

EtherWAN Hardened Managed LL3 Gigabit Ethernet PoE Switch with 12x Gigabit PoE Ports & 4x 100/1000Base SFP Ports

EtherWAN's EX78900H series is a hardened DIN-rail mounted managed PoE Ethernet switch platform. Equipped with up to 12 gigabit PoE ports along with 90W power and IEEE 802.3.bt protocol support and 4 dual-rate gigabit SFP ports, the EX78900H series provides flexibility, speed, and reliability for networks in urban infrastructure, transportation, security, and other areas where connectivity is crucial.

High Bandwidth and Versatility

- 8 or 12 10/100/1000BASE-T(X) ports for high bandwidth connections
- Up to 4 Dual-rate 100/1000BASE SFP uplink ports for fiber connections
- Full capacity switching running at full duplex

Hardened-Grade for Non-Ventilated & Harsh Environments

- Wide operating temperature range -40 to 75°C (-40 to 167°F)
- Fanless operation
- High impact, thermal shock, and electrical noise resistance

Lite Layer 3 Functionality

- Static routing, RIP v1/v2, and OSPF
- Redundancy with VRRP
- Reduces amount of broadcast traffic

PoE Features

- IEEE 802.3bt with up to 90W per port; 360W total power budget
- PoE watchdog monitors status of connected PoE devices

Management/Security Features

- Port control, SFTP
- 1x port-based network access control and remote authentication through RADIUS
- Configure and monitor with eVue™ and eLite™

Support

- Complimentary technical support
- Free firmware upgrades and notifications
- Limited lifetime warranty

Interface

- CLI, Telnet, Web GUI

Management

- SFTP (Secured FTP) support
- Configuration backup / restore
- DHCP Server/Client
- RMON (Remote Monitoring)
- Port Mirroring
- NTP (Network Time Protocol) synchronization
- PoE Watchdog
- LLDP (Link Layer Discovery Protocol)

- IPv4/IPv6
- SNMP v1/v2c/v3
- Modbus TCP

Security

- MAC Address filtering
- Enable/Disable port
- Storm Control and Detection
- DoS (Denial of Service) Attack
- Port Security
- IEEE 802.1x LAN Access Control
- Remote authentication through RADIUS and TACACS+
- Complex password support
- Multi-user login and privileged access management
- SSH for CLI and Telnet security
- TLS and HTTPS for web security
- ACL (Access Control List, up to 4096 entries)

Quality of Service (QoS)

- Priority Queues: 8 queues per port
- Traffic classification based on IEEE 802.1p CoS (Cost of Service), DSCP (Differentiated Services Code Point), WRR (Weighted Round Robin), and strict mode
- Rate Limiting (Ingress/Egress)

Layer 2 Features

- Auto-negotiation for port speed and duplex
 - Flow Control
 - IEEE 802.3x full duplex mode
 - Back-pressure half duplex mode
- Redundant Protocols
 - IEEE 802.1D STP

- IEEE 802.1w RSTP
 - IEEE 802.1s MSTP
 - EtherWAN's Alpha-Ring network fault recovery
- VLANs
 - IEEE 802.1Q Tag VLANs
 - GVRP
 - GMRP
- Link Aggregation
 - Static Trunk (4 groups)
 - IEEE 802.3ad LACP
- IGMP Snooping v1/v2/v3

Layer 3 Features

- IP Packet Routing
 - Maximum number of routes in hardware: 64 entries
 - Static Routing
 - RIP v1/v2
 - OSPF v2
- Routing Redundancy
 - VRRP

Software Properties and Performance

- Switching Fabric
 - 32Gbps
- Forwarding Rate
 - 5Mpps
- Max VLANs
 - 256 (4096 VID)
- Jumbo Frame Size
 - 9KB
- MAC Table Size
 - 16K
- Packet Buffer Memory
 - 12M bits

Interface

- Ethernet
 - 8 or 12 x 10/100/1000BASE-T(X)
 - 2 or 4 x 100/1000BASE SFP
- Console
 - 1 x RJ45
- Config Backup
 - 1 x USB (Type A Connector)
- Digital Input
 - 2 x Digital Input
 - Wet Contact: 0-3V for State 0; 13-30V for State 1; Max Input Current: 8mA
 - Dry Contact: Logic Level 1–Close to GND; Logic Level 0-Open
- Alarm Contact
 - 2 x Relay output, current capacity 0.5A/48VDC
- LED Indicators
 - Per Unit: Power 1, Power 2
 - Per Port: Link/Activity (Green)
 - Per PoE Port: PoE Status (Orange)

Technology

- Standards
 - IEEE 802.3 10BASE-T
 - IEEE 802.3u 100BASE-TX/100BASE-FX
 - IEEE 802.3ab 1000BASE-T
 - IEEE 802.3ad link aggregation control
 - IEEE 802.3z 1000BASE-SX/1000BASE-LX
 - IEEE 802.3x full duplex and flow control
 - IEEE 802.1D STP
 - IEEE 802.1p QoS
 - IEEE 802.1Q Tag VLANs
 - IEEE 802.1s MSTP
 - IEEE 802.1w RSTP
 - IEEE 802.1x PNAC

IEEE 802.1ab LLDP
IEEE 802.3az EEE
IEEE 802.3bt Power over Ethernet
IEEE 1588v2 PTP

- Forward/Filtering Rate
 - 14,880pps for 10Mbps
 - 148,810pps for 100Mbps
 - 1,488,100pps for 1000Mbps
- Processing Type
 - Store-and-forward
 - Auto-negotiation
 - Half-duplex back-pressure and full-duplex flow control
 - Auto MDI/MDIX
- System Memory
 - 2Gb DDR3 SDRAM
- Flash Storage
 - 1Gb

Power

- Input
 - 46-57VDC Redundant (Terminal block)**
** 46-57VDC for IEEE 802.3af type 1, ≤4W PD devices.
52-57VDC for IEEE 802.3at/bt type 2/3, 30W, 60W PD devices.
54-57VDC for IEEE 802.3bt, type 4, 90W PD devices
- Power Consumption
 - 20W Max (without PoE)
- PoE Power Output
 - Ports 1-12: Up to 90W/port
Power Budget: 360W
- Protection
 - Reverse Polarity Protection

Physical

- Casing Material
 - Aluminum

- IP Rating
 - IP30
- Dimensions
 - 72 x 140 x 170mm (W x D x H)
8" x 5.5" x 6.7"
- Weight
 - 5kg (3.3lbs)
- Installation Type
 - DIN-rail mounting

Environmental

- Operating Temp.
 - -40 to 75°C (-40 to 167°F)
- Storage Temp.
 - -45 to 85°C (-49 to 185°F)
- Relative Humidity
 - 5% to 95% (non-condensing)
- MTBF
 - 1,399,701 hours

Regulatory

- ISO
 - Manufactured in ISO-9001 facility
- EMI
 - FCC Part 15B Class A
 - VCCI Class A
 - EN 61000-6-4
 - EN 61000-3-2
 - EN 61000-3-3
- EMS
 - EN 61000-6-2
 - EN 61000-4-2 (ESD)
 - EN 61000-4-3 (Radiated RFI)
 - EN 61000-4-4 (Burst)
 - EN 61000-4-5 (Surge)

- PoE Ports: line to earth 6kV Surge
 - EN 61000-4-6 (Induced RFI)
 - EN 61000-4-8 (Magnetic field)
- Safety
 - UL 61010
- Traffic
 - NEMA TS2
- Rail
 - EN 50121-4
- Vibration
 - IEC 60068-2-6
- Shock
 - IEC 60068-2-27
- Free Fall
 - FED STD 101C Method 5007.1
- Industrial
 - EN 50121-4

What's Included

- Device
 - Ethernet Switch
- Cables
 - 1 Console Cable
- Installation
 - Mounting brackets, screws
- Documentation
 - Quick Install Guide