

# EX73000 Series 16-port 10/100BASE with 2 Gigabit combo ports

## Hardened Managed Ethernet Switches



### Overview



Designed for rugged environments, the EX73000 series Gigabit switch comes with sixteen 10/100BASE-TX/FX ports and two combo Gigabit ports in a package that offers several mounting options. The EX73000 functions at temperatures ranging from -40°C to 75°C (-40°F to 167°F) and is tested for functional operation @ -40°C to 85°C (-40°F to 185°F). Fully manageable via SNMP, Web Browser, Telnet or Console port. The EX73000 is designed to integrate 10/100 Mbps networks into fibre optic Gigabit backbones. The EX73000 series supports advanced features such as 802.1Q VLAN, MAC-based Trunking, IP-Multicast IGMP Snooping, Rapid Spanning Tree for Redundancy, QoS for priority queuing, and port mirroring. Users may choose among SNMP/RMON, Web browser, or Telnet for remote monitoring and configuration.

### Features

- Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- Complies with IEC61000-6-2 EMC Generic standard immunity for Industrial environment
- EtherWAN proprietary "-ring" support for network redundancy; recovery time <15ms
- IEEE802.1w RSTP, IEEE802.1S MSTP and IEEE802.1D STP compatible
- IP Multicast Filtering through IGMP Snooping V1, V2 & V3
- Supports port-based VLAN and IEEE802.1Q VLAN Tagging and GVRP
- IEEE802.1p QoS with four priority queues
- MAC-based trunking with automatic link fail-over
- RS-232 console, Telnet, SSL/SSH, SNMP V1& V2c & V3 ,
- RMON, Web Browser, and TFTP Management
- Supports Command Line Interface in RS-232 Console
- Supports IEEE802.1x Security
- Bandwidth Rate Control
- Per-port programmable MAC address locking
- Up to 24 Static Secure MAC addresses per port
- Port mirroring
- 1000Mbps-Full-duplex, 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX Full wire-speed forwarding rate
- Alarms for power and port link failure by relay output
- Redundant power inputs with Terminal Block and DC Jack
- 40°C to 75°C (-40°F to 167°F) operating temperature range
- Supports NTP

### Ordering Information

EX73400-00Z	16-port 10/100BASE-TX Hardened Managed Ethernet Switch
EX73401-0YZ	16-port 10/100BASE-TX + 1-port Gigabit Hardened Managed Ethernet Switch
EX73402-0YZ	16-port 10/100BASE-TX + 2-port Gigabit Hardened Managed Ethernet Switch
EX73310-X0Z	12-port 10/100BASE-TX + 1-port 100BASE-FX Hardened Managed Ethernet Switch
EX73311-XYZ	12-port 10/100BASE-TX + 1-port 100BASE-FX + 1-port Gigabit Hardened Managed Ethernet Switch
EX73312-XYZ	12-port 10/100BASE-TX + 1-port 100BASE-FX + 2-port Gigabit Hardened Managed Ethernet Switch
EX73320-X0Z	12-port 10/100BASE-TX + 2-port 100BASE-FX Hardened Managed Ethernet Switch
EX73321-XYZ	12-port 10/100BASE-TX + 2-port 100BASE-FX + 1-port Gigabit Hardened Managed Ethernet Switch
EX73322-XYZ	12-port 10/100BASE-TX + 2-port 100BASE-FX + 2-port Gigabit Hardened Managed Ethernet Switch
EX73200-00Z	8-port 10/100BASE-TX Hardened Managed Ethernet Switch
EX73201-0YZ	8-port 10/100BASE-TX + 1-port Gigabit Hardened Managed Ethernet Switch
EX73202-0YZ	8-port 10/100BASE-TX + 2-port Gigabit Hardened Managed Ethernet Switch
EX73210-X0Z	8-port 10/100BASE-TX + 1-port 100BASE-FX Hardened Managed Ethernet Switch
EX73211-XYZ	8-port 10/100BASE-TX + 1-port 100BASE-FX + 1-port Gigabit Hardened Managed Ethernet Switch
EX73212-XYZ	8-port 10/100BASE-TX + 1-port 100BASE-FX + 2-port Gigabit Hardened Managed Ethernet Switch
EX73220-X0Z	8-port 10/100BASE-TX + 2-port 100BASE-FX Hardened Managed Ethernet Switch
EX73221-XYZ	8-port 10/100BASE-TX + 2-port 100BASE-FX + 1-port Gigabit Hardened Managed Ethernet Switch
EX73222-XYZ	8-port 10/100BASE-TX + 2-port 100BASE-FX + 2-port Gigabit Hardened Managed Ethernet Switch
EX73240-X0Z	8-port 10/100BASE-TX + 4-port 100BASE-FX Hardened Managed Ethernet Switch
EX73241-XYZ	8-port 10/100BASE-TX + 4-port 100BASE-FX + 1-port Gigabit Hardened Managed Ethernet Switch
EX73242-XYZ	8-port 10/100BASE-TX + 4-port 100BASE-FX + 2-port Gigabit Hardened Managed Ethernet Switch

#### 100FX Fibre Options:

- (X) = 1: Multi Mode (SC)      A: Single Mode (SC) -20Km  
 2: Multi Mode (ST)      B: Single Mode (SC) -40Km  
 6: Multi Mode (SC) WDM-TX: 1310nm/RX: 1550nm-2Km      H: Single Mode (ST) -20Km  
 7: Multi Mode (SC) WDM-TX: 1550nm/RX: 1310nm-2Km      P: Single Mode (SC) WDM -TX: 1310nm/RX: 1550nm -20Km  
 8: Multi Mode (SC) WDM-TX: 1310nm/RX: 1550nm-5Km      Q: Single Mode (SC) WDM -TX: 1550nm/RX: 1310nm -20Km  
 9: Multi Mode (SC) WDM-TX: 1550nm/RX: 1310nm-5Km      R: Single Mode (SC) WDM -TX: 1310nm/RX: 1550nm -40Km  
 \*More 100FX Fibre options also available upon request.      S: Single Mode (SC) WDM -TX: 1550nm/RX: 1310nm -40Km

#### Gigabit Port Options: Combo Ports

- (Y) = 1: 10/100/1000BASE-TX (No Gigabit Fibre port supported)      R: 10/100/1000BASE-TX with 1000BASE-LX (SC) WDM  
 3: 10/100/1000BASE-TX with 1000BASE-SX (SC)      -TX: 1310nm/RX: 1550nm -20Km  
 A: 10/100/1000BASE-TX with 1000BASE-LX (SC)-10Km      S: 10/100/1000BASE-TX with 1000BASE-LX (SC) WDM  
 B: 10/100/1000BASE-TX with 1000BASE-LX (SC)-20Km      -TX: 1550nm/RX: 1310nm -20Km  
 \*More Gigabit options also available upon request.

Power Input Interface: (Z) = B: Terminal Block & DC Jack

Installation Type: DIN Rail (mounting kit is included); Optional Panel Mount kits are available for ordering.



## Specifications

- **Technology**
- **Standards:**
- IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX,
- IEEE802.3ab 1000BASE-T, IEEE802.3z 1000BASE-SX/1000BASE-LX,
- IEEE802.3x, IEEE802.1p, IEEE802.1Q, IEEE802.1w, IEEE802.1x
- **Forward and Filtering Rate:**
- 14,880pps for 10Mbps
- 148,810pps for 100Mbps
- 1,488,100pps for 1000Mbps
- **Packet Buffer Memory:**
- 2M bits
- **Processing Type:**
- Store-and-Forward
- Half-duplex back-pressure and IEEE802.3x full-duplex flow control
- **Address Table Size:**
- 8192 MAC addresses
- **Power**
- **Input:**
- Input Voltage: 12 to 48VDC (Terminal Block); 12VDC (DC Jack)
- **Power Consumption:**
- 15W Max. 1.25A@12VDC, 0.625A@24VDC
- **Overload Current Protection:**
- Present
- **Reverse Polarity Protection:**
- Present
- **Mechanical**
- **Casing:**
- Aluminium case
- IP30
- **Dimensions:**
- 65mm (W) x 125mm (D) x 145mm (H)
  - (2.56" (W) x 4.92" (D) x 5.71" (H))
- **Weight:**
- 1Kg (2.2lbs.)
- **Installation:**
- DIN-Rail (Top hat type 35mm), Panel Mounting
- **Interface**
- **Ethernet Port:**
- 10/100BASE-TX: 16, 12 or 8 ports
- 100BASE-FX: 0, 1, 2 or 4 ports
- Gigabit: 0, 1 or 2 ports
- **Console Port:**
- Port: One DB9 RS-232 port
- **LED Indicators:**
- Per Unit: Power Status (Power 1, Power 2, Power 3)
- Per Port: 10/100BASE: Link/Activity
- 1000BASE: Link/Activity (Green: Copper, Amber: Fibre)
- **Alarm Contact:**
- One relay output with current 1A@24VDC

## Environment

### Operating Temperature:

- -40°C to 75°C (-40°F to 167°F)
- Tested @ -40°C to 85°C (-40°F to 185°F)

### Storage Temperature:

- -45°C to 85°C (-49°F to 185°F)

### Ambient Relative Humidity:

- 5% to 95% (non-condensing)

### Regulatory Approvals:

#### ISO:

- Manufactured in an ISO9001 facility

#### Safety:

- UL508

#### Hazardous Locations:

- UL1604 (ISA 12.1201)

#### EMI:

- FCC Part 15, Class A
- EN61000-6-4
- EN55022
- EN61000-3-2
- EN61000-3-3

#### EMS:

- EN61000-6-2
- EN61000-4-2 (ESD Standards)  
Contact: + / - 6KV; Criteria B  
Air: + / - 8KV; Criteria B
- EN61000-4-3 (Radiated RFI Standards)  
10V/m, 80 to 1000MHz; 80% AM Criteria A
- EN61000-4-4 (Burst Standards)  
Signal Ports: + / - 4KV; Criteria B  
D.C. Power Ports: + / - 4KV; Criteria B
- EN61000-4-5 (Surge Standards)  
Signal Ports: + / - 1KV; Line-to-Line; Criteria B  
D.C. Power Ports: + / - 0.5KV; Line-to-earth; Criteria B
- EN61000-4-6 (Induced RFI Standards)  
Signal Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A  
D.C. Power Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A

#### A

- EN61000-4-8 (Magnetic Field Standards)  
30A/m @ 50, 60Hz; Criteria A

### Environmental Test Compliance:

- IEC60068-2-6 Fc (Vibration Resistance)  
5g @ 10~150Hz, Amplitude 0.35mm  
(Operation/Storage/Transport)
- IEC60068-2-27 Ea (Shock)  
25g @ 11ms (Half-Sine Shock Pulse; Operation)  
50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport)
- IEC60068-2-32 Ed (Free Fall)  
1M (3.281ft.)

## Diagrams

