

## RUGGED IP67 ETHERNET SWITCH

The ET-8xS-MIL-1 is an ultra-reliable fast Ethernet (10/100) switch with military-style D38999 connectors. It is an ideal Commercial off the Shelf (COTS) solution for battlefield communication, combat vehicles, avionics shipboard or any industrial applications requiring the toughest switch.

### PRODUCT HIGHLIGHTS

- 8 fast Ethernet ports for 10/100 Mbps links
- IP67 / NEMA 6 rated package totally protects against dust, water, oil, debris and more
- High performance switch rated for MIL-STD-10F, MIL-STD-461E and MIL-STD-1275B
- Military-rated MIL-DTL-38999 Series III connectors protect against vibration, shock, water and more
- Tough corrosion-proof aluminum enclosure
- Truly industrial -40 to +75°C operating range with conductive cooling (no moving parts)

### REAL-TIME ETHERNET PERFORMANCE

- Unmanaged or fully managed models available
- Fast wire-speed switching with automatic intelligent routing for no collisions and no delays!
- Each port supports auto-speed/duplex, auto-crossover and auto-polarity
- Managed models support advanced features such as RSTP, SNMP, QoS/CoS, IGMP, VLAN, security and much more

### FLEXIBLE MOUNTING OPTIONS

- Direct-mounting saves money eliminating the need for additional enclosures, wiring and fittings
- IP67 (NEMA6) water-tight case enables mounting into a vehicle or an exposed wall in harsh applications
- Flat or on-edge mounting so connectors are conveniently on the side allowing for a more direct (less bends) and protected routing of your cables

### TROUBLE FREE OPERATION

- Direct 10-30 VDC power input with MIL-STD-275B military-class spike and surge protection
- Over 1,000,000 hours (MTBF) of trouble free service (estimation based on actual return and repair data)
- Hazardous locations rated for Class I, Div. 2 (Zone 2) areas

### Model Numbers:

- ET-8ES-MIL-1 (unmanaged)
- ET-8MS-MIL-1 (managed)



### RUGGED & COMPACT MILITARY-STYLE CONNECTORS

These switches feature MIL-STD-38999 Series III connectors that are suitable for industrial, military and severe environment applications.

- 22D Contacts – Tested and proven for high speed signals such as 100Mbps Ethernet
- EMI Shielding & ESD Resistance – Solid metal to metal coupling provides superior EMI shielding and ESD protection
- Contact Protection – Recessed pins in this 100% scoop-proof connector minimize contact damage
- Moisture Corrosion Resistance – Shells are cadmium over nickel to withstand a 500 hour salt spray exposure
- Resistance – Improved interfacial seal helps prevent electrolytic erosion of contacts
- Vibration/Shock – Operates under severe high temperature with vibration, through 200°C
- Lockwiring Eliminated – Unique, self-locking, quick coupling connector eliminates lockwiring
- Quick Coupling – Completely mates and self-locks in a 60° turn of the coupling nut
- Compact Size – Ultra compact size to fit into the tightest applications



**GENERAL**

- 8 fast Ethernet ports for 10/100Mbps links
- Store & forward wire-speed non-blocking switching
- Managed or unmanaged model available
- All IEEE802.3 Ethernet protocols supported
- Auto-negotiation for Ethernet speed and duplex
- Auto-crossover for Ethernet MDI/MDIX wiring
- Auto-polarity for Ethernet TD and RD polarity
- Full or half duplex operation (auto or configurable)
- 2048 MAC addresses supported
- 3.2 Gbps Memory bandwidth
- Ethernet isolation 1500 VRMS 1 minute
- Connector: MIL-STD-38999 series III receptacle with shell size A, style 35, 6 socket contacts & N keying

**ETHERNET COMPLIANCE**

- IEEE 802.3 (10Mbps Ethernet supports legacy devices)
- IEEE 802.3u (Fast Ethernet 100Mbps for newer devices)
- IEEE 802.3x (Full-Duplex with Flow Control)

**POWER INPUT**

- Connector: MIL-STD-38999 Series III receptacle with shell size A, style 98, 3 pin contacts and A keying
- Input voltage range: 10-30 VDC (continuous)
- Input power: 4 W (typical under full load)
- Reverse polarity protection
- Exceeds MIL-STD-1275 for power protection
- Surge protection: 100 volts for 1 second
- Transient protection: 15,000 watts peak
- Spike protection: 5,000 watts (10x for 10 uS) or 250 volts (50x for 100 uS)

**STANDARDS COMPLIANCE**

- FCC part 15 / ICES-003; EN55022; IEC61326-1
- UL508/CSA C22.2/14 for electrical safety
- UL1604/CSA C22.2/213 for hazardous locations
- EN60079-15 (Zone 2) for hazardous locations
- MIL-STD-461E for EMC performance
- MIL-STD-810F for environmental performance
- MIL-STD-1275B for power protection

**ENVIRONMENTAL**

- Operating temperature: -40 to +75°C (cold startup at -40°C)
- Storage temperature: -40 to +85 °C
- Humidity (non-condensing) 5 to 95% RH
- Vibration, shock & freefall per MIL-STD-810F & IEC68-2-6, -27 & -32
- Vent plug for high altitude operation

**PHYSICAL**

- Dimensions (L x W x H) 10.5 x 4 x 2.45" (267 x 102 x 62mm)
- Weight (including caps) 2.20 lbs (1 Kg)
- IP67 dust, oil and water-tight package protection

All specifications are subject to change. Consult factory for latest info.

**MANAGED MODELS**

- USB / RS232 console port via MIL-STD-38999 series III connector w/ shell size A, style 35, 6 contacts & A keying
- Real-time Ring™ or Rapid Spanning Tree (RSTP) for fast redundant ring or mesh networks.
- Priority queuing for real-time performance
- SNMP v1 and V2 for network management
- SNMP v3 for authentication and encryption
- SNMP notifications (traps) for report on event
- IGMP v1 & v2 for IP multicast filtering
- VLAN (port & tag based) for traffic segregation
- Message filtering to stop broadcast/multicast storms
- RMON and port mirroring for diagnostics
- Configuration via secure (https) Web interface, Telnet / SSH (network), terminal (RS232) or SNMP (v1, v2, v3)
- And much more (contact us for latest features list)

**RECOMMENDED INTERFACE PLUGS**

- Ethernet Plug – D38999/26WA35PN
- Power Plug – D38999/26WA98SA
- USB/RS232 Plug – D38999/26WA35PA

**ORDERING GUIDE**

<b>ET-8ES-MIL-1</b>	8-port unmanaged IP67 switch
<b>ET-8MS-MIL-1</b>	8-port managed IP67 switch (Note: Receptacle caps are included with the switch)
<b>ET-CAT6M-xCD*</b>	Cordset, military-style plug to RJ45, x=meters (Note: Contact Sixnet for other cordset and cable options)
<b>ET-MILPWR-C2</b>	Cordset, power plug to leads, 2 meters
<b>ET-MIL232-C2</b>	Cordset, military-style plug to 232/USB, 2 m

\* See separate datasheet for cable specs

**MECHANICAL DRAWING**

