CONNECTION TECHNOLOGY SYSTEMS

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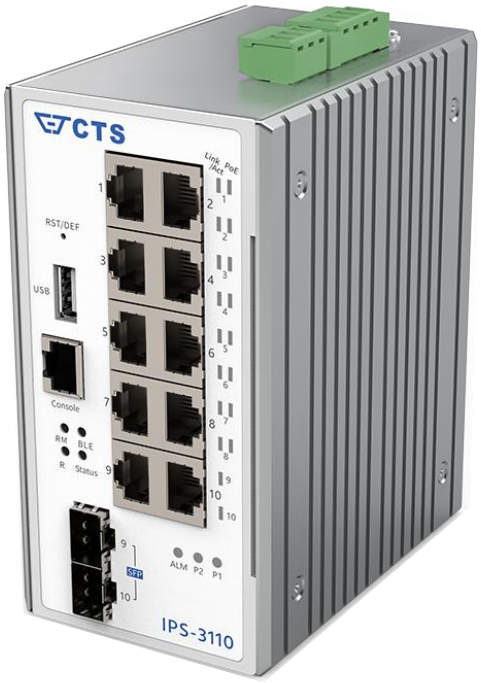


IPS-3110SFP

8 x 10/100/1000Base-T RJ-45 with 802.3af/at PoE injector +
2 x 10/100/1000Base-T RJ-45 / 100/1000Base-X SFP (Combo)
Managed Industrial PoE Switch

Description

Connection Technology Systems (CTS) IPS-3110SFP Industrial PoE Switch is a Fast and Gigabit Ethernet 10/100/1000Base-T to 100/1000Base-X Industrial PoE Switch. It switches the traditional twisted-pair RJ-45 cable into various fiber optics media. IPS-3110SFP offers easy management of the uplink port (10/100/1000Mbps RJ-45 + 100/1000Mbps SFP slot). The fiber optical port of IPS-3110SFP can support various connection distances via multi-mode fiber, single-mode fiber or Bi-directional single-mode fiber for the deployment to the control room, warehouse, or factory.

The IPS-3110SFP Industrial PoE Switch is designed for deployment at industrial sites. With DIN-rail mounting, you can easily mount the Industrial PoE Switch at your sites such as factory or warehouse. The two Terminal Blocks can provide power redundancy to prevent any possible power outage and digital output to serve as an alarm.

The product provides perfect solution for delivering power over Ethernet for IP cameras, Wi-Fi access points ,or IP phones at an extended operating temperature (-40°C ~ 75°C) to withstand against harsh environment for better performance. It is fully compliant with IEEE standards such as IEEE 802.3 / 802.3u / 802.3ab / 802.3az to ensure interoperability between network devices.

It also supports three different operating modes, offering the system integrators the flexibility of designing networks under different applications with just one piece of equipment. The complexity of the operation and the inventory pressure can therefore be both effectively reduced.

Key Features

■ Compatible with IEEE 802.3af/at PoE+

The support of IEEE 802.3at/af PoE+ standard enables safe transfer of electrical power and the transmission of digital data over Ethernet cable.

■ Aluminum Housing

The aluminum housing material provides a remarkable strength-to-weight ratio, capable of undergoing an arduous operating environment yet still staying portably light-weight.

■ PoE Budget 30W Max. per Port, 240W Max. Total

The PSE (Power Sourcing Equipment) comes with intelligent PoE providing a maximum of 30W of power per port, allowing for meeting the needs of nowadays power-hungry PD (Powered Device).

■ Extended Operation Temperature -40˚C ~ 75˚C

The extensive range ensures the reliable performance of mission-critical applications under extreme and rapidly changing temperatures.

■ 48 ~ 54VDC Dual Power Input

Two sets of power inputs ranging from DC 48V~54V bring you the seamless transition of power supply in case of a sudden outage on either set of power inputs.

■ Targeted Applications

- Point-to-Point Fiber Connectivity in Harsh Environment
- Long Distance IP Surveillance Network Deployment
- Factory, Parking Lot, ITS, Smart City Network Deployment

Specification

Interface

RJ-45 Port
- 8 x 10/100/1000Base-T RJ-45 with IEEE 802.3af/at PoE injector

Combo Port
- 2 x 100/1000Base-X SFP, or
  2 x 10/100/1000Base-T RJ-45

Console Port
- 1 x RS-232 to RJ-45 Serial Port

USB Port
- 1 x USB 2.0 (Host Type-A)

Terminal Block
- 1 x Digital Output (Alarm Relay)
  Relay output with current carrying capacity of 1 A @ 30 VDC

Standards
- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-TX/FX
- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000Base-X
- IEEE 802.1p Priority
- IEEE 802.1q Tag VLAN
- IEEE 802.3x Flow Control
- IEEE 802.3ad Link Aggregation
- IEEE 802.1D STP
- IEEE 802.1w RSTP
- IEEE 802.1x Port based Network Access Control
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at Power over Ethernet +

H/W Specification

- MAC Address Table: 16K
- Non-Blocking Switching Fabric: 20Gbps
- Throughput @ 64Bytes: 14.88Mpps
- Packet Buffer: 2Mbit
- Jumbo Frame: 9K Bytes
- Store and Forward Switching Mechanism
- Auto-Cross Over for MDI/MDIX in TP Ports
- Auto-Negotiation in TP Ports
- Full/Half Duplex Mode Operation

LED

- Link/Act/Speed, P1, P2, ALM, RM, R, Status, PoE

Forward/Filter Rate

- 10M: 14,880/14,880pps
- 100M: 148,800/148,800pps
- 1000M: 1,488,000/1,488,000pps

Power over Ethernet

- Total PoE budget: 240W
- Max. Per Port output: 30W

Layer 2 Switch Features

Port Management
- State, Description, Media Type, Port Type, Speed, Duplex and Flow Control

Network Redundancy
- IEEE 802.1d STP
- IEEE 802.1w RSTP
- Fast Ring v2/Chain Redundancy Protocols
- Static Port Trunking / Dynamic LACP Trunk
- Up to 5 Aggregation Groups, 2-6 Ports per Group

VLAN
- IEEE 802.1q VLAN
- VLAN ID: 4094 IDs
- VLAN Concurrent Groups: 128 VLAN Groups
- Port-Based VLAN

QoS
- QoS based on 802.1p CoS and DSCP
- Scheduling Algorithm
  Weighted Round Robin (WRR)
  Strict Priority Queuing (SPQ)
- QoS Priority Queues: 8 Queues
- 802.1p P-bit & DSCP Remarking
- Port-Based Rate Limit (Ingress/Egress)

Multicast
- IGMP Snooping v1/v2
- IGMP Fast Leave
- IGMP Snooping Group: 512 Groups

Security

- 802.1x RADUIS Authentication
  802.1x Port based Access Control
  802.1x MAC Authentication Bypass (MAB)
- RADIUS Authentication for login username / password
- DHCP Snooping and DHCP Server Trust Port
- Broadcast Storm Control
- Loop Detection

Management

- SNMP v1, v2c & v3 (Support Traps)
- Web (HTTP/HTTPS)
- CLI (Console/Telnet/SSHv2)
- SNTP with Daylight Saving Time
- LLDP

Upgrade/Restore
- Firmware Upgrade/Downgrade
  HTTP/HTTPS/FTP/TFTP
  DHCP Auto-provision via DHCP Option 60/43
- Configuration Upload/Backup
  HTTP/HTTPS/FTP/TFTP
  DHCP Auto-provision via DHCP Option 60/43
- Auto configure backup
  FTP/TFTP

PoE Management

- Per Port PoE Operation Mode
  Auto af/at, Injector-30Watt, Shutdown
- Per Port PoE off/on by schedule

Maintenance

Diagnostic
- Port Mirror
- Event log
- Syslog
- SFP SFF-8472 DDMI Monitor
  Temp/Voltage/TX Bias/TX Power/RX Power
- CPU Temperature

Power Requirement

- Dual Power Input: 48~54 VDC
- Power Consumption
  Device: full-load < 255W (870 BTU/h)

Environmental Condition

- Operation: -40˚C ~ 75˚C
- Storage: -40˚C ~ 85˚C
- Humidity: 5% ~ 90%, Non-condensing

Dimension & Weight

- Size: 73 x 110 x 135mm (W x D x H)
- Weight: 0.92 Kg
- Housing: Aluminium, IP30

Standards and Certifications

CE/FCC Class A
- Safety: EN/IEC 62368-1
- EMC: EN 55032 / EN 55035
- ESD
  Air Discharge: +/- 8 kV
  Contact Discharge: +/- 4 kV
- EFT
  DC input: +/- 0.5 kV
  Signal (RJ-45): +/- 0.5 kV
- Surge Protection
  DC input: +/- 0.5 kV
  Signal (RJ-45): +/- 1 kV, PoE: +/- 0.5 kV

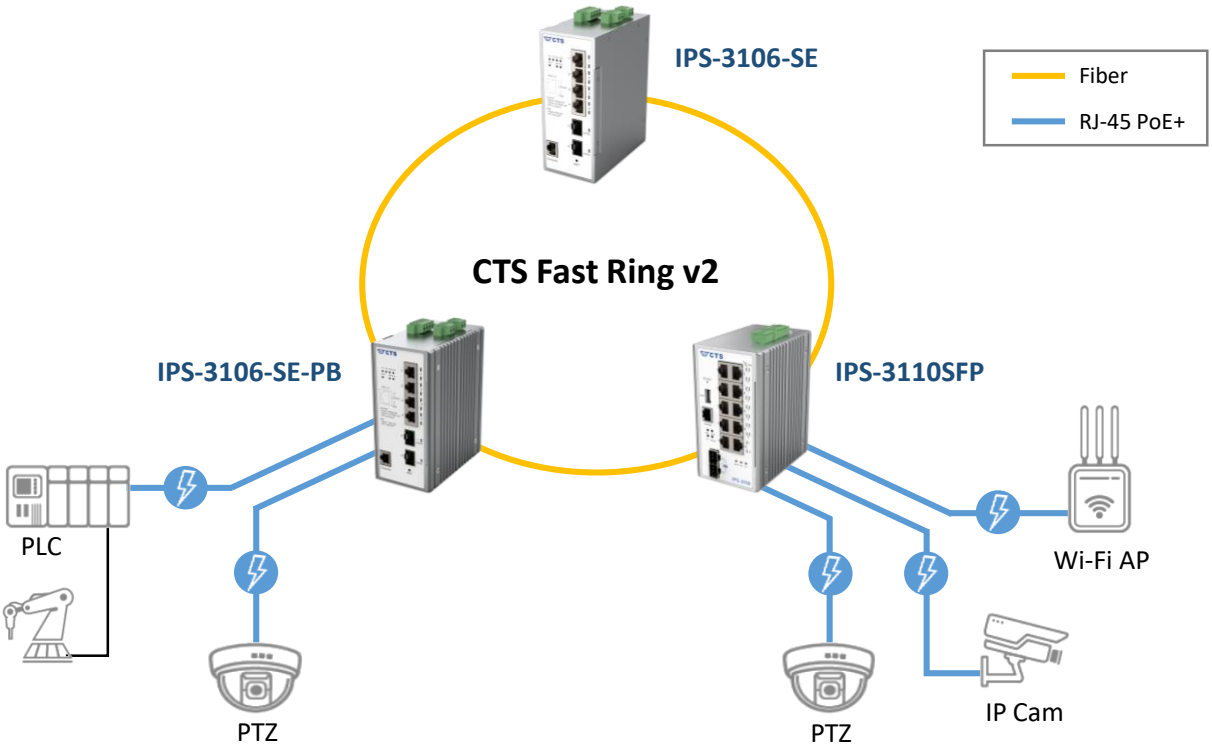
UKCA

ITU-T K.21

Freefall/Shock/Vibration
- IEC 60068-2-32
- IEC 60068-2-27
- IEC 60068-2-6

RoHS 2.0

Application Diagram



Order Information

Model	TP Port		SFP/TP Combo Port*			Support Power Source
	Speed	Ports	Speed	Type	Ports	
IPS-3110SFP	10/100/1000Mbps	8 with 802.3af/at Injector	100/1000Mbps	SFP	2	2 x 48~54V DC with removable terminal block
			10/100/1000Mbps	TP	2	

*The combo port supports either TP (RJ-45) or SFP connectivity, but cannot operate both simultaneously.

Accessory

SFP-31-D

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

Power Supply

Model	Output Voltage Range	Maximum Output Watt	Operating Temperature
SDR-480-48	48~55V	480W	-25˚C ~ 70˚C
SDR-240-48	48~55V	240W	-25˚C ~ 70˚C
SDR-120-48	48~55V	120W	-25˚C ~ 70˚C
SDR-75-48	48~55V	75W	-25˚C ~ 70˚C
NDR-480-48	48~55V	480W	-20˚C ~ 70˚C
NDR-240-48	48~55V	240W	-20˚C ~ 70˚C
NDR-120-48	48~55V	120W	-20˚C ~ 70˚C
NDR-75-48	48~55V	75W	-20˚C ~ 70˚C
MDR-60-48	48~56V	60W	-20˚C ~ 70˚C

NOTE: Please refer to the power supply datasheet for details regarding the operating temperature and derating curve. Subsequently, choose the suitable power supply based on your specific requirements and operating environment.

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