

# 28 Ports 10/100/1000M SMART Industrial POE switch with 24x 1G RJ45 & 4x 1/10G SFP+

SMART Industrial switch Fiber Switch LIMOX28-4TG is a 24x 10/100/1000M RJ45 port and 4x 1/10G SFP+ ports. Managed Industrial Switch with 1x console port. It consumes low power consumption, supports wide operating temperature (-40 to +80°C). Its casing is IP40 rated and meet EMC industrial level 4 requirements. These switches are specially designed for harsh industrial environments. It is suitable for wind power, subway PIS, power SCADA, sewage treatment, intelligent transportation systems applications.



### FEATURES

- 24x 10/100/1000M RJ45 , 4x 1/10G SFP+
- L2+ features provide better manageability, security, ACL/ QoS, and performance.
- L2+ Switching features including 802.10 VLAN, Mirroring, Port isolation, IGMP Snooping, DHCP Snooping, LLDP, IP Source Guard, ARP inspection, ACLs etc.
- Support spanning tree STP(802.1D) and RSTP(802.1W). Jumbo frames support up to 9.6K kilobytes.
- Support enhanced management through WEB, CLI, TELNET, SSH, SNMP and cable diagnosis
- G.8032, ERPS Ethernet Ring Protection Switching (<50ms)

#### SPECIFICATIONS

| Number of PoE RJ45 ports (10/100/1000Base-T) | 24  |
|--|---|
| Number of 1/10G SFP+ ports                   | 4   |
|  | Console port (RJ45-RS232), Reset Switch to restore factory settings                               |
| Managed Type                                 | L2+   |
| Performance Specifications                   |   |
| Network Protocol and Standards               | 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 ; IEEE802.3af/at(PoE Standard)       |
| Ethernet Port Feature                        | Port 1-24 can support 10/100/1000Base-T auto detect, full/half duplex MDI/MDI-X adaptive          |
| Fiber Port Feature                           | 10G SFP+ fiber interface (Fiber module is not included, need to order separately,                 |
|  | module options include single/multi mode, single/dual fiber, LC)                                  |
| Forwarding Mode                              | Store and Forward(Full Wire Speed)  |
| Switching Capacity                           | 598Gbps   |
| Forwarding Rate@64byte                       | 107.14 Mpps   |
| MAC  | 32К   |
| Buffer Memory                                | 32M   |
| Jumbo Frame                                  | 9.6K  |
| 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 Cable                          | Multi-mode:850nm 0~300M(10G) ,850nm 0~500M (1.25G); ;   |
|  | Single-mode:1310nm 0~40KM,1550nm 0~120KM.   |
| 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, off& af &at  |
| PowerConsumption (Max Power Per Port)        | Standby<25W; Full Load<400W (30W, IEEE802.3af/at)   |
| Power Supply                                 | Built-in power supply, AC 100~240V 50-60Hz 5A   |
| Power Input Interface                        | Dual input power interface, AC power supply priority,connection; 2 sets of DC48-57V input interfa |
|  | support anti-reverse protection, power-off automatic switching DC ;                               |
|  | connection; 2 sets of DC48-57V input interface; alarm switch ; 1 set of AC power input interface  |
| LED Indicator                                | Power:PWR(yellow); system:SYS(yellow);network;Link(yellow);PoE:PoE (green);Fiber port:L/A(gree    |
| Heat Dissipation                             | Low noise; fan active cooling   |
| Operation /Storage TEMP (Humidity)           | -40~+80°C / -40~+85°C (5%~90% RH Non condensing)  |
| Dimension (LxWxH)                            | 440*300*45mm  |
| Net /Gross Weight                            | <4.4kg / <5.0kg   |

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| Lightning protection/ | Lightning protection: 6KV 8/20us;   |
|-----------------------|---|
| protection level      | 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; cable:±4kV;            |
|                       | IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data; 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 A ; 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 EN60950; FCC Part 15 Class B; RoHS;  |

| Managed Series Feature           |   |
|----------------------------------|---|
| Interface                        | IEEE802.3x flow control (full duplex) ; Broadcast storm suppression for port rate                             |
|                                  | support speed limit for incoming and offline message traffic, with a minimum particle size of 64Kbps.         |
|                                  | Temperature protection setting ; Energy saving configuration of port EEE Ethernet                             |
| PoE Management                   | Total power limit of PoE power supply ; PoE output power allocation per port, close /af/at ;                  |
|                                  | PoE output priority configuration for each port ; PoE working state display per port;                         |
|                                  | Power delay start ; PoE work and time scheduling  |
| Layer3 Function                  | Support L2+ managed function,Support IPV4/IPV6 management, support layer3 soft routing (weak three tier)      |
|                                  | forwarding, Support different network segments, communication between different VLAN, Support static routing/ |
|                                  | default routing 128, 1024 ARP software forwarding   |
| VLAN                             | Support port based VLAN (4K), IEEE802.1q ; Support protocol based VLAN ;                                      |
|                                  | Support Access, Trunk, Hybrid three types of port configuration ; Support QinQ configuration                  |
| Port Aggregation                 | Support LACP ; Support static polymerization;   |
|                                  | Support the largest 8 aggregation groups, each aggregation group supports 8 ports.                            |
| Spanning Tree                    | STP (IEEE802.1d) ; RSTP (IEEE802.1w) ; MSTP (IEEE802.1s)  |
| Industrial Ring Network Protocol | Support G.8032 (ERPS), support 255 loops at most, and supports 1024 devices per ring;                         |
| Multicast                        | The self healing time of the ring network is less than 20ms   |
|                                  | Support IGMP Snooping V1/V2 and support 1024 multicast groups at most;  |
|                                  | Support the user's quick departure mechanism ; Support MLD Snooping V1/V2 ; Support multicast VLAN            |
| Image                            | Bi-directional traffic mirroring supporting the basic port  |
| QoS                              | Diff-Serv QoS ; Each port supports 8 output queues; Support 802.1p/DSCP priority mapping ;                    |
|                                  | Support queue scheduling mechanism (SP, WRR, SP+WRR) ; priority tag Mark/Remark ;                             |
|                                  | stream based packet filtering ; Support for stream based redirection ; Support flow based speed limit         |
| ACL                              | 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. ;                          |
|                                  | Support ACL based on port and VLAN  |

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| Safety Characteristics     | Support user grading management and password protection ; Support AAA&RADIUS authentication;                             |
|----------------------------|--|
|                            | Support IEEE802.1X authentication / centralized MAC address authentication ; Support port isolation ;                    |
|                            | Support the number of MAC address learning restrictions ; Support MAC address black hole                                 |
|                            | Support SSH 2 to provide secure passwords for user login ; Support SSL to ensure data transmission security              |
|                            | Support the speed limit function of ARP message ; Support IP source address protection                                   |
|                            | Support ARP intrusion detection function ; Support against DoS attacks; Support port broadcast message suppression       |
|                            | Support host data backup mechanism ; Binding capabilities of IP+MAC+VLAN+ ports  |
| DHCP                       | Support DHCP Client ; Support DHCP Snooping ; Suport DHCP Serve ; Suport DHCP Relay                                      |
| Management And Maintenance | Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later; |
|                            | Cat5e or later Ethernet cable;TCP/ IP, installed on on every computer in the network.;                                   |
|                            | network adapter and network operating system (Microsoft Windows, Linux or Mac OS X)                                      |

### FUNCTIONAL DIAGRAM



#### ORDERING INFORMATION

| PN           | DESCRIPTION  |  |
|--------------|--|--|
| LIMPOX24-4TG | 24 Ports 10/100/1000M SMART Industrial POE switch with 20x 1G RJ45 (1-8port POE) & 4x 1/10G SFP+ |  |
| X-           | F: IEEE802.3af (154W per port)   |  |
|              | T- IEEE802.3at (25.5W per port)  |  |
| PEA-52-130   | Power adaptor 220VAC~52VDC: 130W   |  |
| PEA-52-250   | Power adaptor 220VAC~52VDC: 250W   |  |