

# RUGGED/INDUSTRIAL SOLUTIONS

HIGH-SPEED AND RELIABLE  
COMMUNICATION NETWORK



- Industrial Switch
- Rugged & Industrial Media Converter

# CTS

|              |         |
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## | Industrial Switch Solutions

### Managed Industrial Switch Solution

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| • Industrial Force 60W PoE Managed | -----11 |
| • Industrial 10-port Managed       | -----12 |
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## | Rugged/Industrial Media Converter Solutions

### Rugged Media Converter Solution

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### Industrial Media Converter Solution

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| • Industrial Force 60W PoE Media Converter | -----11 |
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## | Accessory

### **SFP/SFP+ Transceiver**

- Industrial 10G Ethernet -----17
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### **Industrial Power Supply**

- Industrial Power Supply -----17
- 

## About CTS

- CTS is a leading network solution provider headquartered in Taiwan. We are professional in design and manufacture products for the Last Mile Connectivity. With branch offices in Japan, Sweden, Austria, India, and the U.S., we aim to develop solutions to achieve sustainability, and grow together with partners worldwide.
- Founded in 1998, public since 2015
- 142 employees internationally, 20% belong to R&D
- 350+ Customers in over 40 countries
- 97.8% Customer Satisfaction

## Our Mission

Find the market gap from user scenario and application

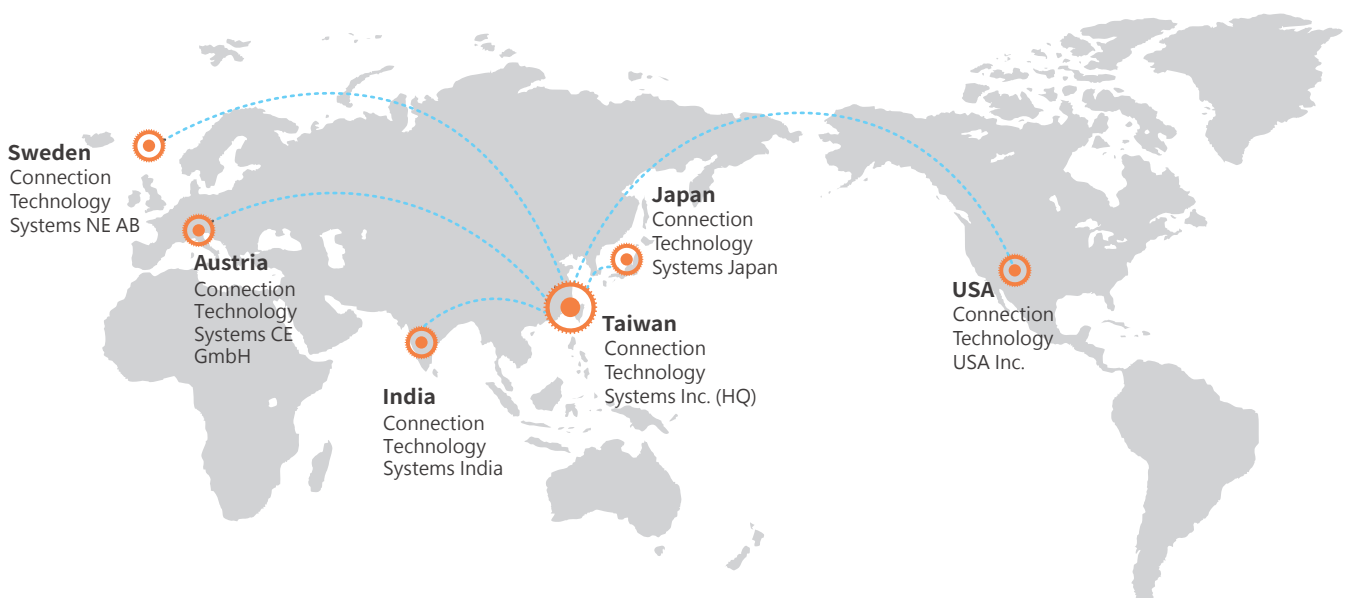
Design reliable products that connect people at the Last Mile

Fulfill customer demands with differentiated and sustainable solutions

## Sustainability

We provide reliable and sustainable solution for our customers so they can use for a long time, reducing the waste of our planet. We also adhere to the most stringent global compliance standards.

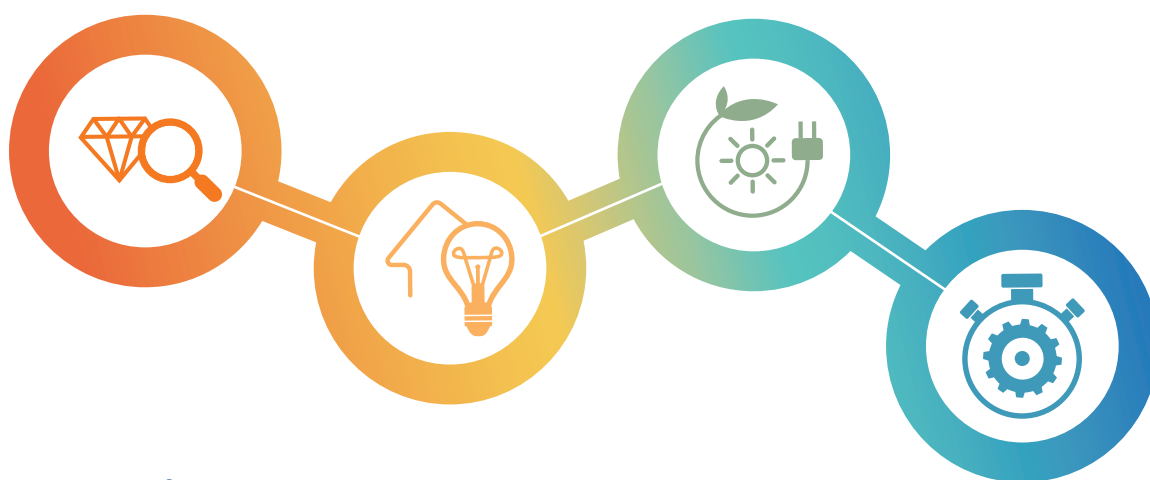
CTS acknowledges the importance of the UN Sustainable Development Goals (SDGs) and we've integrated into our business strategy. We've started to work with our suppliers and partners on the GHGs and PCF. We plan to release sustainability report to our stakeholders every year.



# Why CTS

## The Spirit of Pursuing Excellence

For CTS, our achievement is defined by each successful story our customers have experienced. Until this day, with 20 years experiences in the field, CTS' innovative spirit and passion still driving the company to pursue excellence. Through continuously interact with the clients and the markets, CTS has insisted on keeping "Differentiation and Glocalization" which has make us one of the leading solution providers for telecom companies, network operators, and broadband service providers all over the world.



## Quality Assurance

### Engineering Design

- SW/HW Collaboration
- Design Verification Test
- Design for Manufacturing
- Solution & Risk Analysis

### Own Production

- Made in Taiwan
- IQC/PQC/FQC/OQC
- First Pass Yield
- Dynamic Burn-in Test

### Reliability Test

- High Temperature Operating
- High Temperature Storage
- Damp Heat Cycling Test
- Accelerated Aging Test
- MTBF with MIL-HDBK-217F
- ISO 9001, 14001, CE, FCC

### Timely Services

- Engineering Services
- Local Branch Support
- RMA Center
- Root Cause Analysis

# Largest Ski Resort in Austria Adopts CTS Industrial and Fiber Switch for Ski Lift Network

## Background

Skiwelt in Ellmau, Tyrol is the largest and state of the art ski resort in Austria which has 284km of ski runs in Austrian Alps. In order to enhance safety and to provide better service, the resort planned to invest to update its communication infrastructure into fiber in order to overcome longer distances. The City of Ellmau and Skiwelt also developed an application with regional information such as events, special offerings, local weather, and entertainment. Hopefully tourists can access to real-time information anytime anywhere in the resort. Skiwelt needed a solution reliable provider who can help with fulfill this plan...



### IPS-3110

- 8-Port Gigabit 802.3at PoE+
- 2-Port Gigabit Combo
- Industrial Managed Switch



### IPS-3106-SE-PB

- 4-Port Gigabit 802.3at PoE+
- 2-Port Gigabit SFP
- Industrial Managed Switch



### FOS-5152

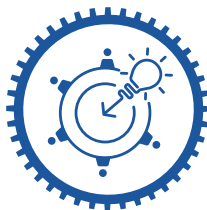
- 52-Port Managed Fiber
- Managed Access Switch



Johannes Winkler,  
Operations Manager, SkiWelt



We need products that work stable at 50 degrees Celsius as well as in -25 degrees Celsius and CTS has proven that their products are reliable and persistent even in harsh environment like in the Austrian Alps



### Networking Consultant

CTS' regional technical support can quickly identified and resolved the issues.



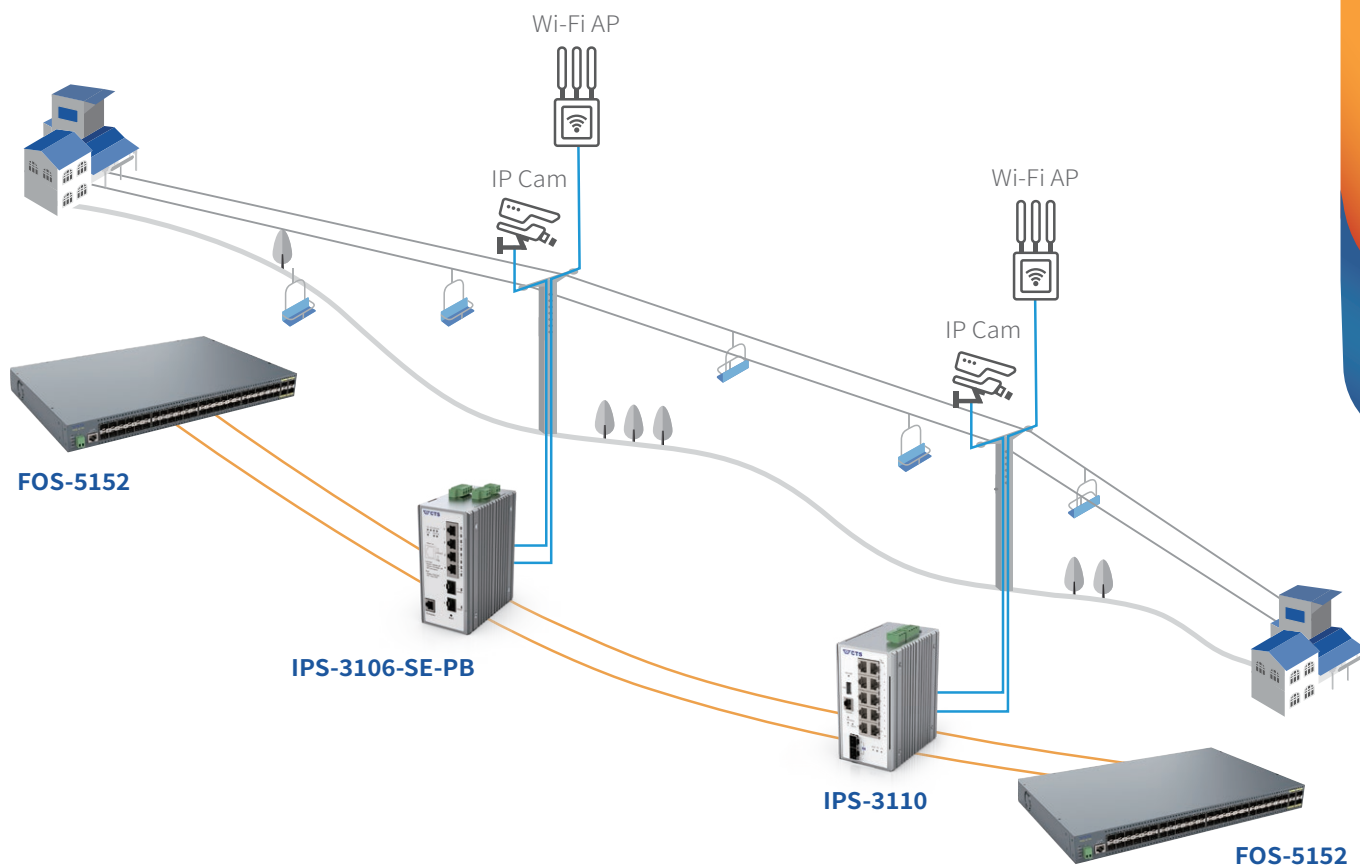
### Trustworthy Partner

High quality and stability over several years in extremely harsh weather conditions.



### In-house Designer

Reliable and robust network helps SkiWelt to provide the best experience for their visitors.



## Challenge

- ① Build long distance networks along cable car systems with the longest over 3km.
- ② Lightening can easily strike when devices are being installed on the cable car mask.
- ③ Outdoor devices have to be able to endure local temperature from -10~26 degrees Celsius.
- ④ Offer public Wi-Fi along the ski-lift for visitors as well as IP cameras for slope monitoring.
- ⑤ Provide a stable connection for security and safety control.

## Solution & Benefit

- ① CTS fiber connectivity solution help to overcome the challenge of long-distance transmission.
- ② CTS IPS-3110 equips with K.21 surge protection to protect devices from damage.
- ③ CTS industrial solutions is designed to endure harsh outdoor environment and it can operate under temperature from -40 to 75 degrees Celsius.
- ④ PoE features on both IPS-3106-SE-PB and IPS-3110 ease Skiwelt's effort in deploying Wi-Fi networks along the lifts and IP cameras by the slope.
- ⑤ Supports redundancy protocol to provide a 24/7 stable security network.





## Providing Robust, Reliable & Flexible Solution for Industrial Environment

The CTS Industrial Ethernet Switch series are enclosed in IP30 case which can endure wide-ranging operating temperature from -40 to 75 degrees Celsius. All CTS Industrial Ethernet Switches support DIN-rail mounts which allows efficient use of cabinet space. CTS also provide redundant supply system to enable a more secure, stable and sustainable connection. The industrial PoE Ethernet Switch series support IEEE 802.3af/at or 60W PoE power output that is able to supply power to PoE compliant devices which greatly reduce wiring complexity and save trouble to search for extra power outlets.

- IP30 Design Housing
- -40 ~ 75 degrees Celsius Operating Temperature Range for Harsh Operating Environment
- 9.6~55/12~54/24~54/44~55/48~54VDC Dual Power Input for Uninterrupted Network System
- Industrial PoE Switch Series Support IEEE 802.3at/af PoE and up to Force 60W PoE Power Output
- IEEE 802.1q Tagged VLAN and Q-in-Q
- IGMP Snooping v1, v2 and v3
- IEEE 802.1p QoS, ToS and DSCP
- IEEE 802.3ad Link Aggregation and Static Trunk
- STP, RSTP and Fast Ring v2



**60W PoE Output**



**IPS-3120-PoE++**



**-40~75 Degrees Celsius**



**IES-3110**



**Power Booster**



**IPS-3106-SE-PB**



# Robust, Reliable & Extendable Solution to Reach Copper Devices Effortlessly



**Dual Fiber**



**IPS-3014-PoE++**



**60W PoE  
Output**



**IPS-3012-PoE++**



**-40~75  
Degrees  
Celsius**



**IAC-3012**

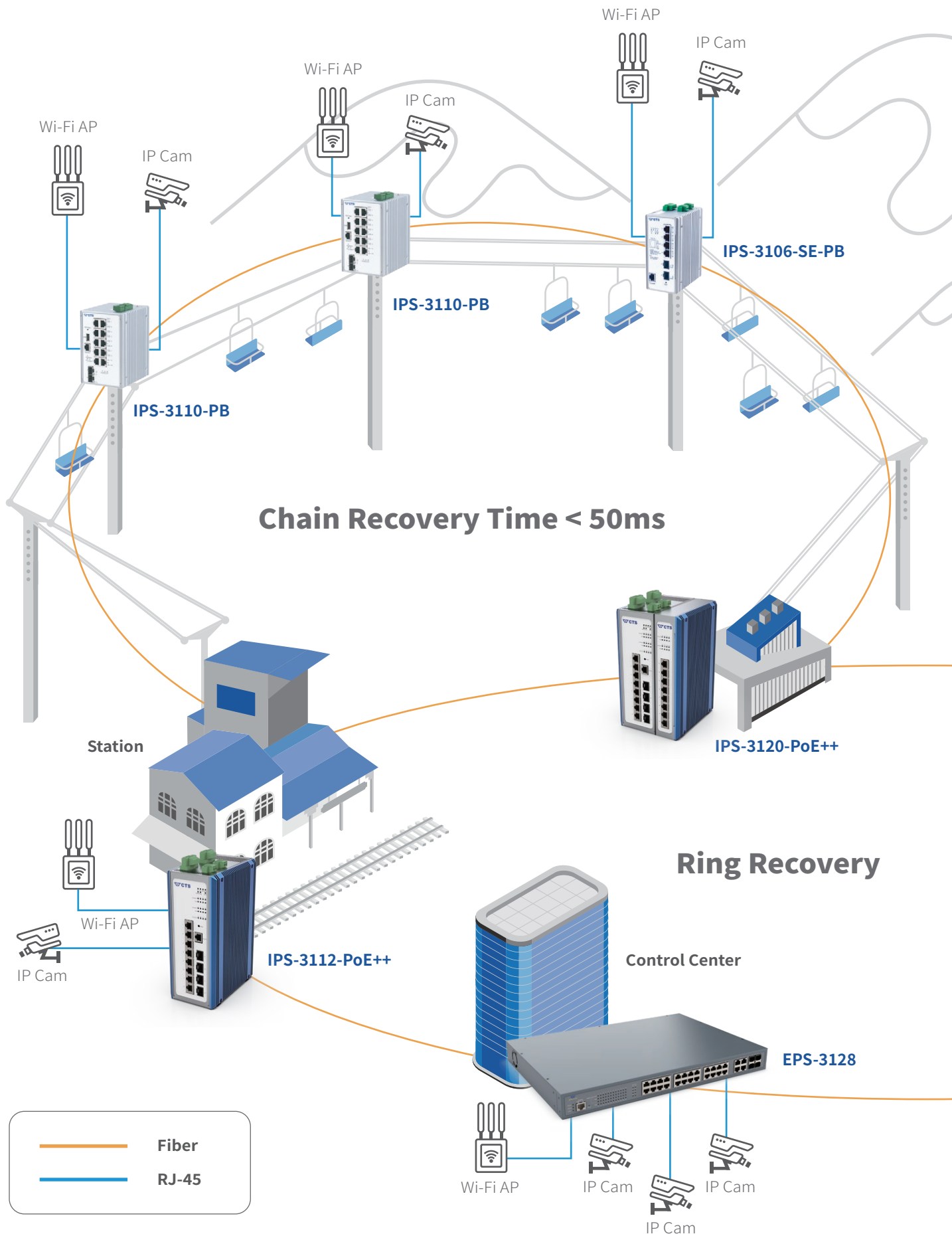
CTS Industrial Media Converters in a robust IP30 housing are designed to meet the demands of industrial network for plug-and-play usage. Industrial Media Converters can extend your Ethernet network beyond 100-meter limitation and convert fiber links from multi-mode to single-mode or vice versa. The wiring distance of CTS Industrial Media Converters can extend from 2 to 120km and data transmission distance is up to 120km.

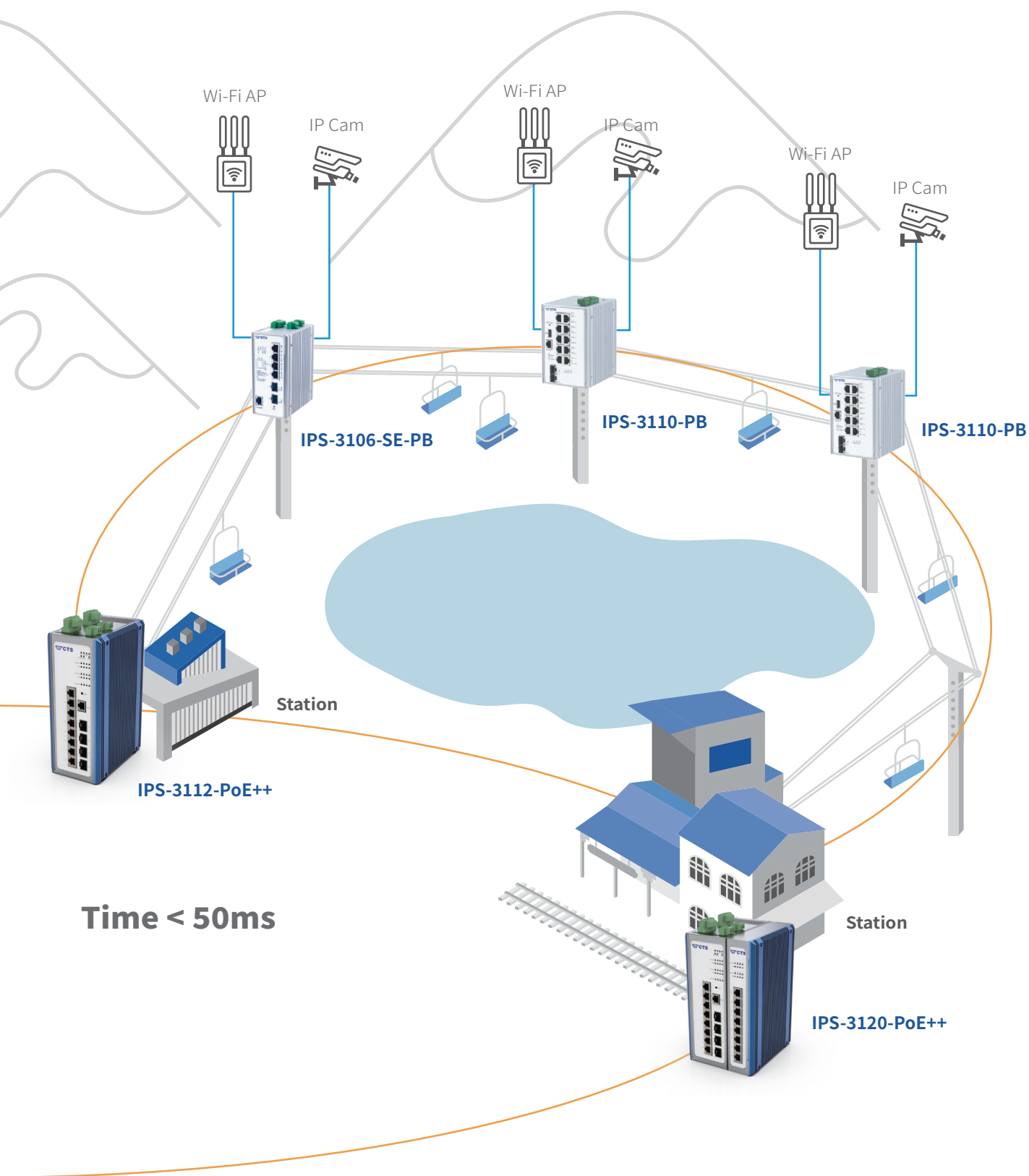
Our rugged media converter added a very useful function, PSE Auto Power Off! PSE Auto Power Off allows you to turn on/off PoE power with Link Alarm. By shutting down the fiber port in the switch, the IPC-3014/3012 stops transmitting both data and power to connected PoE-fed products such as IP camera and Wi-Fi access point.

Since the first step when troubleshooting an IP camera or Wi-Fi access point is almost always is to reboot it, PSE Auto Power Off is a valuable feature in these situations.

- IP30 Slim Design Housing
- -40 ~75 Degrees Celsius Operating Temperature for Harsh Operating Environment
- 12~48/12~57/48~54 Dual DC Power Input for Uninterrupted Network System
- 1-/2-port Copper to 1-/2-port Fiber-optic Interface
- Supports 1-/2-port PoE Injector
- Supports IEEE 802.3at/af PoE and up to Force 60W PoE Power Output
- Built-in DIP Switch Provides Port Isolation and Fiber Redundancy Mode
- PSE Auto Power Off to turn on and off PoE power with Link Alarm

# Application of Fast Ring v2





## Industrial Force 60W PoE Managed Switch

## Model Name

IPS-3120-PoE++

IPS-3112-PoE++




## Product Image



|                                  |                                  |  |                         |
|----------------------------------|----------------------------------|--|-------------------------|
| Hardware                         | 10/100/1000Base-T                | 16   | 8                       |
|                                  | 10/100Base-TX                    | -  | -                       |
|                                  | 1000Base-X                       | 4  | 4                       |
|                                  | 100Base-FX                       | Compatible   | Compatible              |
|                                  | RS-232 Console Port (RJ-45)      | 1  | 1                       |
|                                  | Digital Input/Output             | 1 x DI + 1 x DO  |                         |
|                                  | PoE                              | 8 x up to Force 60W PoE<br>+ 8 x 802.3af/at PoE+                             | 8 x up to Force 60W PoE |
|                                  | PoE Budget (Max.)                | 720W   | 480W                    |
|                                  | Power Connector                  | Terminal Block   |                         |
|                                  | Power Source                     | 48~54VDC Dual Input  |                         |
|                                  | Power Consumption                | 740W   | 495W                    |
|                                  | Dimension W x D x H              | 115 x 135 x 200mm  | 80 x 135 x 200mm        |
|                                  | Operating Temperature (Humidity) | -40~75°C (5~90%)   |                         |
|                                  | MAC Address Table                | 8K   |                         |
|                                  | Non-blocking Switching Fabric    | 40Gbps   | 24Gbps                  |
| Traffic Management               | Memory Buffer                    | 4.1M Bytes   |                         |
|                                  | Jumbo Frame                      | 9K Bytes   |                         |
|                                  | IPv6                             | -  |                         |
|                                  | QoS                              | 802.1p, ToS/DSCP   |                         |
|                                  | QoS Priority Queue               | 8  |                         |
|                                  | Bandwidth Control                | -  |                         |
|                                  | Broadcast Storm Control          | -  |                         |
|                                  | IPTV Multicast                   | IGMP Snooping v1/v2/v3   |                         |
|                                  | Network Redundancy               | CTS Fast Ring v2*, STP/RSTP  |                         |
|                                  | LACP                             | ●  |                         |
|                                  | VLAN                             | 802.1q, Q-in-Q, Port Based   |                         |
| Security & Authentication        | VLAN ID                          | 4094   |                         |
|                                  | VLAN Group                       | 2K   |                         |
|                                  | SSHv2                            | ●  |                         |
|                                  | DHCP Option 82                   | -  |                         |
| Network Management & Maintenance | Authentication                   | RADIUS, 802.1x MAB   |                         |
|                                  | ACL (Access Control List)        | ●  |                         |
|                                  | Management                       | Telnet, CLI, WEB, SNMP v1/v2c/v3   |                         |
|                                  | Port Mirroring                   | -  |                         |
|                                  | SNMP Power Down Trap             | -  |                         |
|                                  | DHCP                             | Client, Auto Provisioning  |                         |
| Certifications                   | SNTP                             | ●  |                         |
|                                  | Firmware/Configuration Upgrade   | FTP/TFTP/HTTP  |                         |
|                                  | EMC/Safety                       | FCC Class A, CE  |                         |
|                                  | Stability                        | IEC 60068-2-27 (Shock), IEC 60068-2-32 (Freefall), IEC 60068-2-6 (Vibration) |                         |
|                                  | Surge                            | ITU-T K.21 Enhanced Level 6KV  |                         |

\* CTS Fast Ring v2 includes Ring and Chain Protocol

## Industrial 10-port Managed Switch

| Model Name                       |                                  | IPS-3110  | IPS-3110-PB   | IES-3110  |
|----------------------------------|----------------------------------|---|---|---|
| Product Image                    |                                  |  |  |  |
| Hardware                         | 10/100/1000Base-T                | 10  | 10  | 10  |
|                                  | 10/100Base-TX                    | -   | -   | -   |
|                                  | 1000Base-X                       | 2 (COMBO)   | 2 (COMBO)   | 2 (COMBO)   |
|                                  | 100Base-FX                       | Compatible  | Compatible  | Compatible  |
|                                  | RS-232 Console Port (RJ-45)      | 1   | 1   | 1   |
|                                  | Digital Input/Output             | 1 x DO  |   |   |
|                                  | PoE                              | 8 x 802.3af/at PoE+   |   | -   |
|                                  | PoE Budget (Max.)                | 240W  |   | -   |
|                                  | Power Connector                  | Terminal Block  |   |   |
|                                  | Power Source                     | 48~54VDC Dual Input   | 24~54VDC Dual Input   | 12~54VDC Dual Input   |
|                                  | Power Consumption                | 255W  |   | 15W   |
|                                  | Dimension W x D x H              | 73 x 110 x 135mm  | 88 x 110 x 135mm  | 73 x 110 x 135mm  |
|                                  | Operating Temperature (Humidity) | -40~75°C (5~90%)  |   |   |
|                                  | MAC Address Table                | 16K   |   |   |
|                                  | Non-blocking Switching Fabric    | 20Gbps  |   |   |
|                                  | Memory Buffer                    | 256K Bytes  |   |   |
|                                  | Jumbo Frame                      | 9K Bytes  |   |   |
| Traffic Management               | IPv6                             | -   |   |   |
|                                  | QoS                              | 802.1p, ToS/DSCP  |   |   |
|                                  | QoS Priority Queue               | 8   |   |   |
|                                  | Bandwidth Control                | ●   |   |   |
|                                  | Broadcast Storm Control          | ●   |   |   |
|                                  | IPTV Multicast                   | IGMP Snooping v1/v2   |   |   |
|                                  | Network Redundancy               | CTS Fast Ring v2*, STP/RSTP   |   |   |
|                                  | LACP                             | ●   |   |   |
|                                  | VLAN                             | 802.1q, Q-in-Q, Port Based  |   |   |
|                                  | VLAN ID                          | 4094  |   |   |
| Security & Authentication        | VLAN Group                       | 128   |   |   |
|                                  | SSHv2                            | ●   |   |   |
|                                  | DHCP Option 82                   | -   |   |   |
|                                  | Authentication                   | RADIUS, 802.1x  |   |   |
| Network Management & Maintenance | ACL (Access Control List)        | ●   |   |   |
|                                  | Management                       | Telnet, CLI, WEB, SNMP v1/v2c/v3  |   |   |
|                                  | Port Mirroring                   | ●   |   |   |
|                                  | SNMP Power Down Trap             | -   |   | ●   |
|                                  | DHCP                             | Client, Auto Provisioning, Snooping   |   |   |
|                                  | SNTP                             | ●   |   |   |
|                                  | Firmware/Configuration Upgrade   | FTP/TFTP/HTTP/USB 2.0 Type A  |   |   |
| Certifications                   | EMC/Safety                       | FCC Class A, CE   |   |   |
|                                  | Stability                        | IEC 60068-2-27 (Shock), IEC 60068-2-32 (Freefall), IEC 60068-2-6 (Vibration)      |   |   |
|                                  | Surge                            | ITU-T K.21 Enhanced Level 6KV   |   |   |

\* CTS Fast Ring v2 includes Ring and Chain Protocol

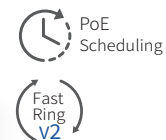
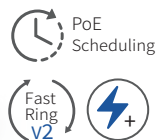
## Industrial 6-port Managed Switch

## Model Name

IPS-3106-SE-PB

IPS-3106-SE

## Product Image



|                                  |                                  |  |                     |
|----------------------------------|----------------------------------|--|---------------------|
| Hardware                         | 10/100/1000Base-T                | 4  | 4                   |
|                                  | 10/100Base-TX                    | -  | -                   |
|                                  | 1000Base-X                       | 2  | 2                   |
|                                  | 100Base-FX                       | Compatible   | Compatible          |
|                                  | RS-232 Console Port (RJ-45)      | 1  | 1                   |
|                                  | Digital Input/Output             | 1 x DI + 1 x DO  |                     |
|                                  | PoE                              | 4 x 802.3af/at PoE+  |                     |
|                                  | PoE Budget (Max.)                | 120W   |                     |
|                                  | Power Connector                  | Terminal Block   |                     |
|                                  | Power Source                     | 24~54VDC Dual Input  | 48~54VDC Dual Input |
|                                  | Power Consumption                | 135W   |                     |
|                                  | Dimension W x D x H              | 63 x 110 x 135mm   | 57 x 110 x 135mm    |
|                                  | Operating Temperature (Humidity) | -40~75°C (5~90%)   |                     |
|                                  | MAC Address Table                | 8K   |                     |
|                                  | Non-blocking Switching Fabric    | 12Gbps   |                     |
|                                  | Memory Buffer                    | 4.1M Bytes   |                     |
|                                  | Jumbo Frame                      | 9K Bytes   |                     |
| Traffic Management               | IPv6                             | ●  |                     |
|                                  | QoS                              | 802.1p, ToS/DSCP   |                     |
|                                  | QoS Priority Queue               | 8  |                     |
|                                  | Bandwidth Control                | ●  |                     |
|                                  | Broadcast Storm Control          | ●  |                     |
|                                  | IPTV Multicast                   | IGMP Snooping v1/v2/v3<br>MLD Snooping v1/v2                                 |                     |
|                                  | Network Redundancy               | CTS Fast Ring v2*, STP/RSTP  |                     |
|                                  | LACP                             | ●  |                     |
|                                  | VLAN                             | 802.1q, Q-in-Q, Port Based   |                     |
|                                  | VLAN ID                          | 4094   |                     |
|                                  | VLAN Group                       | 2K   |                     |
| Security & Authentication        | SSHv2                            | ●  |                     |
|                                  | DHCP Option 82                   | ●  |                     |
|                                  | Authentication                   | RADIUS, TACACS+, 802.1x MAB  |                     |
|                                  | ACL (Access Control List)        | ●  |                     |
| Network Management & Maintenance | Management                       | Telnet, CLI, WEB, SNMP v1/v2c/v3   |                     |
|                                  | Port Mirroring                   | ●  |                     |
|                                  | SNMP Power Down Trap             | -  |                     |
|                                  | DHCP                             | Client, Auto Provisioning, Snooping  |                     |
|                                  | SNTP                             | ●  |                     |
|                                  | Firmware/Configuration Upgrade   | FTP/TFTP/HTTP  |                     |
| Certifications                   | EMC/Safety                       | FCC Class A, CE  |                     |
|                                  | Stability                        | IEC 60068-2-27 (Shock), IEC 60068-2-32 (Freefall), IEC 60068-2-6 (Vibration) |                     |
|                                  | Surge                            | ITU-T K.21 Enhanced Level 6KV  |                     |

\* CTS Fast Ring v2 includes Ring and Chain Protocol



## Rugged 1G Media Converter

| Model Name | SRC-3002SFP-BT | SRC-3002SFP |
|------------|----------------|-------------|
|            | Non-managed    | Non-managed |

Product Image



|                       |                                  |                         |                  |
|-----------------------|----------------------------------|-------------------------|------------------|
| Hardware              | 10/100/1000Base-T                | 1                       | 1                |
|                       | 10/100Base-TX                    | -                       | -                |
|                       | PoE                              | 1 x 802.3af/at/bt PoE++ | -                |
|                       | 1000Base-X                       | 1 (SFP)                 | 1 (SFP)          |
|                       | 100Base-FX                       | Compatible              | Compatible       |
|                       | Store and Forward                | ●                       | ●                |
|                       | Auto-MDI/MDI-X                   | ●                       | ●                |
|                       | Auto-negotiation in TP Port      | ●                       | ●                |
|                       | Flow Control                     | -                       | -                |
|                       | MAC Address Table                | 2K                      | 2K               |
|                       | Memory Buffer                    | 128K Bytes              | 128K Bytes       |
|                       | Jumbo Frame                      | 9K Bytes                | 9K Bytes         |
|                       | Slide-in Chassis                 | -                       | -                |
|                       | Dimension W x D x H              | 71 x 94 x 26mm          | 71 x 94 x 26mm   |
|                       | Operating Temperature (Humidity) | -20~60°C (5~95%)        | -40~75°C (5~95%) |
|                       | Power Source                     | 48~57VDC                | 12~57VDC         |
|                       | Power Consumption                | 102W                    | 2.45W            |
| Management & Features | PSE Auto Power Off               | ●*                      | -                |
|                       | Data-diode Direction             | ●                       | ●                |
|                       | Link Alarm                       | ●                       | ●                |
| Certifications        | EMC/Safety                       | FCC Class A, CE         |                  |

\* Only operates when the fiber interface link goes down by the link alarm function

## Industrial Force 60W PoE Media Converter



| Model Name | IPC-3014-PoE++ | IPC-3012-PoE++ |
|------------|----------------|----------------|
|            | Non-managed    | Non-managed    |

Product Image



|                |                                  |  |   |
|----------------|----------------------------------|--|---|
| Hardware       | 10/100/1000Base-T                | 2  | 1   |
|                | 1000Base-X                       | 2  | 1   |
|                | 100Base-FX                       | Compatible   | Compatible  |
|                | Digital Output                   | ●  |   |
|                | PoE                              | 1 x up to Force 60W PoE<br>+ 1 x 802.3af/at PoE+                             | 1 x up to Force 60W PoE<br>or 1 x 802.3af/at PoE+ |
|                | PoE Budget (Max.)                | 90W  | 60W   |
|                | Power Connector                  | Terminal Block   |   |
|                | Power Source                     | 12~57VDC Dual Input  |   |
|                | Power Consumption                | 96W  | 64.8W   |
|                | Store and Forward                | ●  |   |
|                | Auto-MDI/MDI-X                   | ●  |   |
|                | Auto-negotiation in Fiber Port   | ●  |   |
|                | MAC Address Table                | 2K   |   |
|                | Memory Buffer                    | 128K Bytes   |   |
|                | Jumbo Frame                      | 9K Bytes   |   |
|                | Link Alarm                       | ●*   |   |
|                | Dimension W x D x H              | 36 x 110 x 135mm   |   |
|                | Operating Temperature (Humidity) | -40~75°C (5~90%)   |   |
|                | Network Redundancy               | Fiber Backup Mode  | -   |
| Certifications | EMC/Safety                       | FCC Class A, CE  |   |
|                | Stability                        | IEC 60068-2-27 (Shock), IEC 60068-2-32 (Freefall), IEC 60068-2-6 (Vibration) |   |
|                | Surge                            | ITU-T K.21 Enhanced Level 6KV  |   |

\* Customer should inform CTS before manufacturing if they request for adding link alarm function

| Industrial Media Converter |                                  |   |            |
|----------------------------|----------------------------------|---|------------|
| Model Name                 |                                  | IAC-3014  |            |
|                            |                                  | IAC-3012  |            |
|                            |                                  | Non-managed   |            |
| Product Image              |                                  | <div></div> |            |
| Hardware                   | 10/100/1000Base-T                | 2   | 1          |
|                            | 1000Base-X                       | 2   | 1          |
|                            | 100Base-FX                       | Compatible  | Compatible |
|                            | Digital Output                   | ●   |            |
|                            | Power Connector                  | Terminal Block  |            |
|                            | Power Source                     | 12~48VDC Dual Input   |            |
|                            | Power Consumption                | 4.8W  | 3.4W       |
|                            | Store and Forward                | ●   |            |
|                            | Auto-MDI/MDI-X                   | ●   |            |
|                            | Auto-negotiation in Fiber Port   | ●   |            |
|                            | MAC Address Table                | 2K  |            |
|                            | Memory Buffer                    | 128K Bytes  |            |
|                            | Jumbo Frame                      | 9K Bytes  |            |
|                            | Link Alarm                       | ●*  |            |
|                            | Dimension W x D x H              | 36 x 110 x 135mm  |            |
|                            | Operating Temperature (Humidity) | -40~75°C (5~90%)  |            |
|                            | Network Redundancy               | Fiber Backup Mode   | -          |
| Certifications             | EMC/Safety                       | FCC Class A, CE   |            |
|                            | Stability                        | IEC 60068-2-27 (Shock), IEC 60068-2-32 (Freefall), IEC 60068-2-6 (Vibration)  |            |
|                            | Surge                            | ITU-T K.21 Enhanced Level 6KV   |            |

\* Customer should inform CTS before manufacturing if they request for adding link alarm function

## Industrial 10G Ethernet SFP+ Transceiver

Product Image



| MODEL             | SFP-51-D     |      |           |          |                 |             |
|-------------------|--------------|------|-----------|----------|-----------------|-------------|
|                   | Speed (Gbps) | Type | Connector | Distance | Wavelength (nm) | Temperature |
| SFP-51FC(SM-02)-D | 10           | SM   | LC        | 2KM      | 1310            | -40~85°C    |

## Industrial Gigabit Ethernet SFP Transceiver

Product Image



| MODEL                 | SFP-31-D     |      |           |          |                              |             |
|-----------------------|--------------|------|-----------|----------|------------------------------|-------------|
|                       | Speed (Mbps) | Type | Connector | Distance | Wavelength (nm)              | Temperature |
| SFP-31FC-D            | 1000         | MM   | LC        | 550M     | 850                          | -40~85°C    |
| SFP-31FC(MM-02)-D     | 1000         | MM   | LC        | 2KM      | 1310                         | -40~85°C    |
| SFP-31FC(SM-10/20)-D  | 1000         | SM   | LC        | 10/20KM  | 1310/1310                    | -40~85°C    |
| SFP-31W2A(SM-10/20)-D | 1000         | WDM  | LC        | 10/20KM  | TX:1310/1310<br>RX:1550/1550 | -40~85°C    |
| SFP-31W2B(SM-10/20)-D | 1000         | WDM  | LC        | 10/20KM  | TX:1550/1550<br>RX:1310/1310 | -40~85°C    |

## Power Supply

Product Image



| MODEL      | Output      |                        |               | Input                   | Protection                                     | Temperature | Dimension<br>W x D x H |
|------------|-------------|------------------------|---------------|-------------------------|--|-------------|------------------------|
|            | Rated Power | Voltage Adj.<br>Range* | Current Range | Voltage Range           |  |             |                        |
| SDR-480-48 | 480W        | 48~55V                 | 0~10A         | 90~264VAC<br>127~370VDC | Overload,<br>Over Voltage,<br>Over Temperature | -25~70°C    | 85.5 x 128.5 x 125.2mm |
| SDR-240-48 | 240W        |                        | 0~5A          | 88~264VAC<br>124~370VDC |  |             | 63 x 113.5 x 125.2mm   |
| SDR-120-48 | 120W        |                        | 0~2.5A        |                         |  |             | 40 x 113.5 x 125.2mm   |
| SDR-75-48  | 76.8W       |                        | 0~1.6A        |                         |  |             | -30~70°C               |
| NDR-480-48 | 480W        | 48~55V                 | 0~10A         | 90~264VAC<br>127~370VDC | Overload,<br>Over Voltage,<br>Over Temperature | -20~70°C    | 85.5 x 128.5 x 125.2mm |
| NDR-240-48 | 240W        |                        | 0~5A          |                         |  |             | 63 x 113.5 x 125.2mm   |
| NDR-120-48 | 120W        |                        | 0~2.5A        |                         |  |             | 40 x 113.5 x 125.2mm   |
| NDR-75-48  | 76.8W       |                        | 0~1.6A        |                         |  |             | 32 x 102 x 125.2mm     |
| MDR-60-48  | 60W         | 48~56V                 | 0~1.25A       | 85~264VAC<br>120~370VDC | Overload,<br>Over Voltage                      | -20~70°C    | 40 x 100 x 90mm        |
| MDR-20-12  | 20W         | 10.8~13.2V             | 0~1.67A       |                         |  | -20~70°C    | 22.5 x 100 x 90mm      |

\* Output Voltage Tolerance:  $\pm 1.0\%$



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