ET-8xG-MIL-1 8 Port IP67 Managed or Unmanaged

Military-Rated Industrial Ethernet Switches

Overview
The Sixnet ET-8xG-MIL-1 is an all-Gigabit (10/100/1000) Ethernet managed and unmanaged switch with military-style D38999 connectors. With an ultra-rugged case, protected circuitry and advanced software, this switch is ideal as a Commercial off-the-shelf (COTS) solution for battlefield communications, combat vehicles and avionics shipboard as well as any other industrial application that require hardened switches.

Product Highlights
• 8 Gigabit Ethernet ports for 10/100/1000 Mbps links
• IP67/NEMA 6 rated package protects against dust, water, oil, debris and more
• 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)

Features & Benefits
Ultra Rugged & Compact
• Meets extreme military standards
• Provides proven reliability under field conditions
  – Fully certified MIL-STD performance
  – -40 to 75° C operating temperature
  – Tough corrosion proof aluminum case
  – Conductive cooling — no moving parts
  – Over 1,000,000 (MTBF) of trouble-free service

Industrial COTS Solution
• Reduces time and cost for development / maintenance
• Simplifies procurement
  – Pre-tested for vibration and harsh conditions
  – Ready to ship

Flexible Deployment Options
• Reduces crew workload
• Improves task performance
  – Direct-mounting - no need for additional enclosures and wiring
  – IP67 (NEMA 6) water-tight case enables mounting into a vehicle or an exposed wall in harsh applications
  – Low-profile chassis fits into tight spaces

Real-Time Ethernet Performance
• Helps optimize vehicle networks
• Protects mission critical communications
  – Fast wire-speed switching
  – Auto-speed/duplex, auto-crossover and auto-polarity
  – RSTP, SNMP, QoS/CoS, IGNR, VLAN & security options

ENVIRONMENTAL TESTS

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SPECIFICATIONS

Ethernet Performance
• 8 Gigabit Ethernet ports for 10/100/1000 Mbps links
• Store and forward wire-speed non-blocking switching
• Managed or unmanaged models 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)
• 8192 MAC addresses supported
• 32 Gbps memory bandwidth
• Ethernet isolation 1500 VRMS 1 minute
• Connector: MIL-DTL-38999 series III receptacle with shell/insert style 9-9, 8 socket contacts & N keying

Ethernet Compliance
• IEEE 802.3 (Original Ethernet 10Mbps)
• IEEE 802.3u (Fast Ethernet 100Mbps)
• IEEE 802.3z (Gigabit Ethernet 1000Mbps)
• IEEE 802.3x (Full-duplex with flow control)

Power Input
• Connector: MIL-STD-38999 Series III receptacle with shell size A, style 35, 6 pin contacts and A keying
• Input voltage range: 10-30 VDC (continuous)
• Input power: 17 W (max. under full load)
• Reverse polarity protection
• Exceeds MIL-STD-1275 for power protection
• Surge protection: 100 volts for 1 second
• Transient protection: 15,000 W peak
• Spike protection: 5,000 W (10x for 10 uS) or 250v (50x for 100 uS)

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 and freefall per MIL-STD-810F and IEC60068-2-6, -27 and -32
• Vent plug for high-altitude operation

Physical
• Dimensions 11 x 6 x 2.85” (279 x 152 x 72 mm)
• Weight (including caps): 4.25 lbs (1.9 Kg)
• IP67 dust, oil and water-tight package protection

Standards & Compliance
• FCC part 15/ICES-003; EN61000-6-4,-2
• UL508/CSA C22.2/14 for electrical safety
• UL1604/CSA C22.2/213 and 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
• MTBF per MIL-HNDBK-217F2
  - 8EG: >1MM hours GB or 176,157 GM @ 40° C
  - 8MG: >1MM hours GB or 142,787 GM @ 40° C

Managed Models
• USB/RS232 console port via MIL-STD-38999 series III connector with shell size A, style 35, 6 socket contacts & A keying
• Real-Time RingTM 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
• RMQ and port mirroring for diagnostics
• Configuration via secure (HTTPS) web interface, Telnet/SSH (network), terminal (RS232) or SNMP (v1, v2, v3)

Recommended Interface Plugs
• Ethernet Plug: Aero AE90-365-BN9-9PN or Amphenol TV06RW9-9PN (without center pin)
• Power Plug: D38999/26WA98SA
• USB/RS232 Plug: D38999/26WA35PA

Applications
• Industrial outdoors
• Transportation
• Marine and maritime
• Aerospace
• Military in-vehicle (per COTS)

Models
MIL-324-1 24 port Gigabit IP67 managed Ethernet switch
(20 copper GigE, 4 copper or fiber GigE)

MIL-326-1 26 port Gigabit IP67 managed Ethernet switch
(20 copper GigE, 4 copper or fiber GigE, 2 10 GigE fiber)