IPC-3014-PoE++ Industrial Media Converter

2 Ports 100/1000Mbps SFP Dual Rate and 1 Port 10/100/1000Base-T with 802.3af/at and 1 Port 10/100/1000Base-T with 60W PoE++ Industrial Multi-Functional Media Converter

Features

- Provide 2 Gigabit RJ-45 Copper Ports & 2 SFP Ports 100Base-FX or 1000Base-X

- Compatible with IEEE 802.3af/at PoE+ and up to 60W PoE++

- PoE Setting - Auto / Force Power

- Support 9K Jumbo Frames

- 6KV Surge Immunity on RJ-45 Copper Ports (K.21*)

- Dual Power Input (12~57VDC) & Built-in Power Booster

- Support 3 Operating Modes - Switch mode, Fiber Backup mode and Dual Media Converter mode

- Relay Output for Fault Alarm Notification (Power, Ports)

- Aluminum Housing

- Operating Temperature -40°C~75°C

*K.21 is better than IEC 61000-4-5 Level 3 and designed for PoE Application and Outdoor environment

Description

Connection Technology Systems (CTS) IPC-3014-PoE++ media converter is a Gigabit Ethernet 10/100/1000Base-T with 60W PoE to 100/1000Base-X media converter. The IPC-3014-PoE++ media converter converts traditional twisted-pair RJ-45 cable into various fiber media including multi-mode, single-mode with SC connectors or bi-directional WDM to fulfill different requirements depending on the deployment.

The IPC-3014-PoE++ media converter is designed for deployment at industrial sites. With DIN-Rail mounting, you can easily mount the industrial PoE media converter at your sites. The media converter supports two DC power inputs to provide redundancy and prevent any possible power loss and Relay output to serve as an alarm.

The IPC-3014-PoE++ media converter supports extended working temperature from -40°C to 75°C to withstand against harsh environment for a better performance. It is designed for surveillance network system integrators, who have the needs of implementing fiber optical Ethernet networks over long distance for wide-area surveillance solutions with the demand of wide operating temperature, and are looking for an effortless and robust Gigabit media converter.

The IPC-3014-PoE++ media converter supports three different operating modes and provides system integrators the flexibility to design their networks under different applications with the same product, thus lowering the complexity of their operation and the inventory pressure.

Application Diagram

Fiber
RJ-45

▍Scenario 1: Bridges/Tunnels

A long-distant area in need of a surveillance system can sometimes cause extra costs during the deployment. CTS' brand-new industrial PoE converter, IPC-3014-PoE++, supports **switch mode**, which enables the converters to build a chain network easily and solves the problem.

Control Room
IPC-3014-PoE++
IPC-3014-PoE++
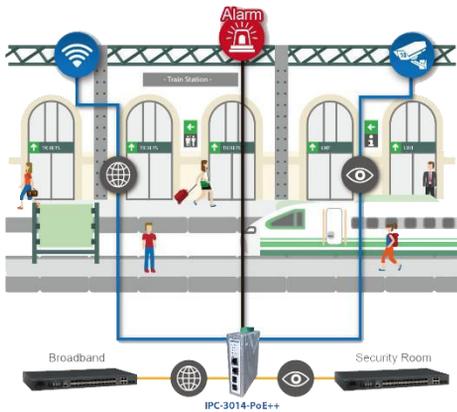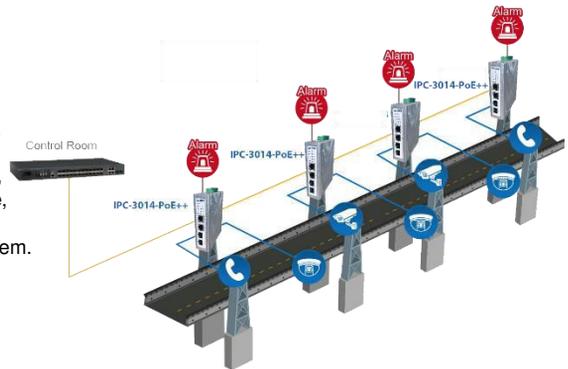
▍Scenario 2 : Public Venues

With the uprising trend of mobile devices, more and more public venues provide free Wi-Fi broadband to satisfy their customers. At the same time the security of surveillance systems cannot be compromised. CTS' IPC-3014-PoE++ supports **dual media converter mode**, which separates the traffic for different purposes (e.g. Public Wi-Fi and Surveillance)

Broadband
Security Room
IPC-3014-PoE++

▍Scenario 3 : Highly Secured Places

At highly secured checkpoints, malfunction of the surveillance systems might cause severe damage beyond imagination. CTS' IPC-3014-PoE++ supports **fiber backup mode**, which enables the system to work smoothly if a fiber cable link is down.

Control Room
IPC-3014-PoE++
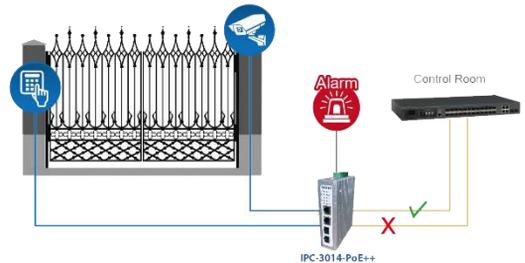
6KV Surge Immunity (K.21)

IPC-3014-PoE++
K.21
RJ-45 PoE
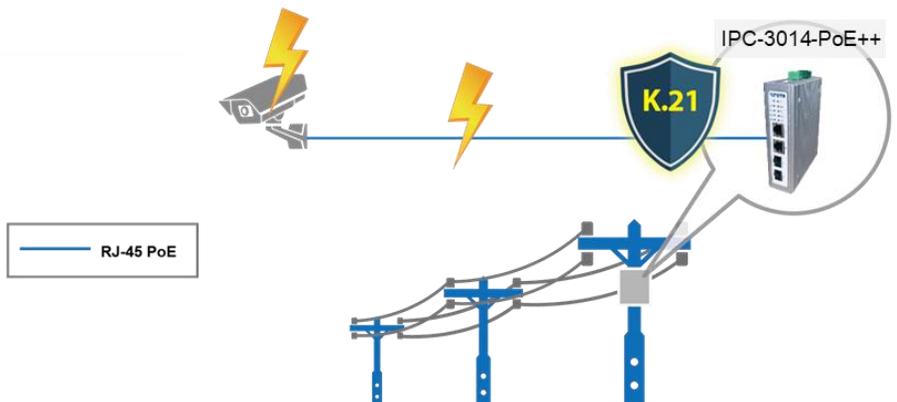
Test	K.21 (EnhancedLevel)	IEC 61000-4-5 (Level 3)	K.21 Advantages
Temporary Voltage Surge	6KV	2KV	Ensures **3 times higher** voltage
Temporary Current Surge	1850A	48A	Withstands **39 times higher** current
PoE Standard	Released PoE testing standard in Dec. of 2016	N/A	Complies with safer **PoE testing** standards

Specification

■Interface
- TP Port:
  2 x 10/100/1000Base-T RJ-45
- F/O Port:
  2 x 100/1000Base-X SFP

■PoE
- 1 x IEEE 802.3af/at (RJ-45)
- 1 x 60W PoE++ (RJ-45)
- Both Compatible with 802.3af/at

■Standards
- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-TX/FX
- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000Base-X
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at Power over Ethernet
  Enhancements

■H/W Specification
- Store and Forward Switching Mechanism
- Auto-negotiation in Copper and Fiber Port
- MDI/MDIX Auto-crossover Supported
- Support Fault Alarm Notification (Power, Ports)
- Support Auto & Force Mode Configuration
- Support Full/Half Duplex Mode
- MAC Address Table : 2K
- Memory Buffer: 128K Bytes
- Relay Output
- Surge Protection: 6KV (K.21)

■LED
P1, P2, ALM, Mode, TP1, TP2, PoE1, PoE2, SFP1, SFP2

■Ethernet Features
Jumbo Frames: 9K Bytes

■Other Features
- DIP Switch Configuration
- Installation Type: DIN Rail Mounting
- PoE Configuration: Auto-Mode/ Force Power

■Environmental Condition
- Operating Temperature: -40°C ~ 75°C
- Storage Temperature: -40°C ~ 85°C
- Humidity: 5% ~ 90%, non-condensing

■Power Requirement
DC Input:
- Terminal Block x 1 with two power inputs
- Input Voltage: 12 ~ 57VDC
- **Caution: Use 14AWG or better powering wire**
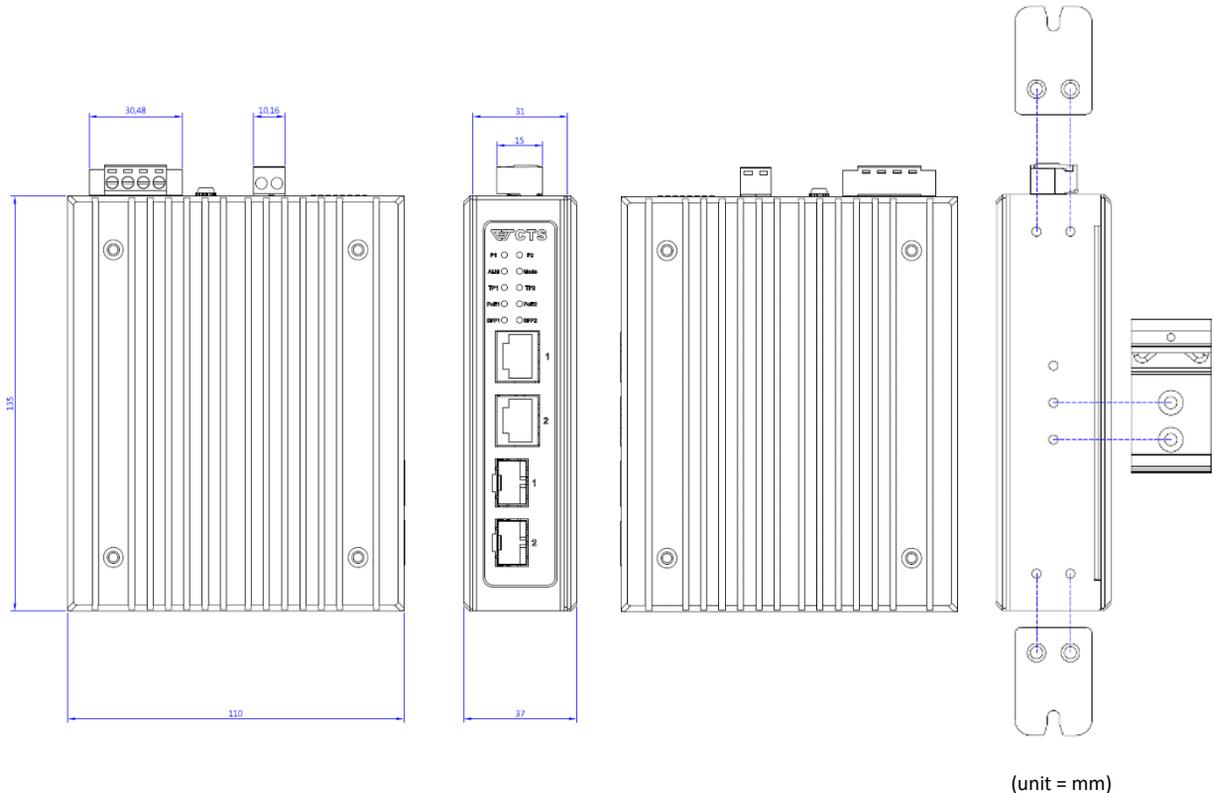- Power Consumption: 96W (Max.)

■Dimension & Weight
- Size: 36 x 110 x 135 mm (W x D x H)
- Weight: 0.64Kg
- Housing: Aluminum, IP30

■EMC/Safety
FCC Class A, CE
ITU-T K.21
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6

Dimension

(unit = mm)

Connection Technology Systems (CTS) reserves the right to change specification without prior notice.

www.ctsystem.com

Order Information

IPC-3014-PoE++

Model	Fiber Ports					TP Ports			Support Power Source
	Speed	Type	Connector	Distance	Ports	Speed	PoE Ports	PoE++ Ports	
IPC-3014-PoE++	100/1000 Mbps	SFP	-	-	2	10/100/1000 Mbps	1	1	Terminal Block x 1 with two power inputs

Accessory

Power Supply

Model	Description	Remarks
SDR-480-48	48V/480W Din-Rail Power Supply	Working Temperature: -25˚C ~ 70˚C
SDR-240-48	48V/240W Din-Rail Power Supply	Working Temperature: -25˚C ~ 70˚C
SDR-120-48	48V/120W Din-Rail Power Supply	Working Temperature: -25˚C ~ 70˚C
SDR-75-48	48V/75W Din-Rail Power Supply	Working Temperature: -25˚C ~ 70˚C
NDR-480-48	48V/480W Din-Rail Power Supply	Working Temperature: -20˚C ~ 70˚C
NDR-240-48	48V/240W Din-Rail Power Supply	Working Temperature: -20˚C ~ 70˚C
NDR-120-48	48V/120W Din-Rail Power Supply	Working Temperature: -20˚C ~ 70˚C
NDR-75-48	48V/75W Din-Rail Power Supply	Working Temperature: -20˚C ~ 70˚C
MDR-60-48	48V/60W Din-Rail Power Supply	Working Temperature: -20˚C ~ 70˚C
MDR-20-12	12V/20W Din-Rail Power Supply	Working Temperature: -20˚C ~ 70˚C

SFP-31-D

Model	Fiber Port					Operating Temperature
	Speed	Type	Connector	Distance	Wavelength	
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	-40˚C ~ 85˚C
					RX: 1550/1550nm	
SFP-31W2B(SM-10/20)-D	1000Mbps	WDM	LC	10/20KM	TX: 1550/1550nm	-40˚C ~ 85˚C
					RX: 1310/1310nm	