光普森科
GPSENKE

# 2*SFP+8*Gigabit RJ45 LAY-2 Managed Switch

## GPEM2000G-R 2+8 Series




INDUSTRIAL NETWORK SOLUTION SPECIALIST
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# Introduction

The GPEM2000G-R 2+8 series is a high-performance fully managed industrial Ethernet switch, offering 8 x 10/100/1000 Base-TX Ethernet ports and 2 x 1000Base-X SFP/SC (Optional) fiber ports. The ERPS self-healing time ≤ 20ms, and it support VLAN/Port Mirroring/ IGMP/ QoS/ LLDP/ 802.1X/ Fiber DDM/ IPV6 management/ Web/SNMP /Telnet/TFTP/Web upgrading those usual LAY-2 managed function.

The GPEM2000G-R 2+8 series support DC 12~58v dual-power, operates in -40° C ~ 75° C temperatures , and it supports 4KV surge protection, 8KV contact electrostatic protection and 15KV air electrostatic protection, has high EMC/EMI level, and can work stably in complex electromagnetic environments.

With its rugged design and high reliability, the GPEM2000G-R 2+8 series is ideal for use in demanding environments for new energy energy, electrical power plant, intelligent transportation, and video surveillance, offering a secure and dependable solution for large LAN deployments.

# Main Feature

- Support 8 * 10/100/1000Base-TX RJ45 Ethernet ports
- Support 2 * 1000Base-X SFP/SC(Optional) Fiber ports
- Support DC12~58v power edundant power supply
- Support reverse/over current protection
- Support VLAN/IGMP/QoS/LLDP/802.1X/DDM/IPV6/Web/SNMP/Telnet/TFTP/Web upgrading
- Support G.8032 ERPS protocol, recovery time ≤20ms
- Support 4KV surge Protection, 8kV Contact Protection, and 15kV Air ESD Protection
- Support Class A EMI Protection
- Support IP40 fan-less and Din-rail hardware design
- Support -40 ° C ~+75° C operation temperature

## Technical Parameter

| | |
|---|---|
| IEEE Standard | IEEE 802.3 10Base-T<br>IEEE 802.3u 100Base-TX<br>IEEE 802.3ab 1000Base-T<br>IEEE 802.3z 1000Base-X<br>IEEE 802.3x flow control and back pressure<br>IEEE 802.1D spanning tree protocol<br>IEEE 802.1w rapid spanning tree protocol<br>IEEE 802.1Q VLAN tagging<br>ITU-T G.8032 ERPS<br>IEEE 802.1X port authentication network control<br>IEEE 802.1ab LLDP<br>IEEE 802.3ad LACP |
| Switch Capacity | 20Gbps |
| Backplane Bandwidth | 29.76 Mpps |
| MAC | 16K |
| Packet Buffer | 2M bit |
| Jumbo Frame | Support 10Kbytes |
| VLAN | 4K |
| MDX/MIDX | Support |
| Watchdog | Support |
| Forward Delay | <5μs |

## Hardware Parameter

| | | |
|---|---|---|
| Size | | 48mmx130mmx98mm |
| Weight | | 0.65 KG |
| Port | Ethernet | 8*10/100/1000Base-TX RJ45 Ethernet MDI/MDI-X Adaptive |
| | Fiber | 2*1000Base-X SFP/SC Fiber Port (Optional) |
| | CONLOSE | 1* RJ45-568B Port |
| Power Port | | 1*4 Pin Phoenix Terminal 5.08mm |
| Power Input | | DC12~58 V Range Dual Power Supply Redundancy |
| Current Input | | 0.6A Max |
| Consumption | | ≤7 W |
| Power Protection | | Support dual power supply redundancy<br>Support reverse connection protection<br>Support over current protection |
| LED Indicator | | Power Indicator： PWR<br>Port Indicator：RJ45 Port（Link/ACT） |
| Protection level | | IP40 Protection Metal Shell |
| Heat Dissipation | | Fanless with natural cooling |
| Installation | | DIN rail mounting / Wall mounting |
| Working Environment | | Working Temperature：-40～75 ° C<br>Storage Temperature：-40～85 ° C<br>Humidity：5%～95%(Non-Condensation） |

## Software Parameter

| | |
|---|---|
| Port aggregation | Support 1/2.5GE Port Aggregation<br>Support Static / dynamic aggregation |
| Port features | Support IEEE802.3x flow control,<br>Support Port traffic statistics<br>Support port isolation<br>Support network storm suppression based on port bandwidth |
| MAC Address | Support Static MAC-Address Management<br>Support Dynamic MAC-Address Management<br>Support Filtering Mac-Address |
| VLAN | Support Access mode,Trunk mode, Hybrid mode |
| VLAN Type | Mac Based VLAN；IP Based VLAN；Protocal Based VLAN |
| Port mirroring | Support Multi to one port mirroring |
| Ring network protocol | Support IEEE802.1w RSTP protocal, STP,RSTP, MSTP<br>Support G.8032 ERPS protocol，<br>Support single ring, sub Ring and associated Sub ring |
| Multicast | IGMP snooping |
| QoS | Support Ingress Port-based Rate-limit<br>Support Egress Port-based Rate-limit |
| Security features | Support Dot1x,<br>Support Port Authorization<br>Support MAC Verification<br>Support RADIUS Server |
| Management and maintenance | Support LLDP<br>Support user management and login authentication<br>Support SNMPV1/V2C/V3<br>Support web management, HTTP1.1, HTTPS<br>Support Syslog and alarm grading<br>Support RMON(Remote Monitoring) alarm<br>Support NTP<br>Support Telnet Server/Client, SSH Server<br>Support TFTP, TFTP Client, web upgrading |

## Standard Protocol

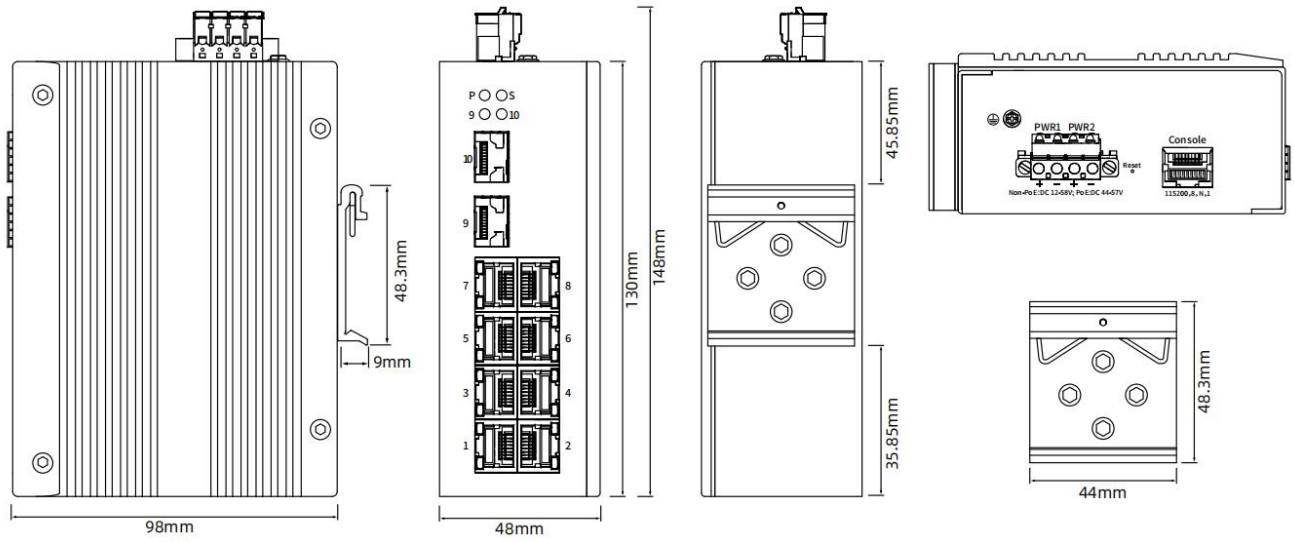
| | |
|---|---|
| Standard | EMI：<br>FCC Part 15 Subpart B Class A，EN 55022 Class A<br>EMS：<br>IEC (EN) 61000-4-2 (ESD): IEC 61000-4-2 8KV/15KV<br>IEC (EN) 61000-4-5 (Surge-Power): IEC 61000-4-5 6KV/4KV ( 8/20us)<br>IEC (EN) 61000-4-5 (Surge-Ethernet): IEC 61000-4-5 6KV/4KV(10/700us)<br><br>Shock： IEC 60068-2-27<br>Freefall： IEC 60068-2-32<br>Vibration： IEC 60068-2-6 |
| MTBF | 429,288 Hour ( Telcordia (Bellcore)，GB Standard) |
| Warranty | 5 - Year |

## LED Indicators

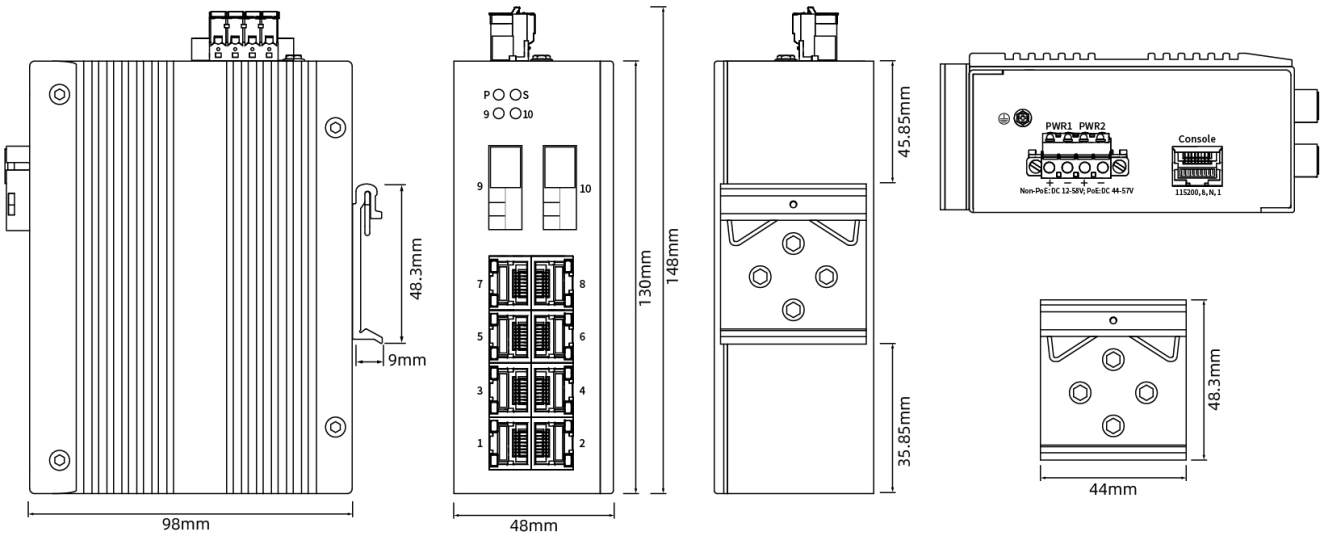
| | | | |
|---|---|---|---|
| P: Power | On: Device on Power Supply | | Off: Power off or Failed |
| S: SYS | On--Device on operation | Blinking：Device Initializing | Off: Without Power/Failure |
| 9~10: Fiber | On--Ports Link Up | Blinking：Data on TX/RX | Off: Ports don't Link |
| 1-8: Ethernet | Yellow (Speed) | | Green（Link/act） |
| | On：Ports speed on 1000M<br>Off：Ports speed on 10/100 M | | On--Ports Link Up<br>Off--Ports Link Down<br>Blinking--Data on TX/RX |

## Product Design

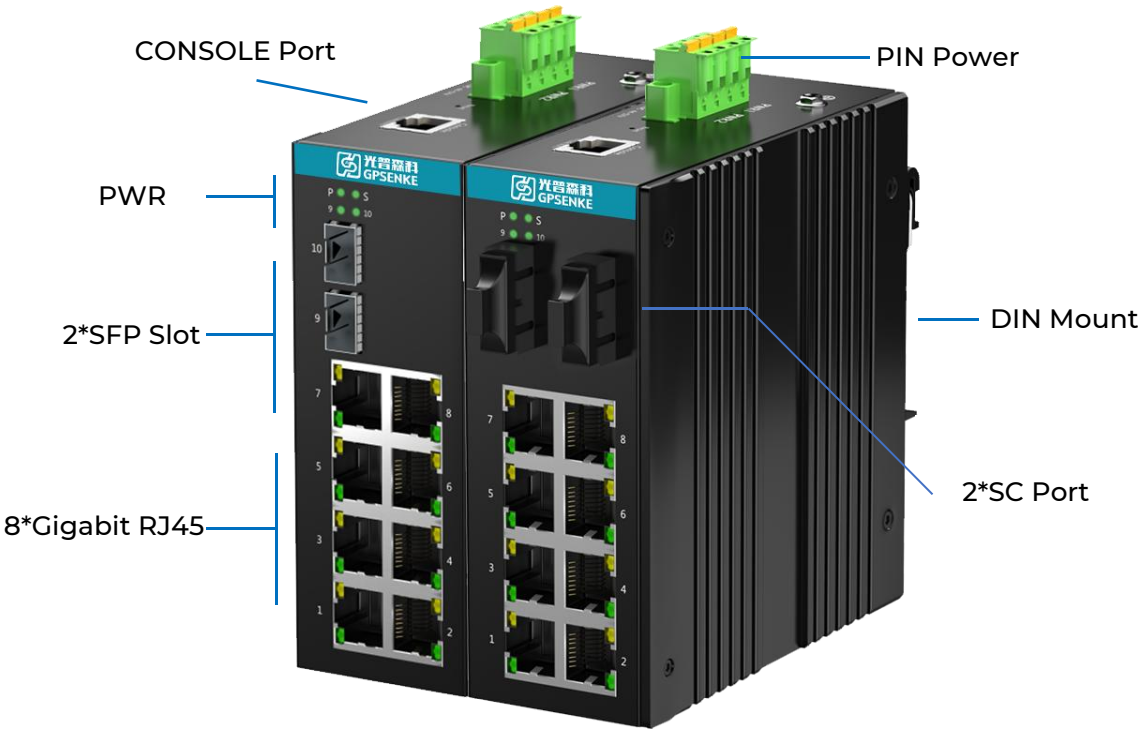
SFP




SC



## Appearance & Accessories





Packing*1


Device*1


Warranty Card*1

Note: - Power adapter (Optional)
- Default DIN rail mount, wall mounting bracket is optional.

## Accessories Selection(Optional)

| | |
|---|---|
| SFP Module<br>Or<br>1×9 SC Module | 1000M single-mode single-fiber LC(SC) / SC port: 20Km, 40Km, 60Km or above<br>1000M single-mode dual-fiber LC/SC port: 20Km, 40Km, 60Km or above<br>1000M multi-mode dual-fiber LC/SC port: 550m |
| Power Adapter | Desktop, Rail Type (Optional) |

## Model Selection

| Model | Ethernet | Fiber | Power |
|---|---|---|---|
| GPEM2000G-R-2GX8GT-2D2 | 8*10/100/1000Base-TX RJ45 | 2*1000Base-X SFP | 12~58VDC Dual Power |
| GPEM2000G-R-2GS8GT-SC20-2D2 | 8*10/100/1000Base-TX RJ45 | 2*1000Base-X multi-Mode SC 20KM | 12~58VDC Dual Power |
| GPEM2000G-R-2GM8GT-SC550-2D2 | 8*10/100/1000Base-TX RJ45 | 2*1000Base-X multi-Mode SC 500M | 12~58VDC Dual Power |

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