

# 36-port 10G Uplink L3 Managed Industrial Ethernet Switch

## (IS830-8E24F4F-60W)

### Product Description

The IS830-8E24F4F-60W is a 10G uplink L3 managed industrial Ethernet fiber switch. It has 8\*10/100/1000Base-T RJ45 ports and 24\*100/1000M SFP fiber slot ports and 4\*1/10G SFP+ fiber slot ports. Each port can support wire-speed forwarding.

The IS830-8E24F4F-60W has L3 full network management function, supports IPV4/IPV6 management, supports static route full line rate forwarding, supports complete security protection mechanism, complete ACL/QoS policy 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. When one-way network fails, communication can be quickly restored to ensure important Uninterrupted communication for applications. According to the actual application requirements, you can configure multiple application services such as port traffic control, VLAN division, and SNMP through the Web network management mode. It meets the needs of various industrial Ethernet application environments and is suitable for industrial, intelligent transportation, rail transit, power industry, mining, petroleum, marine, metallurgical and green energy construction to form a cost-effective, stable and reliable communication network.



## Product Features

### ● Gigabit multi fiber port access, 10G uplink

- ✧ All series supports "Gigabit Ethernet port + Gigabit SFP port+10G SFP+ uplink 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

- ✧ Low power consumption, No fan, aluminum shell.
- ✧ Self-developed power supply, high redundancy design, providing a long term and stable power output.
- ✧ CCC, CE, FCC, RoHS.
- ✧ The user-friendly panel, it can show the device status through the LED indicator of PWR, SYS, Link , L/A.

### ● 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                      | IS830-8E24F4F-60W                                                                                                                                                       |
| Interface Characteristics  |                                                                                                                                                                         |
| Fixed Port                 | 8*10/100/1000Base-T RJ45 ports (Data)                                                                                                                                   |
|                            | 24*100/1000Base-X uplink SFP fiber slot ports (Data)                                                                                                                    |
|                            | 4*1/10G uplink SFP+ fiber slot ports (Data)                                                                                                                             |
|                            | 1*Console RS232 port (115200,N,8,1)                                                                                                                                     |
|                            | Alarm switch(FAULT)                                                                                                                                                     |
|                            | 1 *AC100-240V power input port                                                                                                                                          |
|                            | 2 * DC12V power input ports ( support anti-reverse protection)                                                                                                          |
| Ethernet Port              | Port 1-8 support 10/100/1000Base-T,auto-sensing,Full/half duplex MDI/MDI-X self-adaption                                                                                |
| Twisted Pair Transmission  | 10BASE-T: Cat3,4,5 UTP( $\leq 100$ meter)                                                                                                                               |
|                            | 100BASE-TX: Cat5 or later UTP( $\leq 100$ meter)                                                                                                                        |
|                            | 1000BASE-T: Cat5e or later UTP( $\leq 100$ 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/<br>Distance | Multi-mode: 850nm / 0 ~ 500M, 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 (non-blocking)                                                                                                                                                  |

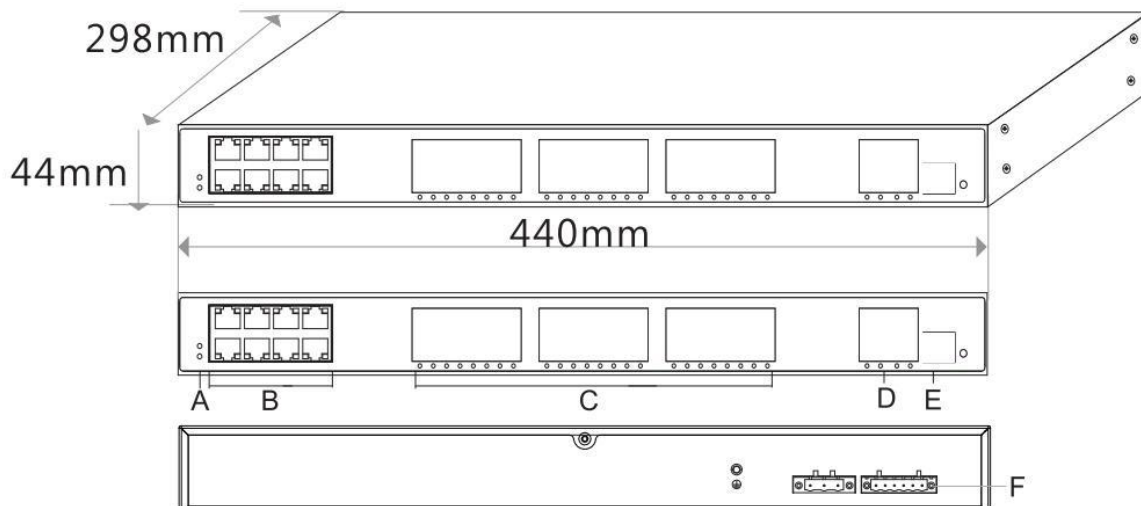
|                                         |                                                                                                          |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------|
| Forwarding                              | 107.14Mpps                                                                                               |
| Rate@64byte                             |                                                                                                          |
| MAC                                     | 32K                                                                                                      |
| Buffer Memory                           | 32M                                                                                                      |
| Jumbo Frame                             | 9.6K                                                                                                     |
| LED Indicator                           | Power: PWR (yellow), system:SYS (yellow), network: Link/Act (yellow), Fiber port : L/A (green)           |
| Reset Switch                            | Yes, support one key to restore factory settings                                                         |
| Power                                   |                                                                                                          |
| Total PWR / Input Voltage               | 60W (AC100-240V)                                                                                         |
| Power Consumption                       | Standby<35W, Full Load<50W                                                                               |
| Power Supply                            | Built-in power supply, AC 100~240V 50-60Hz 0.65A                                                         |
| Power Input Interface                   | Dual input power port design, AC power supply priority,                                                  |
|                                         | support anti-reverse protection, power-off automatic switching DC connection; 2*DC12V power input ports; |
|                                         | Alarm switch, 1*AC power input port                                                                      |
| 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)                       | 440*298*44mm                                                                                             |
| Net /Gross Weight                       | <5.3kg / <5.8kg                                                                                          |
| Installation                            | Desktop type ,19 inch 1U cabinet installation                                                            |
| 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 software routing is forwarded at full wire speed,                  |
|                             | Communication between different network segments and different VLANs  |
|                             | 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 18 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 250 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 |

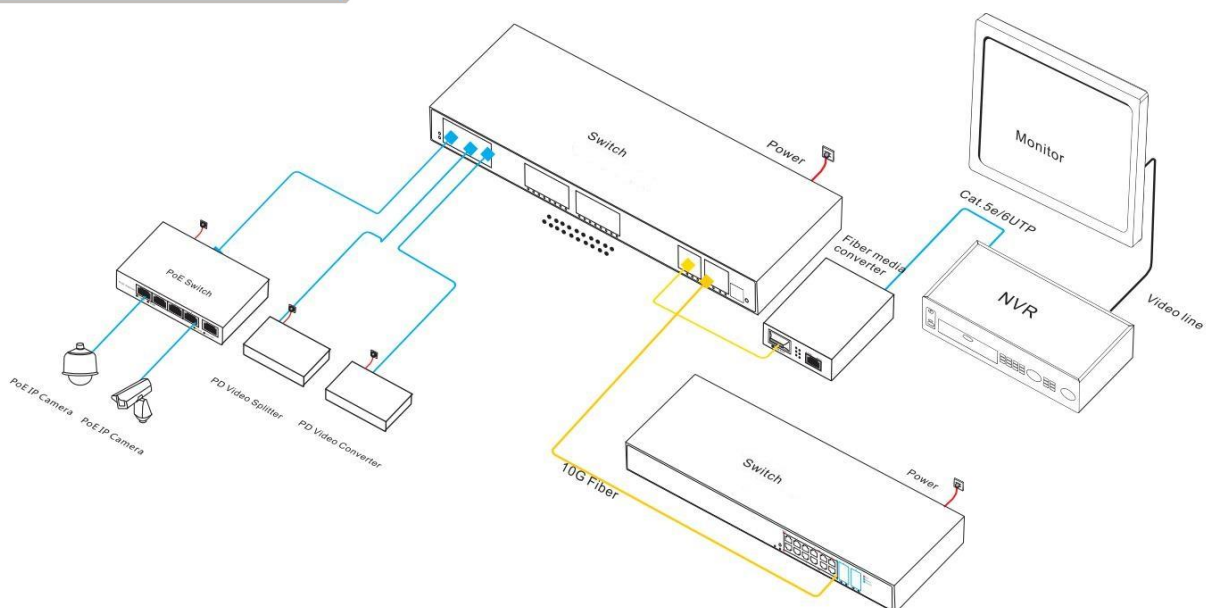
## Product size



A. Working indicator  
C. 24\* Gigabit SFP Ports  
E. Console port

B. 8\* RJ45 Ports  
D. 4\* 1/10G SFP+ Ports  
F. AC/DC dual input port

## Application





## Order Information

| Model                                                                                        | Description                                                                                                                                                                                               | Recommended Power Supply |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| IS830-8E24F4F-60W                                                                            | L3 managed industrial Ethernet aggregation/ core switch with 8* 10/100/1000M RJ45 ports and 24*10/100/1000M SFP fiber slot ports and 4*1/10G SFP+ fiber slot ports. Support 1U/19 inch rack installation. | 60W                      |
| Note:The SFP optical module is not included by default and needs to be purchased separately. |                                                                                                                                                                                                           |                          |

## PACKING LIST

|              | CONTENT                                                  | QTY | UNIT |
|--------------|----------------------------------------------------------|-----|------|
| PACKING LIST | 36-port 10G uplink L3 managed industrial Ethernet switch | 1   | SET  |
|              | AC Power Cable                                           | 1   | PC   |
|              | Mounting Kits (Hanging Ear)                              | 1   | SET  |
|              | User Guide                                               | 1   | PC   |
|              | Warranty Card                                            | 1   | PC   |
|              |                                                          |     |      |