



RBH-2404M-PSE

24x 10/100/1000Base-Tx(8 combo RJ45/SFP) ports
and 4x 10G SFP+ Managed PoE Industrial Switch

The RBH-2404M-PSE is a 28 port Gigabit Ethernet managed Industrial Switch 24x10/100/1000Base-Tx & 4x 10GBase-X SFP+ ports, hardened for extreme operating temperatures: -40 to +75 Celsius. The managed switch supports a variety of Ethernet functions, including STP/RSTP/MSTP and multiple sub-Ring for redundant cabling, layer 2 Ethernet IGMP, VLAN, QoS, Security, bandwidth control, port mirroring and is housed in IP40 rated rugged metal housing designed to operate in difficult conditions, including mechanically and electrically extreme environments. All Industrial switches have strong surge protection (8kV~15kV) per port, depending on models and strict compliance with IEC and EN standards for industrial grade equipment.

RBH-2404M-PSE has 400W of PoE power and has redundant DC 46-54V power supply inputs.

Features

- redundant power: two DC input 46-54V
- Extreme operating temperature: -40 to +75 Celsius
- Rugged IP40 rated metal casing with fanless design
- 24x 10/100/1000Base-T RJ-45 (8 combo RJ45/SFP) and 4x 10GBase-X SFP+ Fiber ports
- Reversed power polarity protection
- STP, RSTP, MSTP for redundant cabling
- DHCP Server/Client/Relay/Snooping
- QoS, CoS, bandwidth control for Ingress and Egress, Storm Control
- Dynamic IEEE 802.3ad LACP Link Aggregation, Static Link Aggregation
- Supports up to 16kV surge protection per port on all TP ports
- Web based management, SNMP v1/v2, Telnet
- Supports IEEE 802.1Q Tag VLAN and port VLAN
- IGMP snooping V1/V2/V3, IGMP Filtering/ Throttling, IGMP query
- Port based and MAC based IEEE802.1X, RADIUS, ACL
- Software upgrade via TFTP and HTTP
- Port mirroring, System log, DNS, SNTIP, LLDP
- 400W of PoE PSE power available

Specifications

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX and 100Base-FX Fast Ethernet IEEE 802.3ab 1000Base-T and 1000Base-X Gigabit Eth. IEEE 802.3x Flow Control and Back Pressure IEEE 802.3ae 10G-Base-SR/LR/ER/ZR	Removable Terminal Block	Provide 2 Redundant power inputs
Switch Architecture	Back-plane (Switching Fabric): 160 Gbps	Operating Temperature	-40 ~ 75°C
Data Processing	Store and Forward	Operating Humidity	5% to 95% (Non-condensing)
Flow Control	IEEE 802.3x flow control, back pressure flow control	Storage Temperature	-40 ~ 85°C
Provides Broadcast Storm Protection	Present	Housing	Rugged Metal, IP40 Protection
MAC Address Table	16K	Dimensions	440 x 245 x 44mm (D x W x H)
Packet Buffer Size	12MB	Weight	3.65kg
Ports	24 x RJ-45 10/100/1000Base-Tx 4 x 10GBase-X SFP+ slot 10/100/1000Base-TX auto negotiation speed, Auto MDI/MDI-X function, Full/Half duplex 8 Gigabit RJ-45 ports are also available as SFP slots	Installation Mounting	19" rack mounting
Network Cable	10Base-T: 2-pair UTP/STP Cat.5 cable 100Base-TX: 2-pair UTP/STP Cat. 5 cable 1000Base-T: 4-pair UTP/STP Cat. 5e cable EIA/TIA-568 100-ohm (100m)	EMI	FCC Part 15 Subpart B Class A, CE EN 55022 Class A EN61000-6-4 – Emission for industrial environment
Protocols	CSMA/CD	EMS	EN61000-6-2 – Immunity for Industrial environment EN61000-4-2 (ESD) Level 3, Criteria B EN61000-4-3 (RS) Level 3, Criteria A EN61000-4-4 (Burst) Level 3, Criteria A EN61000-4-5 (Surge) Level 3, Criteria B EN61000-4-6 (CS) Level 3, Criteria A EN61000-4-8 (Magnetic Field) Level 3, Criteria A
LED	Per unit: PWR (Green) LNK/ACT (Green - Fiber port status and activity) Per port: Link/Active (Green), Speed/100 (Yellow)	Traffic control	NEMA-TS2
Reverse Polarity Protection	Present	Rail Traffic	EN50121-4
Overload Current Protection	Present	Shock	IEC 60068-2-27
Power Supply	Redundant Dual DC48V Input power (Removable Block)	Freefall	IEC 60068-2-32
PoE Specs	PoE+ PSE device: IEEE 802.3af/at, up to 30W per port 400W total PoE budget	Vibration	IEC 60068-2-6
Power Consumption	<430W, PoE available budget is 400W	MTBF	100,000Hrs
		Warranty	3 years

Software Specifications

Topology

VLAN	IEEE 802.1q VLAN, up to 4094 IEEE 802.1q VLAN, up to 4094 Groups IEEE 802.1ad Q-in-Q MAC-based VLAN, up to 256 entries
Link Aggregation (Port Trunk)	Static (Hash with SA, DA, IP, TCP/UDP port), up to 12 trunk grp. Dynamic (IEEE 802.3ad LACP), up to 12 trunk group
Spanning Tree	IEEE802.1d STP IEEE802.1w RSTP IEEE802.1s MSTP
Multiple Ring	supports Sub-Ring type Recovery time <10ms The maximum number of devices allowed in a Ring supported ring is 250.
Ring	supports ERPS
Loop Protection	Present

QoS Features

Class of Service	IEEE802.1p 8 active priorities queues for per port
Traffic Classification QoS	IEEE802.1p based CoS IP Precedence based CoS IP DSCP based CoS QCL(QoS Control List): Frame Type, Source/ Destination MAC, VLAN ID, PCP, DEI QCE(QoS Control Entry): Protocol, Source IP, IP Fragment, DSCP, TCP/UDP port number
Bandwidth Control for Ingress	Rate in steps :1 kbps / Mbps Range : 100 kbps to 10Gbps Rate Unit : bit
Bandwidth Control for Egress	Rate in steps : 1 kbps / Mbps Range : 100 kbps to 10Gbps Rate Unit : bit Per queue / Per port shaper
Storm Control	for Unicast, Broadcast, Multicast

DHCP	Server, Client, Relay, Snooping
IP Source Guard	
Port Mirroring	
Event Syslog	Syslog server (RFC3164) (Support 1 server)
Warning Message	System log, alarm relay
DNS	Client, Proxy
NTP	
LLDP (IEEE 802.1ab)	Link Layer Discovery Protocol LLDP-MED

IP Multicasting Features

IGMP / MLD Snooping	IGMP Snooping v1, v2, v3 / MLD Snooping v1, v2 Port Filtering Profile Throttling, Fast Leave Maximum Multicast Group : up to 1022 entries Query / Static Router Port
---------------------	--

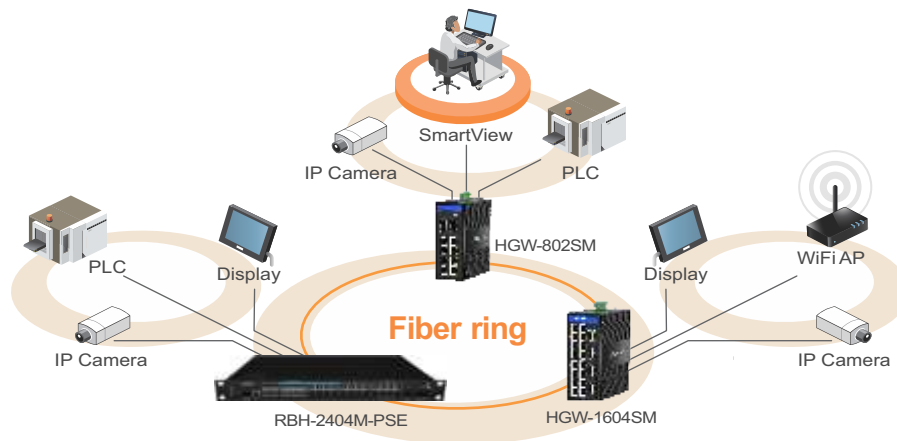
Security Features

IEEE 802.1X	Port-Based MAC-Based
ACL	Number of rules : up to 500 entries for L2 / L3 / L4
RADIUS authentication & accounting	
User Name	Local Authentication
Password	Remote Authentication (via RADIUS)
Authentication	
Management Interface Access	Web, Telnet / RS-232 console
Filtering	

Management Features

Web Based Management	
Telnet	Server
SNMP	V1, V2c, V3
SW & Configuration Upgrade	TFTP, HTTP firmware upgrade function

Fiber Ring Application



RBH-2404M-PSE Gigabit Ethernet Managed PoE Industrial Switch Application

Ordering Information

Model Name	Description
RBH-2404M-PSE	24x 10/100/1000Base-Tx(8 combo RJ45/SFP) & 4x 10GBase-X SFP+ Managed Industrial PoE Switch Extreme Temp. (-40~75 Celsius), 2xDC PS 400W of PoE power, max. 30W of PoE power/port (802.3at/af compatible)