

16-Port 10G Uplink L3 Managed Industrial Ethernet Fiber Switch

(IS830-12E4F-B)

Product Description

The IS830-12E4F-B is a 10G uplink L3 managed industrial Ethernet fiber switch. it has 12*10/100/1000Base-T RJ45 ports and 4*1/10G SFP+ fiber slot ports. Each port can support wire-speed forwarding.

The IS830-12E4F-B has L3 full network management function, IPV4/IPV6 management, software/static route forwarding, security protection mechanisms, complete ACL/QoS policies, and rich VLAN functions, and is easy to manage and maintain. Supports multiple network redundancy protocols STP/RSTP/MSTP (<50ms) and (ITU-T G.8032) ERPS(<20ms) to improve link backup and network reliability. Any port can be looped, supporting chain, star, Double star, ring, tangent ring, intersecting ring, coupling ring, self-healing within 20ms of the ring network. When a one-way network fails, communication can be quickly resumed to ensure uninterrupted communication of important applications. This series of models has high reliability, high security, and high manageability. It ensures reliable transmission of critical data, supports remote management, and can be clustered with the NMS network management platform of the optical network to achieve blind management. IS830-12E4F-B industrial grade series products fully comply with industrial product design and materials. The shell is made of aluminum alloy to enhance heat dissipation performance, and has excellent industrial field environment adaptability (including mechanical stability, climatic environment adaptability, electromagnetic environment adaptability, etc.), protection class up to IP40, support dual redundant power supply, low power fanless cooling technology, MTBF average trouble-free working time up to 35 years, 5-year warranty.



Product Features

● Full gigabit port ,10G uplink

- ✧ All series supports Ethernet port and SFP port combination, which enables users to flexibly build networking to meet the needs of various scenarios.
- ✧ Support non-blocking wire-speed forwarding.
- ✧ Support full-duplex based on IEEE802.3x and half-duplex based on backpressure.

● Strong business processing capability

- ✧ IEEE802.1Q VLAN, flexible VLAN division, Voice VLAN and QinQ configuration.
- ✧ QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including Equ, SP, WRR & SP+WRR.
- ✧ ALC, filter data packet through configuring matching rules, processing operation & time permission, and provide flexible and safe access control.
- ✧ IGMP V1/V2 and IGMP Snooping.
- ✧ ERPS/STP/RSTP/MSTP.
- ✧ Static and dynamic aggregation.

● Security

- ✧ 802.1X authentication.
- ✧ Port isolation, Storm control.
- ✧ IP-MAC-VLAN-Port binding.

● Stable and reliable

- ✧ CCC, CE, FCC, RoHS.
- ✧ Low power consumption, no fan , aluminum casing.
- ✧ The user-friendly panel, it can show the device status through the LED indicator of PWR, Link.

● Easy operation and maintenance management

- ✧ HTTPS, SSLV3, and SSHV1/V2.
- ✧ RMON, system log, LLDP, and port traffic statistics.
- ✧ CPU monitoring, memory monitoring, Ping test, and cable diagnose.
- ✧ Web management, CLI command line (Console, Telnet), SNMP (V1/V2/V3).

Product Parameters

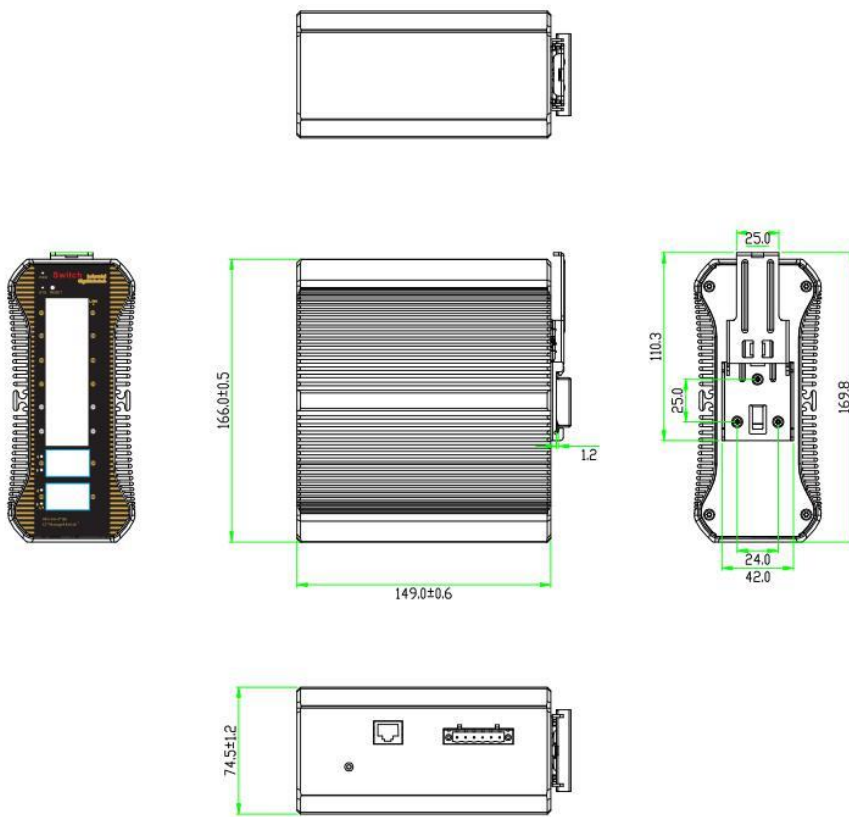
Model	IS830-12E4F-B
Interface Characteristics	
Fixed Port	12*10/100/1000Base-T uplink RJ45 ports (Data)
	4*1/10G uplink SFP+ slot ports (Data)
	2 set of V+, V- redundant DC power interface (5Pin Phoenix terminal)
	Power off alarm switch (FAULT)
Ethernet Port	Port 1-12 support 10/100/1000Base-T, auto-sensing, 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 /10G 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, 850nm / 0 ~ 300M (10G);
	single mode: 1310nm / 0 ~ 40KM, 1550nm/ 0 ~ 120KM.
Chip Parameter	
Network Management Type	L3
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T
	IEEE802.3u 100Base-TX , IEEE802.3ab 1000Base-T
	IEEE802.3z 1000Base-X
	IEEE802.3ae 10GBase-LR/SR
	IEEE802.3x
Forwarding Mode	Store and Forward(Full Wire Speed)
Switching Capacity	598Gbps
Forwarding	77.38Mpps
Rate@64byte	
MAC	32K

Buffer Memory	32M
Jumbo Frame	9.6K
LED Indicator	System : SYS (green), Network: Link (yellow); Fiber Port : L/A (green)
Reset Switch	Yes, Press and hold the reset switch for 10s and release it to restore the factory settings
Power	
Total PWR / Input Voltage	36W/48V
Working Voltage	12-48VDC, 5 Pin industrial Phoenix terminal, support anti-reverse protection.
Power Consumption	Standby<16W, Full load<28W
Power Supply	No, optional 24V/36W industrial power supply
Physical Parameter	
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*74.5mm
Net /Gross Weight	<1.9kg / <2.4 kg
Installation	Desktop, DIN rail
Certification & Warranty	
Lightning protection / protection level	Lightning protection: 6KV 8/20us; Protection level: IP40
	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
	IEC61000-4-5(Surge):power cable:CM±4kV/DM±2kV; data cable:±4kV
	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

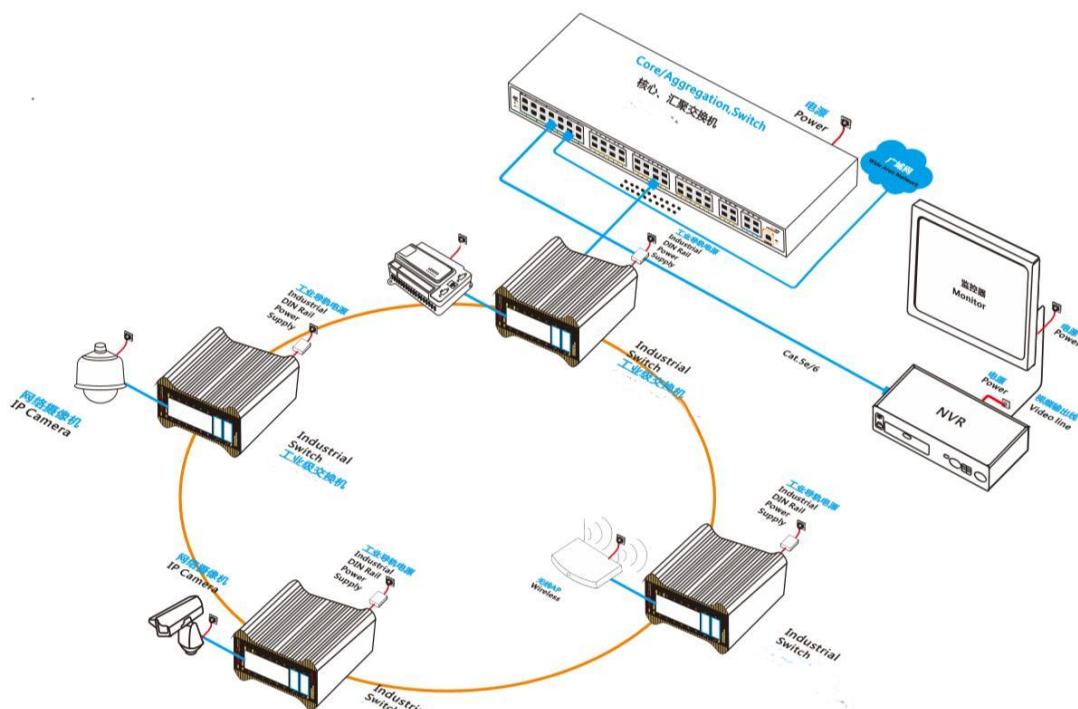
	IEC61000-6-2(Common Industrial Standard)
Mechanical Properties	IEC60068-2-6 (anti vibration)
	IEC60068-2-27 (anti shock)
	IEC60068-2-32 (free fall)
Certification	CCC;CE mark, commercial; CE/LVD EN60950;FCC Part 15 Class B; RoHS
Warranty	5 years, lifelong maintenance.
Network Management Features	
Interface	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.
Layer 3 Features	L3 network management ,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 8 aggregation groups and 8 ports per group.
Spanning Tree	STP (IEEE802.1d),RSTP (IEEE802.1w),MSTP (IEEE802.1s)
Industrial Ring Network Protocol	G.8032 (ERPS),Recovery time less than 20ms
	250 Ring at most, Max 254 devices per ring.
Multicast	MLD Snooping v1/v2,Multicast VLAN
	IGMP Snooping v1/v2, Max 1024 multicast groups, Fast log out
Port Mirroring	Bidirectional data mirroring based on port
QoS	Flow-based Rate Limiting
	Flow-based Packet Filtering

	8*Output queues of each port
	802.1p/DSCP priority mapping
	Diff-Serv QoS,Priority Mark/Remark
	Queue Scheduling Algorithm (SP, WRR, SP+WRR)
ACL	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.
Security	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
DHCP	DHCP Client,DHCP Snooping, DHCP Server,DHCP Relay
Management	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
	NMS - smart network management system platform(LLDP+SNMP)
System	Category 5 Ethernet network cable
	Web browser: Mozilla Firefox 2.5 or higher, Google browser chrome V42 or higher, Microsoft Internet Explorer10 or later;
	TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, or Mac OS X) installed on each computer in a network

Product size



Application



Order Information

Model	Description	Recommended Power Supply
IS830-12E4F-B	L3 managed industrial Ethernet fiber switch with 12*10/100/1000M RJ45 ports and 4*1/10G uplink SFP+ slot ports, Support dual DC power supply input and DIN rail mounting.	36W
Note: Industrial Ethernet switch does not match the SFP optical module and power supply.		

PACKING LIST

	CONTENT	QTY	UNIT
PACKING LIST	16-port 10G uplink L3 managed industrial Ethernet switch	1	SET
	RJ45-DB9 Line	1	PC
	User Guide	1	PC
	Warranty Card	1	PC