Rugged IP67 Managed Layer2+ 8-Port M12 Gigabit PoE++ Ethernet Switch

PART NUMBER

NWT-SW-X-8GBT-DC

PRODUCT DESCRIPTION

Rugged industrial-grade PoE switch, engineered for mission-critical networking in harsh environments, delivering reliable connectivity with eight M12 X-coded Gigabit Ethernet ports supporting IEEE 802.3af/at/bt PoE standards. With up to 500W of total PoE output capability and a wide 10–60V DC power input range, it ensures stable operation across diverse industrial applications. Its IP67-sealed enclosure, extended operating temperature range (-40°C to +80°C), and 6kV surge protection make it ideal for outdoor, transportation, utility, and mining deployments where durability and uptime are paramount.

PRODUCT OVERVIEW

This rugged IP67 PoE switch delivers high-performance Gigabit networking with advanced Layer2+ features, including VLAN, QoS, and comprehensive security. With up to 500W PoE output, wide DC input, and full remote management via web, CLI, SNMP, and REST API, it ensures reliable, flexible connectivity for industrial automation, transportation, utilities, and mining environments.

PORT CONFIGURATION

Downlink Ports	8 × 1000-BaseT M12 X-Coded
PoE Support	Ports 1-8 support IEEE 802.3bt (POE++)
Console Port	1 × M12 A-Code 5-pin connector for serial console access
Power Port	M12 L-Code Female power connector

HARDWARE SPECIFICATIONS

CPU	500MHz
DDR	1GB DDR3 1333MHz
Buffer	Fully integrated 4.1M packet buffer
FLASH	16MB
RAM	128MB
Bandwidth	56Gbps
Packet Forwarding	14.44Mpps
MAC Table	8K entries

POWER SPECIFICATIONS

Input Voltage	10-60V DC via M12 L-Code power connector	
Power Output Capability	**With 12V Input:** Up to 200W total PoE output	**With 24V+ Input:** Up to 500W total PoE output
PoE Standards	IEEE 802.3af/at/bt on all 8 ports, up to 95W per port	
Power Consumption	Standby: ≤5W	Network Full-load: ≤15W

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ENVIRONMENTAL & PHYSICAL SPECIFICATIONS

Enclosure Rating	IP67 sealed enclosure
Operating Temperature	-40°C to +80°C
Operating Humidity	10% to 90% RH (non-condensing)
Storage Temperature	-40°C to +85°C
Storage Humidity	5% to 95% RH (non-condensing)
Lightning Protection	6KV 8/20µs; 8KV ESD
Installation	Wall Mount Included (DIN rail mount available)
Weight	4.5lb / 2.2kg
Dimensions	8.5" x 8" x 2.875" / 216mm x 203mm x 73mm

NETWORK PROTOCOL SUPPORT

IEEE 802.3x (Flow Control)
IEEE 802.3, IEEE 802.3u, IEEE 802.3ab (Ethernet standards)
IEEE 802.3ad (Link Aggregation)
IEEE 802.1q, IEEE 802.1q/p (VLAN tagging)
IEEE 802.1w, IEEE 802.1d, IEEE 802.1S (Spanning Tree)
IEEE 802.3af/at/bt (PoE standards)

LED INDICATORS

PWR	Power/System status LED
Status LED	System Health Monitoring

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Software Features

OPERATING SYSTEM

OS	Linux

NETWORK MANAGEMENT

Web Interface	Full web-based management
CLI Management	Telnet, TFTP, Console (via M12 A-Code connector)
SSH	Secure shell access
SNMP	V1/V2/V3 management support

VLAN CONFIGURATION

Port-based VLAN support
Up to 4096 VLANs
Voice VLAN with QoS configuration
IEEE 802.1Q support
VXLAN support

SPANNING TREE

STP (Spanning Tree Protocol)
RSTP/MSTP (Rapid Spanning Tree Protocol)

ADVANCED FEATURES

Port Aggregation	Up to 8 groups, 8 ports per group
Port Mirroring	Many-to-one port mirroring
Loop Guard	Real-time detection with automatic recovery
Port Isolation	Downlink port isolation with uplink communication
Flow Control	Back pressure (half duplex) and PAUSE frame (full duplex)

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POE MANAGEMENT

Web and CLI PoE configuration	
Individual port PoE on/off control	
Remote process call support	

QUALITY OF SERVICE (QOS)

IEEE 802.1p port queue priority	
CoS/ToS QoS remarking	
WRR (Weighted Round Robin)	
Multiple priority scheduling modes (WRR, SP, WFQ)	

ADDITIONAL NETWORK FEATURES

Static Routing	IPv4 and IPv6 static routes
Storm Suppression	Bandwidth-based storm control

CERTIFICATIONS & COMPLIANCE

CE mark (commercial)	
CE/LVD EN60950	
FCC Part 15 Class B	
RoHS compliant	
IP67 environmental protection	

WARRANTY

Coverage	1 year whole device warranty
Exclusions	Accessories not included

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APPLICATIONS

Mining Vehicle Communications
Industrial automation networks
Harsh environment installations
Outdoor telecommunications infrastructure
Transportation systems
Marine and offshore platforms
Power utility substations

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