

# TELECOM/DATACOM SYSTEM

## 24 Ports 10/100/1000M SMART+ Industrial switch with 12x 1G RJ45, 8x 1G SFP & 4x 1/10G SFP+

SMART+ Industrial switch Fiber Switch LIR0X24-8SFP-4TG is a 12 x RJ45port 10/100/1000M, 8x 1000M SFP, 4x 1/10G SFP+ ports Managed (L2+ / L3) Industrial Switch with 1x console port. It consumes low power consumption, supports wide operating temperature (-40 to +85°C). 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

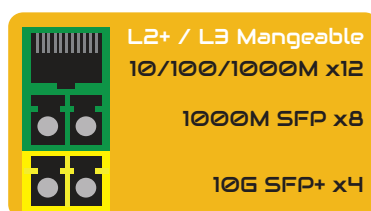
- 12x RJ45port (10/100/1000M), 8x 1000M SFP , 4x 1/10G SFP+ and 1 console port
- L2+/L3 features provide better manageability, security, QoS, and performance.
- L2+/L3 Switching features including 802.1Q VLAN, Mirroring, Port isolation, IGMP Snooping, DHCP Snooping, LLDP, IP Source Guard, ARP inspection, 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 RJ45 ports (10/100/1000BaseT)	12
Number of 1000M SFP ports	8
Number of 1/10G SFP+ ports	4
Console port	YES (RS232)
Ethernet Port	Port 1-12 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	Gigabit SFP optical fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
SFP Port Expansion	Turbo overclocking 2.5G optical module and ring
Optical Cable/ Distance	Multi mode: 850nm / 0 ~ 500M, single mode: 1310nm / 0 ~ 40KM, 1550nm / 0 ~ 120KM
Network Management Type	L2+ / L3
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T; IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T IEEE802.3z 1000Base-X; IEEE802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	598Gbps
Forwarding Rate@64byte	89.28Mpps
MAC	32K
Buffer Memory	32M
Jumbo Frame	9.6K
Reset Switch	Yes, One-button factory reset
Power Consumption	Standby<20W, Full load<30W
Total PWR / Input Voltage	36W /48VDC
Working Voltage	12-48VDC, 6 Pin industrial Phoenix terminal, support anti-reverse protection.
Power Supply	No, optional 24V/36W or 24V/60W industrial power supply
Operation TEMP / Humidity	40~+80°C;5%-90% RH Non condensing.
Storage TEMP / Humidity	-40~+85°C;5%-95% RH Non condensing.
Dimension (L*W*H)	166*149*68mm
Net /Gross Weight	<2.2kg / <2.8kg

<i>Lightning protection / protection level</i>	Lightning protection: 6KV 8/20us; Protection level: IP40 ;IEC61000-4-9(pulsed magnet field):1000A/m ; 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;IEC61000-4-12/18(shockwave):CM 2.5kV,DM 1kV ; IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV;FCC Part 15/CISPR22(EN55022):Class A ; IEC61000-4-6(radio frequency transmission):10V(150kHz-80MHz);IEC61000-6-2(Common Industrial Standard) ; IEC61000-4-8(power frequency magnetic field):100A/m;1000A/m ,1s to 3s; IEC61000-4-10(damped oscillation):30A/m 1MHz ; IEC61000-4-16(common-mode transmission):30V; 300V,1s
<i>Mechanical Properties</i>	IEC60068-2-6 (anti vibration) ; IEC60068-2-27 (anti shock) ; IEC60068-2-32 (free fall)
<i>Certification</i>	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS
<i>Network Management Features</i>	
<i>Interface</i>	IEEE802.3X (Full-duplex) ; Port temperature protection setting; Port green Ethernet Energy-saving setting; Broadcast storm control based on port speed ;The speed limit of the message flow in the access port; The minimum particle size is 64Kbps.
<i>Layer 3 Features</i>	L2+ network management ,IPV4/IPV6 management; L3 soft routing forwarding , Static route, Default route @ 128 pcs, APR @ 1024 pcs
<i>VLAN</i>	4K VLAN based on port, IEEE802.1q ; VLAN based on the protocol ; VLAN based on MAC Voice VLAN, QinQ configuration ; Port configuration of Access, Trunk, Hybrid
<i>Port Aggregation</i>	LACP, Static aggregation ; Max 12 aggregation groups and 8 ports per group.
<i>Spanning Tree</i>	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
<i>Industrial Ring Network Protocol</i>	G.8032 (ERPS),Recovery time less than 20ms ; 250 Ring at most, Max 1024 devices per ring.
<i>Multicast</i>	MLD Snooping v1/v2,Multicast VLAN ; IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
<i>Port Mirroring</i>	Bidirectional data mirroring based on port
<i>QoS</i>	Flow-based Rate Limiting ; Flow-based Packet Filtering ; Queue Scheduling Algorithm (SP, WRR, SP+WRR) ; 802.1p/DSCP priority mapping ; Diff-Serv QoS,Priority Mark/Remark ;8*Output queues of each port
<i>ACL</i>	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.
<i>Security</i>	IP-MAC-VLAN-Port binding;ARP inspection,Anti-DoS attack;AAA & RADIUS,MAC learning limit; Mac black holes,IP source protection;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
<i>DHCP</i>	DHCP Client,DHCP Snooping, DHCP Server,DHCP Relay
<i>Management</i>	One-key recovery ; Cable Diagnose,LLDP; Web Management (HTTPS) ; NTP,System work log,Ping Test; CPU instant utilization status view ; Console/AUX Modem/Telnet/SSH2.0 CLI; Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3
<i>System</i>	NMS - smart network management system platform(LLDP+SNMP)

## FUNCTIONAL DIAGRAM



## ORDERING INFORMATION

PN	DESCRIPTION
LIROX24-8SFP-4TG	24 Ports 10/100/1000M SMART+ Industrial Switch With 12x 10/100/1000M RJ45, 8x 1000M G SFP & 4x 1/10G SFP+