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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**Physical Characteristics**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Physical Dimensions</td>
<td>8.5 x 6.2 x 2.7 inches</td>
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<tr>
<td>Weight</td>
<td>4.4 lbs</td>
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**Reliability**

- BIT >95%
- MTBF (@ 50°C estimated): 40,000 hours
- MTBF (@ 30°C estimated): 137,000 hours

**Baseline Configuration**

- 6x 10/100/1000 ports, 18x 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
  - 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: -45°C to +70°C
- 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

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