



L2+ Managed Industrial PoE++ Switch 24-Port Gigabit PoE RJ45 + 4-Port 10G SFP+ with DI/DO/RS485

Features

- ▶ 24x10/100/1000Base-T RJ45 PoE ports (Ports 1-4 support PoE++), 4x1G/2.5G/10GBase-X SFP+ uplink
- ▶ Redundant 44-57V DC power input with reverse polarity & over-current protection
- ▶ Fully compliant with IEEE802.3af, IEEE802.3at, IEEE802.3bt PoE++ standards
- ▶ DI/DO/RS485 terminal supported; USB one-click configuration backup and firmware upgrade
- ▶ Layer 3: IPv4/IPv6 static routing, DHCP Server, DHCP Relay
- ▶ Layer 2: VLAN, GVRP, QinQ, SPAN, RSPAN, STP/RSTP/MSTP, Multicast, ACL, QoS, LLDP, 802.1X, AAA, Loop Detect, Dying Gasp, SFP DDM, Dual Stack, PoE management, sFlow, Web, SNMP, MQTT, Telnet, TFTP, Web upgrade
- ▶ ITU-T G.8032 ERPS ring network, network recovery time $\leq 20\text{ms}$
- ▶ 6KV surge protection; ESD protection: Air 15kV, Contact 8kV
- ▶ IP40 fanless housing, DIN rail mounting structure
- ▶ Operating temperature range: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$



Product Description

This L2+ managed industrial PoE++ switch comes with 24 PoE gigabit RJ45 ports (ports 1-4 support PoE++) and 4 SFP+ slots for 1G/2.5G/10G fiber connection.

It supports dual redundant 44-57V power and full IEEE af/at/bt PoE standards. DI/DO/RS485 and USB one-key configuration are available. It provides complete L2 management and IPv4/IPv6 L3 routing, plus ERPS ring with $\leq 20\text{ms}$ recovery.

With 6KV surge, 15kV/8kV ESD protection, IP40 fanless casing and DIN rail design, it runs reliably from -40°C to $+70^{\circ}\text{C}$ for harsh industrial scenarios.



Product Specification

Ethernet	
Port Configuration	24×10/100/1000Base-T RJ45 PoE ports (Port 1-4 support IEEE802.3bt PoE++ 90W)
	4×SFP+ fiber slots, compatible with 1G / 2.5G / 10G optical transceivers
Switching Performance	Backplane bandwidth: 128Gbps
	Packet forwarding rate: 190.4Mpps
	MAC address table: 16K entries
	Packet buffer: 12Mbits
	Max jumbo frame: 10,000 Bytes
	Forwarding latency: < 5μs
	Transmission mode: Store-and-Forward, auto full/half duplex
Ethernet Standards	IEEE 802.3 (10Base-T) IEEE 802.3u (100Base-TX) IEEE 802.3ab (1000Base-T) IEEE 802.3z (1000Base-X) IEEE 802.3ae (10G Ethernet) IEEE 802.3x Flow Control IEEE 802.1D STP IEEE 802.1w RSTP IEEE 802.1s MSTP IEEE 802.1Q VLAN IEEE 802.1p QoS/CoS IEEE 802.1X Port Authentication IEEE 802.1ab LLDP IEEE 802.3ad LACP IEEE 802.3af / at / bt PoE Standard ITU-T G.8032 ERPS Ring Protocol
LED Indication	Power indicator (P1/P2)
	System status indicator (SYS)
	USB status indicator
	Fault alarm indicator (ALM)
	Ring network status indicator
	Copper port link & activity indicator
	PoE working status indicator
	Fiber port link & activity indicator
Interface	
Management Ports	1×RJ45 Console port (115200, 8, N, 1)



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	1×USB 2.0 port for one-click config & firmware upgrade
Industrial I/O Terminal	5V auxiliary power output, max 0.2A
	1-channel RS485, Modbus RTU transparent transmission, TCP Client/Server
	1-channel DI: Logic 1=12V~30V, Logic 0=-30V~3V
	1-channel DO relay: NO/NC/Pulse, 2A@30VDC / 0.3A@125VAC
Power Specifications	
Power Input	Dual redundant DC 44~57V input
	52~57V required for full PoE+/PoE++ load
	Max input current: 6A
	Power connector: Removable 2×2 pin terminal block
PoE Power Budget	Single power supply: Max 360W (-40℃ ~ +75℃)
	Dual identical power supply: Max 480W (-40℃ ~ +60℃)
	Note: ≥54V input required when PoE load exceeds 240W
Basic Power Consumption	Non-PoE full load power consumption: ≤23W
Power Protection	Reverse polarity protection
	Over-current protection
Mechanical	
Housing & Mounting	Enclosure rating: IP40 metal housing
	Cooling method: Fanless passive heat dissipation
	Installation: Standard DIN rail mount
Dimension(W×D×H)	110mm × 115mm × 158mm
Weight	2.1kg
Environmental	
Temperature	Operating temperature: -40℃ ~ +70℃
	Storage temperature: -40℃ ~ +85℃
Humidity	10%~90%RH (operating) / 5%~95%RH (storage), non-condensing
EMC Immunity	ESD: Air 15kV / Contact 8kV (IEC 61000-4-2)
	Surge: Power port 6kV / Ethernet port 6kV (IEC 61000-4-5)
	EFT/Burst: 4kV/2kV (IEC 61000-4-4)
	Radiated RF: 10V/m, 80MHz~1GHz (IEC 61000-4-3)



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	Conducted RF: 10V (IEC 61000-4-6)
Mechanical Test	Compliant with IEC 60068 vibration, shock, free fall standards
MTBF	> 200,000 hours
Software Features	
Redundancy Protocols	STP / RSTP / MSTP + BPDU Guard
	ERPS industrial ring network, recovery time ≤20ms
	Static / LACP dynamic port aggregation, max 64 groups, 8 ports per group
Layer 2 Switching	Port isolation, broadcast storm suppression, port/VLAN loop detection
	SPAN / RSPAN port mirroring
	802.3x flow control, auto MDI/MDIX
VLAN	802.1Q VLAN (ID 1~4094)
	MAC/IP/Protocol/Voice/Private VLAN supported
	GVRP, port/flow-based QinQ, VLAN mapping supported
Multicast	IGMP v1/v2/v3 Snooping + Fast Leave, PIM-SM, 1K multicast entries
QoS	8 hardware egress queues, SP/WRR scheduling, ingress/egress rate limit
Layer 3 (L2+) Routing	IPv4 / IPv6 dual-stack management
	IPv4 & IPv6 static routing, 4K IPv4 routing entries
	DHCPv4 Server/Relay/Client, DHCPv6 Client, DHCP Snooping Option 82
Security	Multi-type ACL (IP / MAC / IPv6 / time-range)
	802.1X port authentication, port security, IP Source Guard
	DAI ARP inspection, anti-ARP spoofing, DDoS defense
	AAA RADIUS/TACACS authentication, 0~15 level user privilege
Management & O&M	Access: Web/CLI/Telnet/SSH/SNMP v2c/v3/MQTT/sFlow/RMON
	Dual firmware partition, USB/TFTP/FTP remote upgrade
	Diagnosis: Ping/Traceroute, cable detection, SFP DDM, Dying Gasp
	NTP time synchronization, 7-level syslog, supports 3 log servers
PoE Management	Per-port power limit, PoE priority, PD watchdog, PoE schedule
Certifications	CE, FCC, RoHS