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## TYPE:

# Sepitam-PI208G-DFM

Industrial Ethernet Switches can be implemented in outdoor projects and challenging environments due to their stable performance in harsh environmental conditions, including a wide range of temperatures, high humidity, and electromagnetic radiation. PoE technology in these products greatly contributes to the easier power supplying of various network devices, and its management and configuration capabilities provide optimal performance.



- ▶ TYPE: Sepitam-PI208G-DFM
- ▶ Technical Specification of Sepitam-PI208G-DFM
- ▶ 8\*10/100/1000Base-T PoE ports & 2\*10/100/1000Base-X SFP ports Industrial Management Switch

## ▶ Description:

The Sepitam-PI208G-DFM is a full Gigabit managed industrial PoE switch. It has 8\*10/100/1000Mbps PoE ports and 2\*10/100/1000Mbps SFP fiber slot Uplink ports, port 1-8 can support IEEE 802.3af/at standard PoE power supply, single port POE power up to 30W, and the maximum PoE output power is 120W (at-240W). As a PoE power supply device, it can automatically detect and identify the electrical equipment that meets the standard and supply power through the cable. It can supply the PoE terminal equipment, such as wireless AP, network camera, network telephone, industrial sensor and so on, to meet the demand for high density PoE power supply network environment. It is suitable for intelligent transportation, rail transportation, electric power industry, mining, metallurgy and green energy construction and so on. A reliable communication networks.

Managed model supports a variety of network redundancy protocol STP/RSTP/MSTP (<50ms). When one-way network fails, communication can be recovered quickly to ensure uninterrupted communication of important applications. Sepitam-PI208G-DFM industrial series products fully follow industrial product design and material. The shell adopts aluminum alloy to enhance heat dissipation efficiency, IP40 protection grade, and ensures the stable operation of the equipment in bad environment. According to the actual application needs, through Web, CLI, SNMP network management, POE power supply management, port flow control, VLAN division, STP, RSTP and other functions of the application service configuration.



## ▶ Properties:

- 8\*10/100/1000Mbps PoE+ and 2\*10/100/1000Mbps SFP fiber Port Industrial PoE Switch, 1-8 ports support IEEE 802.3af/at;
- PoE port support AF/AT intelligent recognition. Standard power is 15.4W/port, Maximum power: 30W/port;
- Only support 1,2(+)/3,6(-);
- Support L2+ full network management, PoE network management and configuration;
- Input voltage: DC48-57V, Redundant dual power 5-bit industrial terminals;
- IP protection level: IP40;
- Rail-type installation;
- Alarm output for connecting to a relay

## ▶ Specifications:

| Model            | Sepitam-PI208G-DFM  |
|------------------|---|
| Interface        | 8*10/100/1000Base-T PoE ports (Data/Power)<br>2*100/1000Base-X SFP slot (Data)<br>1 * RS232 console port (115200, N,8,1)<br>2 set of V+, V- redundant DC power interface (5 Pin Phoenix terminal) |
| PoE Port         | Port 1-8 supports POE @ IEEE802.3af/at  |
| Network Protocol | IEEE802.3 10BASE-T<br>IEEE802.3u 100BASE-T/TX<br>IEEE802.3ab 1000BASE-T<br>IEEE802.3z 1000BASE-X<br>IEEE802.3u 100BASE-FX<br>IEEE802.3x.  |
| PoE Standard     | IEEE802.3af/at  |



| Model                     | Sepitam-PI208G-DFM  |
|---------------------------|---|
| SFP Port Characteristic   | Gigabit SFP optical fiber interface, default matching optical modules, need to buy separately, (optional order mode / multi-mode, single fiber / double fiber optical module. |
| Forwarding Mode           | Store and Forward   |
| Switching Capacity        | 192bps (Non-blocking)   |
| Forwarding Rate@64byte    | 14.88Mpps   |
| MAC                       | 8K  |
| Buffer Memory             | 4M  |
| Jumbo Frame               | 10K   |
| Twisted Pair Transmission | 10BASE-T: Cat3,4,5 UTP ( $\leq 100$ meter)<br>100BASE-TX: Cat5 or later UTP ( $\leq 100$ meter)<br>1000BASE-T: Cat5e or later UTP ( $\leq 100$ meter)                         |
| Optical Cable             | Multi mode: 850nm 0 ~ 500M;<br>Single mode: 1310nm 0 ~ 40KM, 1550nm 0 ~ 120KM.  |
| Power Supply Pin          | Default 1/2(+), 3/6(-);   |
| Working Voltage           | 48-57VDC; 5 Pin industrial Phoenix terminal, support anti-reverse protection.   |
| Max Power Per Port        | 30W; IEEE802.3af/at   |
| Total PWR / Input Voltage | 240W (48-57VDC)   |
| Power Consumption         | Standby:<10W; Full load:<240W   |
| LED Indicator             | Power indicator: PWR (Green); Network indicator: 1-10(Link/Act)/ (Orange); POE indicator: PoE (Green)   |
| Power Supply              | No, optional 48V/120W or 48V/240W industrial power supply   |



| Model                                   | Sepitam-PI208G-DFM   |
|---|--|
| LED Indicator                           | Power indicator: PWR (Green); Network indicator: 1-10(Link/Act)/ (Orange); POE indicator: PoE (Green)  |
| Power Supply                            | No, optional 48V/120W or 48V/240W industrial power supply  |
| Operation TEMP / Humidity               | -40~+75°C;5%~90% RH Non condensing   |
| Storage TEMP / Humidity                 | -40~+85°C;5%~95% RH Non condensing   |
| Dimension                               | 165*120*52mm   |
| Net /Gross Weight                       | <0.8kg / <1.2kg  |
| Lightning protection / protection level | <p>Lightning protection: 6KV 8/20us; Protection level: IP40</p> <p>IEC61000-4-2(ESD): ±8kV contact discharge, ±15kV air discharge</p> <p>IEC61000-4-3(RS):10V/m(80~1000MHz)</p> <p>IEC61000-4-4(EFT): power cable: ±4kV; data cable: ±2kV</p> <p>IEC61000-4-5(Surge): power cable:CM±4kV/DM±2kV; data cable: ±4kV</p> <p>IEC61000-4-6(radio frequency transmission):10V(150kHz~80MHz)</p> <p>IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m ,1s to 3s</p> <p>IEC61000-4-9(pulsed magnet field):1000A/m</p> <p>IEC61000-4-10(damped oscillation):30A/m 1MHz</p> <p>IEC61000-4-12/18(shockwave):CM 2.5kV, DM 1kV</p> <p>IEC61000-4-16(common-mode transmission):30V; 300V,1s</p> <p>FCC Part 15/CISPR22(EN55022): Class B</p> <p>IEC61000-6-2(Common Industrial Standard)</p> |
| Certification                           | CCC; CE mark, commercial; CE/LVD EN60950; FCC Part 15 Class B; RoHS;   |



| Model   | Sepitam-PI208G-DFM  |
|---|---|
| <b>Business features (only restricted management function models)</b> |   |
| Port  | <ul style="list-style-type: none"> <li>Support IEEE802.3x flow control (full duplex)</li> <li>Support for broadcast storm suppression based on port rate</li> <li>support speed limit for incoming and offline message traffic, with a minimum particle size of 64Kbps.</li> <li>Support port temperature protection settings</li> <li>Support port EEE green Ethernet energy saving configuration</li> </ul> |
| PoE Management  | <ul style="list-style-type: none"> <li>Support total power limit configuration for POE power supply</li> <li>Support PoE output power allocation per port, close / start af/at</li> <li>Support PoE output priority configuration per port</li> <li>Support PoE work status per port display</li> <li>Support power delay start</li> <li>Support PoE work and time scheduling</li> </ul>                      |
| Layer 3 Function  | <ul style="list-style-type: none"> <li>L2+ network management function</li> <li>Support IPV4/IPV6 management</li> <li>Support layer3 soft routing (weak three tier) forwarding,</li> <li>Support different network segments, communication between different VLAN</li> <li>Support static routing / default routing 128, 1024 ARP software forwarding</li> </ul>  |
| VLAN  | <ul style="list-style-type: none"> <li>Support port based VLAN (4K), IEEE802.1q</li> <li>Support protocol based VLAN</li> <li>Support Voice VLAN</li> <li>Support for MAC address-based VLANs</li> <li>Support Access, Trunk, Hybrid three types of port configuration</li> <li>Support QinQ configuration</li> </ul>   |
| Port Aggregation  | <ul style="list-style-type: none"> <li>Support LACP</li> <li>Support static polymerization</li> <li>Support the largest 8 aggregation groups, each aggregation group supports 8 ports.</li> </ul>   |





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|----------------------------------|---|
| Spanning Tree                    | <p>Support STP (IEEE802.1d)</p> <p>Support STPRSTP (IEEE802.1w)</p> <p>Support STP MSTP (IEEE802.1s)</p>  |
| Industrial Ring Network Protocol | <p>Support G.8032 (ERPS), support 255 loops at most, and supports 1024 devices perring.</p> <p>The self-healing time of the ring network is less than 20ms</p>  |
| Multicast                        | <p>Support IGMP Snooping V1/V2 and support 1024 multicast groups at most.</p> <p>Support the user's quick departure mechanism</p> <p>Support MLD Snooping V1/V2</p> <p>Support multicast VLAN</p>   |
| Mirror                           | Bi-directional traffic mirroring supporting the basic port  |
| QoS                              | <p>Support Diff-Serv QoS</p> <p>Each port supports 8 output queues</p> <p>Support 802.1p/DSCP priority mapping</p> <p>Support queue scheduling mechanism (SP, WRR, SP+WRR)</p> <p>Support priority tag Mark/Remark</p> <p>Support stream-based packet filtering</p> <p>Support for stream-based redirection</p> <p>Support flow-based speed limit</p> |
| ACL                              | <p>Support L2 to L4 packet filtering function, can match the first 80 bytes of the message, provide based on the source MAC address, destination MAC address, source IP address, destination IP address, IP protocol type, TCP/UDP port, TCP/UDP port range, VLAN and other definition ACL.</p> <p>Support ACL based on port and VLAN</p>             |
| Safety Characteristics           | <p>Support user grading management and password protection</p> <p>Support IEEE802.1X authentication / centralized MAC address authentication</p> <p>Support AAA&amp;RADIUS authentication</p> <p>Support the number of MAC address learning restrictions</p> <p>Support MAC address black hole</p>  |

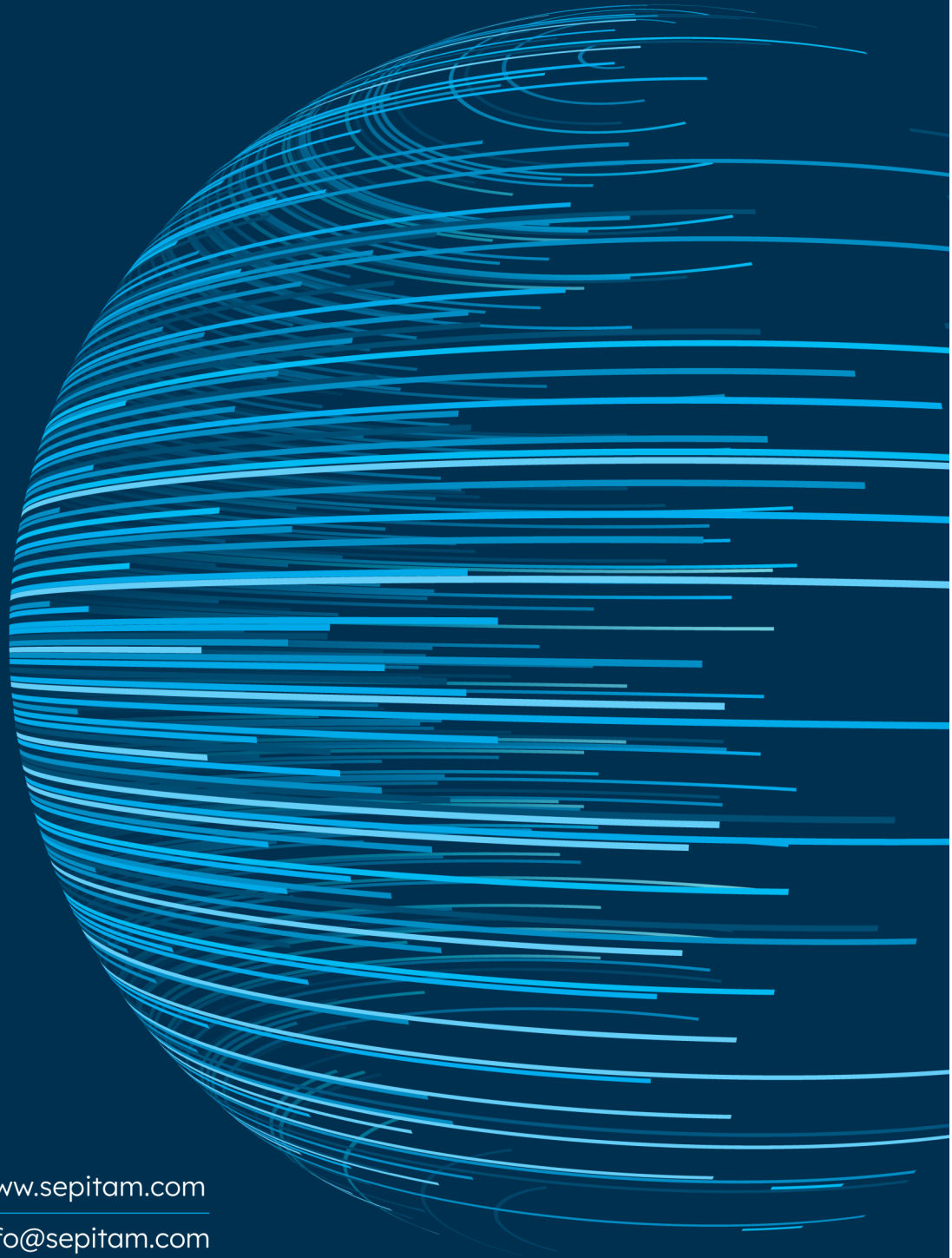


| Model                      | Sepitam-PI208G-DFM  |
|----------------------------|---|
| Safety Characteristics     | <ul style="list-style-type: none"> <li>Support SSL to ensure data transmission security</li> <li>Support port isolation</li> <li>Support the speed limit function of ARP message</li> <li>Support IP source address protection</li> <li>Support ARP intrusion detection function</li> <li>Support against DoS attacks</li> <li>Support port broadcast message suppression</li> <li>Support host data backup mechanism</li> <li>Binding capabilities of IP+MAC+VLAN+ ports</li> </ul>  |
| DHCP                       | <ul style="list-style-type: none"> <li>Support DHCP Client</li> <li>Support DHCP Snooping</li> <li>Support DHCP Serve</li> <li>Support DHCP Relay</li> </ul>  |
| Management and Maintenance | <ul style="list-style-type: none"> <li>Support Console/AUX Modem/Telnet/SSH2.0 CLI command line configuration</li> <li>Support WEB network management (HTTPS)</li> <li>Support FTP, TFTP, Xmodem, SFTP file download management</li> <li>Support SNMP V1/V2C/V3</li> <li>Support one bond reduction</li> <li>Support NTP clock</li> <li>Support system work log</li> <li>Support Ping detection</li> <li>Support cable state detection</li> <li>Support CPU instant utilization status view</li> <li>Support link layer discovery protocol LLDP</li> <li>Support NMS intelligent management center</li> </ul> |
| System Requirements        | <ul style="list-style-type: none"> <li>Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later;</li> <li>Cat5e or later Ethernet cable;</li> <li>TCP/ IP, network adapter and network operating system (Microsoft Windows, Linux or Mac OS X) installed on every computer in the network.</li> </ul>  |



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|-------|---|
| Relay | <p>"Power-off Warning Relay: Dying Gasp signal refers to the situation when the system input voltage cannot meet the normal operation of the system. The system will automatically send a signal to the head end, informing that the CPE end may not work properly. The head end responds accordingly by releasing the channel originally assigned to the CPE. The implementation principle of the Dying Gasp system: Chip manufacturers design a Dying Gasp performance module in the chip when designing it. This module performs the Dying Gasp function by monitoring the external input voltage. Since the prerequisite for this function to work properly is that the chip must still function normally and send a signal to the head end for a certain period, the voltages of various power sources for the chip's normal operation must not be lower than the minimum operating voltage described in the chip specification within the effective time of the defined Dying Gasp signal. In other words, the voltage difference between the activation voltage at the monitoring point and the working voltages of the chip must not be less than the specified Dying Gasp signal time length.</p> <p>As the name suggests, Dying Gasp, or "taking a breath before death," utilizes the last stored bit of electricity to allow the CPE to send out the final state information. It consists of two parts of the circuit:</p> <p>Large capacitor energy storage: When the external input power is cut off, the energy stored in the large capacitor is released to supply the energy needed for the core circuit to work for a breath of time, generally a few milliseconds. The circuit is simple, consisting of a diode, a large capacitor (electrolytic, with capacity depending on the power consumption of the circuit board and the range of rectification and stabilization voltage it can handle), and a voltage comparator.</p> <p>The main chip of ADSL has an input pin detecting the output level of the voltage comparator. Once triggered, it can send an interrupt signal to put the system into a "stay" state.</p> <p>Analysis and LAYOUT of Differential Signal Lines:</p> <p>Differential signals have three main advantages compared to ordinary single-ended signal lines:</p> <p>a. Strong anti-interference ability: Because the coupling between the two differential lines is good, when there is external noise interference, it is simultaneously coupled to</p> |

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