TYPE: Sepitam-PI424G-QXM-L3

10G Uplink 28-Port L3 Managed Industrial PoE Switch

Overview :

The Sepitam-PI424G-QXM-L3 series is a 10G uplink L3 managed industrial PoE fiber switch independently developed. It has 24*10/100/1000Base-T RJ45 ports and 4*1/10G SFP+ fiber ports. Port 1-24 can support IEEE802.3af/at PoE standard. Single-port PoE power reaches 30W. As a PoE power supply device, it can automatically detect and recognize power-compliant devices that meet the standard and supply power through the network cable. It can supply power to POE terminal equipment such as wireless AP, webcam, VoIP, industrial sensor through the network cable, and meet the network environment that needs high-density PoE power supply. It is suitable for intelligent transportation, rail transit, power industry, mining, petroleum, Industrial scenes such as shipping, metallurgy, and green energy construction form a cost-effective, stable and reliable communication network.

Sepitam-PI424G-QXM-L3 has L3 network management function, supports IPV4/IPV6 management, dynamic routing full line-speed forwarding, complete security protection mechanism, perfect ACL/QoS policy, and rich VLAN functions, easy to manage and maintain. With industry-leading ring network technology. It supports a variety of industrial-grade redundant ring network protocols, and each port can form a ring network, supporting chain ring network, starring network, double starring network, ring network, tangent network ring network, intersecting ring network, coupled ring network, self-healing within 20ms of the ring network. The switches series has high reliability, high security, and high manageability, ensures reliable transmission of key data, supports remote management, and cooperates with the Sepitam-PI424G-QXM-L3 network management platform for cluster management to achieve no blind spot network management throughout the process. The Industrial grade series products completely follow the industrial product design and materials. The shell is made of metal material to enhance heat dissipation. It has excellent adaptability to the industrial site environment (including mechanical stability, climate environment adaptability, electromagnetic environment adaptability, etc.). Protection level reaches IP30 and support AC+DC dual redundant power supply, and the mean time between failures of MTBF can up to 35 years.

Features :

♦ **Gigabit access, 10G uplink**

- Support Gigabit Ethernet port and 10G SFP+ uplink port combination, which enables users to flexibly build networking to meet the needs of various scenarios.

- Support non-blocking wire-speed forwarding.

- Support full-duplex based on IEEE802.3x and half-duplex based on Backpressure.

♦ **Intelligent PoE power supply function**

- 24*10/100/1000Base-T RJ45 ports, meeting the needs of security monitoring, teleconferencing system, wireless coverage, and other scenarios.

- IEEE802.3af/at PoE standard, without damaging non-PoE devices.

- Priority system for PoE port, it will supply power to the high priority level port first when the power budget is insufficient and avoid overwork of the device.

- PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.

♦ **Security**

- 802.1X authentication.

- Port isolation,Storm control.

- IP-MAC-VLAN-Port binding.

♦ **Strong business processing capability**

- ERPS/STP/RSTP/MSTP.

- Static and dynamic aggregation.

- IGMP V1/V2 and IGMP Snooping.

- IEEE802.1Q VLAN, flexible VLAN division,Voice VLAN and QinQ configuration.

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- QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including Equ, SP, WRR & SP+WRR.
- ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.

♦ **Stable and reliable**

- CCC,CE, FCC, RoHS.
- Low power consumption, galvanized steel casing. The fan active cooling.
- The user-friendly panel can show the device status through the LED indicator of PWR, Link, L/ A , PoE.
- Self-developed power supply, high redundancy design, providing a long term and stable PoE power output.

♦ **Easy operation and maintenance management**

- HTTPS, SSLV3, and SSHV1/V2.
- RMON, system log, LLDP, and port traffic statistics.
- CPU monitoring, memory monitoring, Ping test, and cable diagnose.
- Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

ORDERING INFORMATION

Model	Description	Configure Power Supply
Sepitam-PI424G-QXM-L3	L3 managed industrial PoE fiber switch with 24*10/100/1000M RJ45 ports and 4*1/10G SFP+ ports. Port 1-24 support IEEE802.3af/at PoE standard. Built-in redundant dual power supply. support 2AC+DC power terminal input and 1U/19-inch cabinet installation.	2*400W
Sepitam-PI424G-QXM-L3-at		2*600W
Note: The SFP optical module is not included by default and needs to be purchased separately.		

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PACKING LIST

	CONTENT	QTY	UNIT
Packing List	28-port 10G uplink L3 managed industrial PoE fiber switch	1	SET
	RJ45-DB9 Line	1	PC
	AC Power Cable	1	PC
	Mounting Kits (Hanging Ear)	1	SET
	User Guide	1	PC
	Warranty Card	1	PC

OPTICAL MODULE INFORMATION

Product	Model	Description	Unit
1.25G Optical Module	2630-G	Industrial SFP optical module, 1.25G, multi-mode dual fiber 850nm, transmission distance: 550m, LC interface, support DDM function, support hot plug and pull.	PC
	2632-G	Industrial SFP optical module, 1.25G, single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	2612-T-G	Industrial SFP optical module, 1.25G, single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	2613-R-G	Industrial SFP optical module, 1.25G, single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC

1.25G Optical Module	2612-T-G-SC	Industrial SFP optical module, 1.25G, single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
	2613-R-G-SC	Industrial SFP optical module, 1.25G, single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, SC interface, support DDM function, support hot plug and pull.	PC
10G Optical Module	6630-G	SFP+ optical module,10G, Multi-mode dual fiber 850nm, transmission distance: 300m, LC interface, support DDM function,support hot plug and pull.	PC
	7832-G	SFP+ optical module,10G, Single-mode dual fiber 1310nm, transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	7832-33-G	SFP+ optical module,10G, Single-mode single fiber TX1330nm/RX1270nm , transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC
	7832-27-G	SFP+ optical module,10G, Single-mode single fiber TX1270nm/ RX13300nm , transmission distance: 20km, LC interface, support DDM function, support hot plug and pull.	PC

TECHNICAL SPECIFICATION

Model	Sepitam-PI424G-QXM-L3	Sepitam-PI424G-QXM-L3-at
Interface Characteristics		
Fixed Port	2*AC100-240V input ports Alarm switch port (FAULT) 1*Console port (115200, N, 8,1) 4*1/10G uplink SFP+ ports (Data) 24*10/100/1000Base-T PoE ports (Data/Power) 1 group of DC48-57V input ports (Support reverse polarity protection function)	

Ethernet Port	Port 1-24 support 10/100/1000Base-T auto-sensing, full/half duplex MDI/MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 or later UTP(≤100 meter) 1000BASE-T: Cat5e or later UTP(≤100 meter)
Optical Fiber Port	1/10G SFP+ optical fiber port, default no include optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Optical Fiber Port Expansion	Support Turbo overclocking 2.5G optical module expansion and ring network
Optical Cable/ Distance	Multi-mode: 850nm / 0~500M, 0~300M(10G), Single-mode: 1310nm / 0~ 40KM, 1550nm / 0~120KM.
Chip Parameter	
Network Management Type	L3
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3ae 10GBase-SR/LR, IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	598Gbps (non-blocking)
Forwarding Rate@64byte	95.23Mpps
CPU	500MHz
DRAM	2G
FLASH	128M
MAC	32K

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Buffer Memory	32M
Jumbo Frame	9.6K
LED Indicator	System: SYS (Green), Network:Link (Yellow), PoE: PoE (Green), Fiber port: L/A (Green)
Reset Switch	Yes, press and hold the switch for 10 seconds and release it to restore the factory settings
PoE & Power Supply	
PoE Port	Port 1 to 24
PoE Management	PoE working status Delay start of power supply PoE output priority configuration Scheduling of PoE operation and time Total power limit of PoE power supply PoE output power allocation, on/off & af/at
Power Supply Pin	Default: 1/2 (+) 3/6 (-)
Max Power Per Port	30W, IEEE802.3af/at
Power Consumption	Standby<25W, Full Load<400W	Standby<30W, Full Load<600W
Power Supply	Built-in power supply, AC 100~240V 50-60Hz 5A	Built-in power supply, AC 100~240V 50-60Hz 6.6A
Power Input Port	1 group of DC48-57V input port, Alarm switch port, 2 group of AC power input ports Dual input power port design: AC power supply priority, support anti-reverse protection, power-off automatic switching DC connection.
Physical Parameter	
Operation TEMP / Humidity	-40~+80℃, 5%~90% RH Non condensing
Storage TEMP / Humidity	-40~+85℃, 5%~95% RH Non condensing

Dimension (L*W*H)	440*378*44.5mm	
Net /Gross Weight	<5.5kg / <6.0kg	<5.8kg / <6.6kg
Installation	Desktop,19 inch 1U cabinet installation	
Certification & Warranty		
Lightning Protection	Lightning protection: 6KV 8/20us, Protection level: IP30 IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge IEC61000-4-3(RS):10V/m(80~1000MHz) IEC61000-4-4(EFT): power cable:±4kV; data cable:±2kV IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz) IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m ,1s to 3s IEC61000-4-9(pulsed magnet field):1000A/m IEC61000-4-10(damped oscillation):30A/m 1MHz IEC61000-4-12/18(shockwave):CM 2.5kV,DM 1kV IEC61000-4-16(common-mode transmission):30V; 300V,1s FCC Part 15/CISPR22(EN55022):Class B IEC61000-6-2(Common Industrial Standard)	
Mechanical Properties	IEC60068-2-6 (anti vibration) IEC60068-2-27 (anti shock) IEC60068-2-32 (free fall)	
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS	
Network Management Features		
Interface	IEEE802.3X (Full-duplex) Port temperature protection setting No connection port automatic sleep Port green Ethernet Energy-saving setting Broadcast storm control based on port speed SFP+ optical port DDMI real-time digital diagnosis The speed limit of the message flow in the access port, minimum particle size is 64Kbps.	

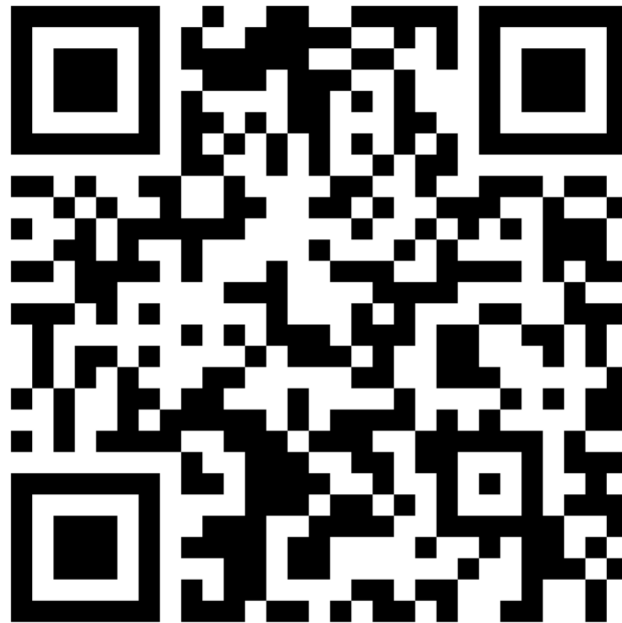|	
Layer 3 Features	IPV4 Equal Cost Routing NG protocol, maximum 1000 entries ARP protocol, maximum 1000 entries Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6 IPV4/IPV6 VRRP, the maximum group is 255 IPV4/IPV6 VLANIF interface supports up to 128 IPV4/IPV6 static route/default route supports up to 128 entries IPV4 dynamic routing, RIPv1/v2, OSPFv2, BGP4+, 4000 routing entries IPV6 dynamic routing OSPFv3, BGP+, RIPng, IPV6 management, 1000 routing entries L3 network management function, IPV4/IPV6 dual-stack management Layer 3 routing and forwarding, support communication between different network segments and different VLANs
VLAN	Voice VLAN, QinQ configuration 4K VLAN based on port, IEEE802.1q Port configuration of Access, Trunk, Hybrid. VLAN based on MAC, VLAN based on the protocol
Port Aggregation	LACP, Static aggregation Max 14 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d), RSTP (IEEE802.1w), MSTP (IEEE802.1s)
Industrial Ring Network Protocol	G.8032 (ERPS), Recovery time less than 20ms 250 Ring at most, Max 250 devices per ring.
Multicast	MLD Snooping v1/v2,Multicast VLAN IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based Rate Limiting Flow-based Packet Filtering 8*Output queues of each port 802.1p/DSCP priority mapping Diff-Serv QoS,Priority Mark/Remark Queue Scheduling Algorithm (SP, WRR, SP+WRR)

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ACL	Port-based Issuing ACL,ACL based on port and VLAN
	L2 to L4 packet filtering, matching first 80 bytes message. Provide ACL based on MAC, Destination MAC address, IP Source, Destination IP, IP Protocol Type, TCP/UDP Port, TCP/UDP Port Range, and VLAN, etc.
Security	IEEE802.1X & MAC address authentication
	Broadcast storm control, Backup for host datum
	SSH 2.0, SSL, Port isolation, ARP message speed limit
	User hierarchical management and password protection
	IP-MAC-VLAN-Port binding, ARP inspection, Anti-DoS attack
	AAA & RADIUS, MAC learning limit, Mac black holes, IP source protection
DHCP	DHCP Client,DHCP Snooping, DHCP Server,DHCP Relay
Management	CPU instant utilization status view
	One-key recovery, Cable Diagnose, LLDP
	Console /AUX Modem /Telnet /SSH2.0 CLI
	Web Management (HTTPS), NTP, System work log, Ping Test
	Download & Management on FTP, TFTP, Xmodem, SFTP, SNMP V1/V2C/V3
	Sepitam-PI424G-QXM-L3 -Smart Network Management System Platform (LLDP+SNMP)
System	Category 5 Ethernet network cable
	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later.
	TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

Technical Specification of

Sepitam-PI424G-QXM-L3

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