

# TELECOM/DATACOM SYSTEM

## 44 Ports 10/100/1000M SMART+ Industrial switch with 12x 10/100/1000M RJ45, 28x 1G SFP & 4x 10G SFP+

SMART+ Industrial switch Fiber Switch LIR0X44-28SFP-4TG is a 12x RJ45port 10/100/1000M, 28x 1000M SFP, 4x 1/10G SFP+ ports Managed (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 10/100/1000M RJ45 , 28x 1000M SFP and 4x 10G SFP+ and 1 console port
- L3 features provide better manageability, security, QoS, and performance.
- L3 management features including CLI command line (Console, Telnet), SNMP (V1/V2/V3), HTTPS, SSLV3, and SSHV1/V2.RMON, system log, LLDP, and port traffic statistics.CPU monitoring, memory monitoring, Ping test, and cable diagnose.
- G.8032, ERPS Ethernet Ring Protection Switching (<50ms)
- Low power consumption, fan active cooling , galvanized steel casing.
- Self-developed power supply, high redundancy design, providing a long term and stable power output.

### SPECIFICATIONS

Number of RJ45 ports (10/100/1000BaseT)	12
Number of 1000M SFP ports	28
Number of 1/10G SFP+ ports	4
Console port	YES (RJ45-RS232)
Reset Button	YES
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;
Ethernet Port Feature	10/100/1000Base-T,Auto-sensing,Full/half duplex MDI/MDI-X, self-adaption
Fiber Port Feature	Gigabit SFP /10G SFP+ fiber interface, default matching optical modules (optional order single-mode / multi-mode, single fiber / dual fiber optical module. LC)
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	598Gbps
Forwarding Rate@64byte	119.04Mpps
MAC	32K
Buffer Memory	32M
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.
PowerConsumption (Max Power Per Port)	Standby<20W; Full Load<130W (30W)
Power Supply	Built-in power supply, AC100~240V 50~60Hz 2.3A
Power Input Interface	Dual input power interface, AC power supply priority,connection; 2 sets of DC48-57V input interface; 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

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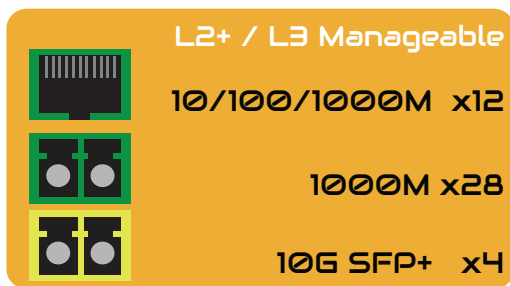
LED Indicator	Power:PWR(yellow); system:SYS(yellow);network;Link(yellow);Fiber port:L/A(green)
Heat Dissipation	Low noise; fan active cooling
Operation /Storage TEMP (Humidity)	-40~+80° C / -40~+85° C (5%-90% RH Non condensing)
Dimension (LxWxH)	440x 298x 44mm
Net /Gross Weight	<5.3kg / <5.8kg
Lightning protection	Lightning protection: 6KV 8/20us;Protection level: IP30 ; IEC61000-4-2(ESD):±8kV contact discharge,±15kV air discharge
/ protection level	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
Layer3 Function	Support L3 managed function,IPV4/IPV6 management ; L3 soft routing forwarding, Static route, Default route @ 128 pcs, APR @ 1024 pcs
VLAN	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
Port Aggregation	LACP, Static aggregation,Max 22 aggregation groups and 8 ports per group.
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	IGMP Snooping v1/v2/v3, Max 1024 multicast groups, Fast log out ; MLD Snooping v1/v2,Multicast VLAN
Image	Bidirectional data mirroring based on port
QoS	Diff-Serv QoS,Priority Mark/Remark ; 8*Output queues of each port ; 802.1p/DSCP priority mapping; Queue Scheduling Algorithm (SP, WRR, SP+WRR); Flow-based Packet Filtering ;Flow-based Redirection Flow-based Rate Limiting
ACL	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. Port-based Issuing ACL. ACL based on port and VLAN
Safety	User hierarchical management and password protection;SSH 2.0,SSL,Port isolation,ARP message speed limit; Broadcast storm control,Backup for host datum; IEEE802.1X & MAC address authentication; IP-MAC-VLAN-Port binding ; Mac black holes,IP source protection;AAA & RADIUS,MAC learning limit ; ARP inspection,Anti-DoS attack
DHCP	Support DHCP Client ; Support DHCP Snooping ; Suport DHCP Serve ; Suport DHCP Relay ; One-key recovery

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Management And Maintenance	Console/AUX Modem/Telnet/SSH2.0 CLI ;Web Management (HTTPS) ; Cable Diagnose,LLDP ;
	Download & Management on FTP, TFTP, Xmodem, SFTP,SNMP V1/V2C/V3;
	NTP, System work log, Ping Test ; CPU instant utilization status view;
	Smart Network Management System Platform (LLDP+SNMP)
System	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later;
	Category 5 Ethernet network cable; TCP/IP, network adapter, and network operating system
	(such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

## FUNCTIONAL DIAGRAM



## ORDERING INFORMATION

PN	Description
LIROX44-28SFP-4TG	44 Ports 10/100/1000M SMART+ Industrial switch with 12x 10/100/1000M RJ45, 28x 1000M SFP & 4x 10G SFP+
x	F: IEEE802.3af (15.4W per port)
	T- IEEE802.3at (25.5W per port)