

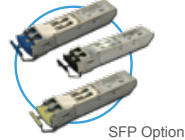
EX71000 Series

Managed Hardened 8-port 10/100BASE and 2-port Gigabit Ethernet Switch with SFP options



Value

- › Provides flexibility of 8-port 10/100BASE-TX/FX/BX/SFP plus 2-port Gigabit-TX/SX/LX/BX/SFP
- › Complies with EN50121-4 Environmental requirement for Railway applications
- › Wide temp range for extreme environments



Features

- › Certified by NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- › Supports α-ring and RSTP/MSTP/STP for Ethernet redundancy
- › 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, 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
- › Supports NTP
- › 100Mbps-Full-duplex, 10/100Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- › Full wire-speed forwarding rate
- › -40°C to 75°C (-40°F to 167°F) operating temperature range, tested for functional operation @ -40°C to 85°C (-40°F to 185°F)

Ordering Information

EX71800-00Z	8-port 10/100BASE-TX Hardened Managed Ethernet Switch
EX71801-0YZ	8-port 10/100BASE-TX + 1-port Gigabit Hardened Managed Ethernet Switch
EX71802-0YZ	8-port 10/100BASE-TX + 2-port Gigabit Hardened Managed Ethernet Switch
EX71620-X0Z	6-port 10/100BASE-TX + 2-port 100BASE-FX Hardened Managed Ethernet Switch
EX71621-XYZ	6-port 10/100BASE-TX + 2-port 100BASE-FX + 1-port Gigabit Hardened Managed Ethernet Switch
EX71622-XYZ	6-port 10/100BASE-TX + 2-port 100BASE-FX + 2-port Gigabit Hardened Managed Ethernet Switch
EX71420-X0Z	4-port 10/100BASE-TX + 2-port 100BASE-FX Hardened Managed Ethernet Switch
EX71422-XYZ	4-port 10/100BASE-TX + 2-port 100BASE-FX + 2-port Gigabit Hardened Managed Ethernet Switch
EX71440-X0Z	4-port 10/100BASE-TX + 4-port 100BASE-FX Hardened Managed Ethernet Switch

100FX Fiber Options :

- (X) = 1 : Multi Mode (SC) - 2Km
 2 : Multi Mode (ST) - 2Km
 6 : Multi Mode (SC) WDM-TX:1310nm/RX:1550nm - 2Km
 7 : Multi Mode (SC) WDM-TX:1550nm/RX:1310nm - 2Km
 8 : Multi Mode (SC) WDM-TX:1310nm/RX:1550nm - 5Km
 9 : Multi Mode (SC) WDM-TX:1550nm/RX:1310nm - 5Km
 A : Single Mode (SC) - 20Km
 *More 100FX Fiber options also available upon request.

- B : Single Mode (SC) - 40Km
 H : Single Mode (ST) - 20Km
 P : Single Mode (SC) WDM-TX:1310nm/RX:1550nm - 20Km
 Q : Single Mode (SC) WDM-TX:1550nm/RX:1310nm - 20Km
 R : Single Mode (SC) WDM-TX:1310nm/RX:1550nm - 40Km
 S : Single Mode (SC) WDM-TX:1550nm/RX:1310nm - 40Km
 V : SFP Mode

Gigabit Options :

*More Gigabit options also available upon request.

(Y) = 1 : 10/100/1000BASE-TX

- 3 : 1000BASE-SX (SC) - 550m
 4 : 1000 BASE-SX(SC) - 2Km
 5 : 1000 BASE-SX(ST) - 550m

- A : 1000BASE-LX (SC) - 10Km
 B : 1000BASE-LX (SC) - 20Km
 R : 1000BASE-BX (SC) WDM-TX:1310nm/RX:1550nm - 20Km
 S : 1000BASE-BX (SC) WDM-TX:1550nm/RX:1310nm - 20Km
 V : 1000BASE-SFP Mode

Power Input Interface :

(Z) = B : DC Jack & Terminal Block

Power Supply : (Optional)

- *Option A - Terminal Block power supply(s), part numbers: DR-30-24, DR-60-24, DR-75-24, DR-120-24 or 41-136046-X (X)=1: US, 2: EU, 3: UK, 4: AU, 5: JP
 **Option B - DC Jack power supplies kit(s), part numbers: 41-136044-X (X)=1: US, 2: EU, 3: UK, 4: AU, 5: JP

Installation Type : DIN Rail (mounting kit is included), Optional Rack Mount kits (KR-BK71000) and Panel Mount kits (KP-AA96-480) are available for ordering.

Specifications

Technology	
Standards	<ul style="list-style-type: none"> • IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX/100BASE-FX, IEEE802.3ab 1000BASE-T, IEEE802.3z 1000BASE-SX/1000BASE-LX, IEEE802.3x, IEEE802.1p, IEEE802.1Q, IEEE802.1w, IEEE802.1x
Forward and Filtering Rate	<ul style="list-style-type: none"> • 14,880pps for 10Mbps • 148,810pps for 100Mbps • 1,488,100pps for 1000Mbps
Packet Buffer Memory	• 2M bits
Processing Type	<ul style="list-style-type: none"> • 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	• 11W Max. 0.92A @ 12VDC, 0.46A @ 24VDC
Overload Current Protection	• Present
Reverse Polarity Protection	• Present

Mechanical	
Casing	<ul style="list-style-type: none"> • Aluminum case • IP30
Dimensions	• 60mm (W) x 125mm (D) x 145mm (H) (2.36" (W) x 4.92" (D) x 5.7" (H))
Weight	• 1.1Kg (2.42lbs.)
Installation	• DIN-Rail (Top hat type35mm), Rack Mount, Wall Mount

Interface	
Ethernet Port	<ul style="list-style-type: none"> • 10/100BASE-TX: 8, 6 or 4 port • 100BASE-FX: 0 to 4 ports • Gigabit: 0, 1 or 2 ports
Console Port	• Port: One DB9 RS-232 port
LED Indicators	<ul style="list-style-type: none"> • Per Unit: Power Status (Power 1, Power 2, Power 3) • Per Port: 10/100TX, 100FX/ SFP: Link/Activity, Speed 10/100/1000TX, 1000SX/LX/ SFP: Link/Activity, Speed
Alarm Contact	• one relay output with current 1A @ 24VDC

Environment	
Operating Temperature	<ul style="list-style-type: none"> • -40°C to 75°C (-40°F to 167°F) Tested @ -40°C to 85°C (-40°F to 185°F)
Storage Temperature	• -40°C to 85°C (-40°F to 185°F)
Ambient Relative Humidity	• 5% to 95% (non-condensing)

Regulatory Approvals	
ISO	• Manufactured in an ISO9001 facility
Safety	• UL508
EMI	<ul style="list-style-type: none"> • FCC Part 15, Class A • EN61000-6-4 <ul style="list-style-type: none"> - EN55022 - EN61000-3-2 - EN61000-3-3
EMS	<ul style="list-style-type: none"> • EN61000-6-2 <ul style="list-style-type: none"> - EN61000-4-2 (ESD Standards) <ul style="list-style-type: none"> Contact: + / - 6KV; Criteria B Air: + / - 8KV; Criteria B - EN61000-4-3 (Radiated RFI Standards) <ul style="list-style-type: none"> 10V/m, 80 to 1000MHz; 80% AM Criteria A - EN61000-4-4 (Burst Standards) <ul style="list-style-type: none"> Signal Ports: + / - 4KV; Criteria B D.C. Power Ports: + / - 4KV; Criteria B - EN61000-4-5 (Surge Standards) <ul style="list-style-type: none"> 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) <ul style="list-style-type: none"> Signal Ports: 10Vrms @ 0.15 - 80MHz; 80% AM Criteria A D.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM Criteria A - EN61000-4-8 (Magnetic Field Standards) <ul style="list-style-type: none"> 30A/m @ 50, 60Hz; Criteria A
Environmental Test Compliance	<ul style="list-style-type: none"> • IEC60068-2-6 Fc (Vibration Resistance) <ul style="list-style-type: none"> 5g @ 10 - 150Hz, Amplitude 0.35mm (Operation/Storage/Transport) • IEC60068-2-27 Ea (Shock) <ul style="list-style-type: none"> 25g @ 11ms (Half-Sine Shock Pulse; Operation) 50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport) • IEC60068-2-32 Ed (Free Fall) <ul style="list-style-type: none"> 1M (3.281ft.)

Diagrams

