Smart solutions for smart networks

SWMD-H-8GP-2BT-FBP

Version 1.0

L2+ Managed Industrial 8*10/100/1000Base-T + 4*1G/2.5G/10GBase-X SFP + 1*Bypass PoE++ Switch

8X10/100/1000 BASE-T RJ45 POE

4X1G/2.5G/10G BASE-X SFP+

1 CHANNEL SINGLE LC BYPASS

FIBER BYPASS LC TYPE, RECOVERY 10MS (MAX)

MAINTAIN NETWORKS CONTINUITY IF POWER LOSSES

COMPLIES WITH IEEE802.3AF/AT/BT POE STANDARD, 1-2 PORTS SUPPORT POE++ 60-90W

LAYER 3 FEATURES: SUPPORT IPV4/IPV6 STATIC ROUTING, DHCP SERVER

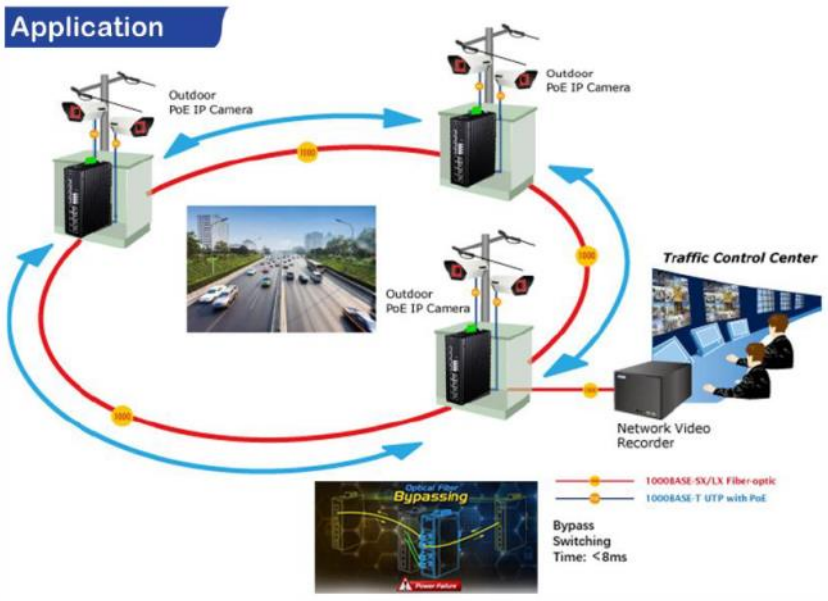
SUPPORT G.8032 ERPS PROTOCOL, RECOVERY TIME ⩽20MS

Description

The **CXR SWMD-H-8GP-2BT-FBP** is the highly reliable managed industrial Bypass PoE++ switch with 8-port 10/100/1000-T PoE, 4-port 1G/2.5G/10GBase-X SFP+ and 1 channel single fiber Bypass port. It complies with IEEE802.3af PoE, IEEE802.3at PoE+, IEEE802.3bt PoE++ standard protocol, the Max power output consumption per port can reach 90W (1-2 ports), which is the ideal solution for those high power consumption industrial networking PDs. In normal operation, it is a L2+ managed PoE++ switch. It supports ERPS redundant network and the self-recovery mechanism less than 20ms on full load which allows you to scheme a reliable Ethernet network by building a redundant ring topology as your back-up solution. IPv4/IPv6 static routing, DHCP server, robust Layer 2 management and secure functions can help users expand their networks quickly and efficiently. However, when it encounters a power failure or internal malfunction, the bypass function is activated through the integrated bypass optical switching module, which allows the network connections passing through the switch to remain uninterrupted, ensuring that the data can still flow directly between the connected devices, as if the switch were not in the path at all.

CXR SWMD-H-8GP-2BT-FBP is also the high cost-effective easy-to-use device, which provides essential industrial Ethernet networking function, including wide range power input 44-57VDC, redundant power design with polarity reverse protection, robust IP40 fan-less housing with Din-rail installation, wide operation temperature from -40°C to 80°C as well as high-level EMI/EMC capability. It is the best choice for heavy industrial factory, transportation, oil & gas, chemical, IP Surveillance and processing automation area where environmental conditions are harsh and critical.

Application Diagram



Specifications

Interface	**Fiber ports**	**Copper RJ45 ports**
	4	8
Ethernet	8*10/100/1000Base-T RJ45 PoE/PoE+, 1-2 ports support PoE++ 4*1G/2.5G/10GBase-X SFP+	
Management port	1*RJ45 Console port (115200, 8, N, 1)	
Bypass features		
Connector type	LC Female Connector	
Bypass Channels	1 channel single LC	
Optical Switching Time	≤ 10ms, power failure <—-> power normal	
Insertion Loss	1.2dB (max)	
Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Ethernet IEEE 802.3ab 1000Base-T Ethernet IEEE 802.3z 1000Base-X Ethernet IEEE 802.3bz 2.5GBASE-X IEEE 802.3ae 10Gb/s Ethernet IEEE802.3x Flow Control and Back Pressure IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1Q VLAN ITU-T G.8032 ERPS IEEE 802.1X Port Authentication Network Control IEEE 802.1ab LLDP IEEE 802.3ad LACP IEEE 802.3af PoE IEEE 802.3at PoE+ IEEE 802.3bt PoE++	
LED Indicators		
P (Power indicator)	Off: the device is power off or failed	On: the device power on is normal
S (System status indicator)	Blinking: device initialization	On: device on normal operation

1-8 (Copper ports indicators) Green	Off: ports link down
	On: ports link up
	Blinking: data on TX/RX
9-12 (Fiber ports indicators) Green	Off: ports link down
	On: ports link up
	Blinking: data on TX/RX
Power parameter	
Input Voltage	44-57VDC(802.3af) 52-57VDC(802.3at/802.3bt) redundant power input
Input current	5.8A Max
Total power consumption	Full loading without PoE ≤15W PoE power budget ≤240W
Connector	Removable 4-pin terminal block
Reverse polarity protection	Support
Over-voltage protection	Support
Over-current protection	Support

Layer 2 functions	
Port aggregation	Support GE port aggregation Support 2.5GE aggregation Support 10GE aggregation Support static aggregation Support LACP dynamic aggregation Up to 64 aggregation groups and up to 8 ports per group
Port features	Support IEEE802.3x flow control, Support interface counters, Support port isolation, Port mirroring (One-to-One, Many-to-One) Support loop detection(Port-based; VLAN-based) Support broadcast storm suppression(broadcast; unknown multi-cast; unknown unicast)
Mac-address table management	Support static Mac-address management Support dynamic Mac-address Management Support filtering Mac-address Support MAC limit based on port and VLAN Support MAC flapping based on port and VLAN
VLAN	Support access mode Support trunk mode Support hybrid mode
VLAN classification	Mac Based VLAN IP Based VLAN Protocol Based VLAN
GVRP	Normal mode Fixed mode Forbidden mode
QinQ	Port-based QinQ VLAN-based QinQ Flow-based QinQ
LLDP	LLDP (Link Layer Discovery Protocol)

Ring network protocol	Support IEEE802.1D-STP Support IEEE802.1W-RSTP Support IEEE802.1S-MSTP
	Support G.8032 ERPS protocol，single ring, sub Ring and major ring Recovery time ≤20ms
L2 Multicast	
IGMP snooping	Support IGMP snooping
Group address	Support group address
Security functions	
ACL	IP Standard ACL MAC extend ACL IP extend ACL IPv6 ACL
QoS	Support QoS Class, remarking Support SP, WRR queue scheduling Ingress port-based rate-limit Egress port-based rate-limit Support policy-based QoS
802.1x	Port access control Mac-address access control RADIUS server
Port-security	Port-security
IP source guard	IP Port/MAC binding

ARP-check	Support ARP-check and ARP packet filtering for illegal users
Access control	Support Telnet/SSH/HTTP/HTTPS user access control
Management & Maintenance functions	
User Management	Support password protection Support user authorization management
SNMP	Supporting SNMP V1/V2C/V3 version
Web Management	Web Management Support HTTP V1.1 Support HTTPS
CLI management	Console/Telnet command line management
RMON	Support RMON(Remote Monitoring) alarm
Firmware upgrade	Firmware upgrade
Fault Detection	Ping/Traceroute Dying gasp Support optical transceiver DDM function
Cable detection	Support copper port cable detection
PoE management	Support 802.3af/802.3at/802.3bt Support PD watchdog Support PoE priority management Support Max PoE power configuration for each port Support alarm threshold configuration Support reserved power configuration
NTP	Network Time Protocol

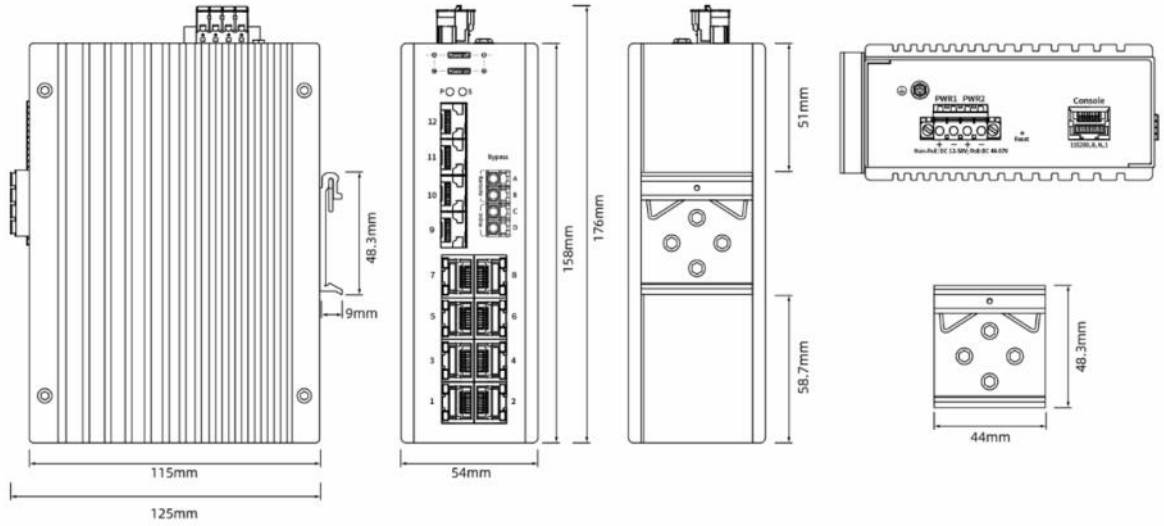
Syslog/Debug	Syslog/Debug Syslog send to three servers
Configuration import/export	Support FTP/TFTP remote import/export
Dual partition management	Support dual partition switching
Application Protocol Functions	
DHCP Snooping	DHCP snooping trust port Support remote-id/circuit-id configuration DHCP option-82
DHCP client	Support DHCP client
Telnet Server	Support telnet server
Telnet Client	Support telnet client
SSH Server	Support SSH server
TACACS	Support TACACS (the terminal access controller accesses the control system)
SFLOW	Support network traffic analysis
TFTP	Support TFTP Client
Layer 3 functions	
ARP	ARP table aging
IPv4/IPv6	Static routing

Switching features	
Switching capacity	96Gbps
Packet forwarding rate	142.8Mpps
MAC address table	16K
VLAN	4K
Buffer	12Mbits
Forwarding delay	<5us
Jumbo Frame	Support 10Kbytes
MDX / MIDX	Support
Watchdog	Support
Mechanical structure	
Case protection	IP40
Installation method	Din-Rail
Dimension (W*D*H)mm	54*115*158mm
Weight	1.42kg
Operating environment	
Operating temperature	-40°C ~ +80°C
Storage / Transportation temperature	-40°C ~+85°C
Relative humidity	Operation humidity : 10% - 90% RH Storage humidity : 5% - 95% RH
Industrial Standard	
EMS	Surge protection of power: IEC 61000-4-5 6KV/4KV（8/20us） Surge protection of Ethernet ports: IEC 61000-4-5 6KV/2KV（10/700us） RS：IEC 61000-4-3 80 MHz-1 GHz：10 V/m EFT：IEC 61000-4-4 4K/2K CS：IEC 61000-4-6 10V ESD：IEC 61000-4-2 Contact: 8K；Air: 15K
EMI	FCC Part 15B Class A
Shock	IEC 60068-2-27
Free fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Certification	CCC/CE/UKC/RoHS/REACH/FCC
MTBF	> 200 000 hours
Warranty	2 years

Ordering Information

Reference	Description
SWMD-H-8GP-2BT-FBP	L2+ Managed industrial Bypass switch with 8*10/100/1000Base-T RJ45 ports, 4*1G/2.5G/10GBase-X SFP slots and 1 channel single fiber bypass port, complies with IEEE802.3af, IEEE802.3at and IEEE802.3bt standard, 1-2 ports support PoE++ 60-90W, DC44-57V input, redundant dual power supply, Din-rail installation. Operation temperature: -40℃～+80℃

Size & Dimensions



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