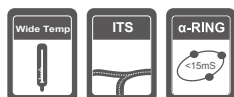


# EX77000 Series

Managed Hardened 24-port 10/100BASE and 4-port Gigabit Ethernet Switch with SFP options



## Value

- › Provides flexibility of 24-port 10/100BASE-TX/FX/BX/SFP plus 4-port Gigabit-TX/SX/LX/BX/SFP
- › Wide temp range for extreme environments



## Features

- › Certified by NEMA 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 and LACP
- › IEEE802.1x Security
- › Bandwidth Rate Control
- › Per-port programmable MAC address locking
- › Up to 24 Static Secure MAC addresses per port
- › Port mirroring
- › NTP synchronization
- › DHCP Client/Server
- › RS-232 console, Telnet, SNMP V1, V2c & V3, RMON, Web Browser, and TFTP Management
- › 1000Mbps-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

EX77604-0XYZ	24-port 10/100BASE-TX + 4-port Gigabit Managed Ethernet Switch
EX77424-WXYZ	16-port 10/100BASE-TX + 8-port 100BASE-FX + 4-port Gigabit Managed Ethernet Switch
EX77244-WXYZ	8-port 10/100BASE-TX + 16-port 100BASE-FX + 4-port Gigabit Managed Ethernet Switch
EX77064-WXYZ	24-port 100BASE-FX + 4-port Gigabit Managed Ethernet Switch
EX77064-V0VZ	4-port 100BASE-SFP + 4-port Gigabit SFP Combo Managed Ethernet Switch
EX77064-V0VC	24-port 100BASE-SFP + 4-port Gigabit SFP Combo Managed Ethernet Switch (power input +/- 48VDC terminal block)
EX77242-A2BC	8-port 10/100BASE-TX + 16-port 100FX SM(SC) - 20Km + 2-port 1000LX(SC) 20Km Managed Ethernet Switch (power input 90 to 264 AC inlet)

### 100FX Fiber Options :

(W) = 1 : Multi Mode (SC) - 2Km	B : Single Mode (SC) - 40Km
2 : Multi Mode (ST) - 2Km	F : Single Mode (FC) - 20Km
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
A : Single Mode (SC) - 20Km	S : Single Mode (SC) WDM-TX:1550nm/RX:1310nm - 40Km
	V : SFP Mode

\*More 100FX Fiber options also available upon request.

### Numbers of fixed Gigabit Fiber :

(X) = 0 : None
1 : One Gigabit Fiber Port
2 : Two Gigabit Fiber Ports
3 : Three Gigabit Fiber Ports
4 : Four Gigabit Fiber Ports

### Gigabit Port Options :

(Y) = 1 : 10/100/1000BASE-TX	A : 1000BASE-LX (SC) - 10Km
3 : 1000BASE-SX (SC) - 550m	B : 1000BASE-LX (SC) - 20Km
4 : 1000BASE-SX (SC) - 2Km	R : 1000BASE-BX (SC) WDM-TX:1310nm/RX:1550nm - 20Km
5 : 1000BASE-SX (ST) - 550m	S : 1000BASE-BX (SC) WDM-TX:1550nm/RX:1310nm - 20Km
	V : 4-port 1000BASE SFP Combo with 10/100/1000BASE-TX

\*More Gigabit options also available upon request.

### Power Input Interface : (Z) = T : +/- 48VDC (Terminal Block)

W : 88 - 370VDC and 90 - 264VAC (Terminal Block)
C : 90 - 264VAC (AC Inlet)
TR : +/- 48VDC Redundant (Terminal Block)
WR : 88 - 370VDC and 90 - 264VAC Redundant (Terminal Block)
CR : 90 - 264VAC Redundant (AC Inlet)

Installation Type : Rack Mount (mounting kit is included)

# Specifications

Technology	
Standards	<ul style="list-style-type: none"> <li>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</li> </ul>
Forward and Filtering Rate	<ul style="list-style-type: none"> <li>14,880pps for 10Mbps</li> <li>148,810pps for 100Mbps</li> <li>1,488,100pps for 1000Mbps</li> </ul>
Packet Buffer Memory	<ul style="list-style-type: none"> <li>3M bits</li> </ul>
Processing Type	<ul style="list-style-type: none"> <li>Store-and-Forward</li> <li>Half-duplex back-pressure and IEEE802.3x full-duplex flow control</li> </ul>
Address Table Size	<ul style="list-style-type: none"> <li>8192 MAC addresses</li> </ul>

Power	
Input	<ul style="list-style-type: none"> <li>(T) : +/- 48VDC(36 - 75VDC) Internal Universal PSU</li> <li>(W) : 88 - 370VDC and 90 - 264VAC Internal Universal PSU</li> <li>(C) : 90 - 264VAC, 50 - 60Hz Internal Universal PSU</li> </ul>
Power Consumption	<ul style="list-style-type: none"> <li>42.7W Max.</li> </ul>
Overload Current Protection	<ul style="list-style-type: none"> <li>Present</li> </ul>

Mechanical	
Casing	<ul style="list-style-type: none"> <li>Metal case</li> <li>IP30</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>Single Power: 442mm (W) x 250mm (D) x 44.2mm (H) (17.4" (W) x 9.8" (D) x 1.74" (H))</li> <li>Redundant Power: 442mm (W) x 375mm (D) x 44.2mm (H) (17.4" (W) x 14.7" (D) x 1.74" (H))</li> </ul>
Weight	<ul style="list-style-type: none"> <li>6.2Kg (13.7lbs.)</li> </ul>
Installation	<ul style="list-style-type: none"> <li>Rack Mounting</li> </ul>

Interface	
Ethernet Port	<ul style="list-style-type: none"> <li>10/100BASE-TX: 24, 20, 16, 12, 8, 4 or 0 port</li> <li>100BASE-FX: 0, 4, 8, 12, 16, 20 or 24 ports</li> <li>100BASE-SFP: 0 or 24 ports</li> <li>Gigabit: 0, 2 or 4 ports</li> <li>Gigabit-SFP Combo: 0 or 4 ports</li> </ul>
Console Port	<ul style="list-style-type: none"> <li>Port: One DB9 RS-232 port</li> </ul>
LED Indicators	<ul style="list-style-type: none"> <li>Per Unit: Power Status</li> <li>Per Port: 10/100TX, 100FX: Link/Activity (Green) 10/100/1000TX, 1000SX/LX: Link/Activity (Green) SFP Selected: Selected/Unselected (Green)</li> </ul>

Environment	
Operating Temperature	<ul style="list-style-type: none"> <li>-40°C to 75°C (-40°F to 167°F)</li> <li>Tested @ -40°C to 85°C (-40°F to 185°F)</li> </ul>
Storage Temperature	<ul style="list-style-type: none"> <li>-45°C to 85°C (-49°F to 185°F)</li> </ul>
Ambient Relative Humidity	<ul style="list-style-type: none"> <li>5% to 95% (non-condensing)</li> </ul>

Regulatory Approvals	
ISO	<ul style="list-style-type: none"> <li>Manufactured in an ISO9001 facility</li> </ul>
EMI	<ul style="list-style-type: none"> <li>FCC Part 15, Class A</li> <li>EN61000-6-4 <ul style="list-style-type: none"> <li>EN55022</li> <li>EN61000-3-2</li> <li>EN61000-3-3</li> </ul> </li> </ul>
EMS	<ul style="list-style-type: none"> <li>EN61000-6-2 <ul style="list-style-type: none"> <li>EN61000-4-2 (ESD Standards) Contact: +/- 6KV Air: +/- 8KV</li> <li>EN61000-4-3 (Radiated RFI Standards) 10V/m, 80 to 1000MHz; 80% AM</li> <li>EN61000-4-4 (Burst Standards) Signal Ports: +/- 4KV A.C. Power Ports: +/- 4KV</li> <li>EN61000-4-5 (Surge Standards) Signal Ports: +/- 1KV; Line-to-Earth; A.C. Power Ports: +/- 0.5KV; Line-to-Earth</li> <li>EN61000-4-6 (Induced RFI Standards) Signal Ports: 10Vrms @ 0.15 - 80MHz; 80% AM A.C. Power Ports: 10Vrms @ 0.15 - 80MHz; 80% AM</li> <li>EN61000-4-8 (Magnetic Field Standards) 30A/m @ 50, 60Hz</li> </ul> </li> </ul>
Environmental Test Compliance	<ul style="list-style-type: none"> <li>IEC60068-2-6 Fc (Vibration Resistance) 1g @ 10 - 150Hz, Amplitude 0.35mm (Operation/Storage/Transport)</li> <li>IEC60068-2-27 Ea (Shock) 25g @ 11ms (Half-Sine Shock Pulse; Operation) 50g @ 11ms (Half-Sine Shock Pulse; Storage/Transport)</li> <li>FED STD 101C Method 5007.1 (Free fall w/ package) -Tested with Cross Weight and Drop High standard table</li> </ul>

# Diagrams

Unit: mm

