterson Ave. SE
 Grand Rapids, MI 49512
 616-241-7000
 www.geaviation.com
 220120

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