

## Industrial Fast Ethernet Media Converter

### IFC-1200



The IFC-1200 is industrial grade fiber media converter that provides 2-port 10/100Base-TX and 1-port 100Base-FX. The reliable hardware design is suitable for keeping industrial automation application running continuously. Each IFC-1200 media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-1200 media converter supports operating temperatures of 0 to 60 degree C.

#### Features

- 2-port 10/100Base-TX to 100Base-FX Converter
- Auto-Negotiation on two LAN port
- Auto MDI/MDIX
- Supports max forwarding packet length 1552 bytes
- Supports Q in Q double tagged frame transparent
- Supports IEEE 802.1q Tag VLAN pass thru
- Supports flow control (Pause)
- Supports Far End Fault
- Supports two Relay out (Arc-Free Contact)

#### Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Supports DIN-Rail & wall mount
- Redundant dual DC power inputs

#### Specifications

##### Optical Interface

**Connector:** 1x9 (SC,FC,ST)

**Data rate:** 100Mbps

**Duplex mode:** Full duplex

##### Fiber

MM 50/125µm, 62.5/125µm.

SM 9/125µm

##### Distance

MM 2km, SM 15/30/50/80/120km,

WDM 20/40/60/80km

##### Wavelength

MM 1310nm, SM 1310,1550nm

WDM 1310Tx/1550Rx (type A)

1550Tx/1310Rx (type B)

##### Electrical Interface

**Connector:** RJ45

**Data rate:** 10Mbps, 100Mbps

**Duplex mode:** Half / Full duplex

##### Cable

10Base-T Cat.3, 4, 5, UTP,

100Base-TX Cat.5, 5e or higher

##### Standard

IEEE 802.3, IEEE 802.3u

##### LED Indications

PWR 1/2, FX-Link/Act, LAN1-Link/Act,

LAN2-Link/Act, Alarm

(Power or Optical Fiber Failure Alarm)

##### Power

###### Power Input

PWR : 1/2

DC12-48 VDC

**Power Consumption** < 4.8W

##### Mechanical

###### Dimension

106 x 62.5 x 134.8mm (DxWxH)

###### Weight

460g

###### Physical Characteristics

Housing: Metal

###### IP Protection

IP30

##### Environmental

###### Temperature

Operating: 0 ~ 60°C

Storage: -10 ~ 70°C

###### Humidity

0 ~ 90% non-condensing

##### Approvals

###### Safety

CSA C22.2 No.60950-1, EN60950-1

###### EMI

FCC Part 15, CISPR(EN55022) ClassA

###### EMS

EN61000-4-2 (ESD), Level3

EN61000-4-3 (RS), Level3

EN61000-4-4 (EFT), Level3

EN61000-4-5 (Surge), Level3

EN61000-4-6 (CS), Level3

EN61000-4-8

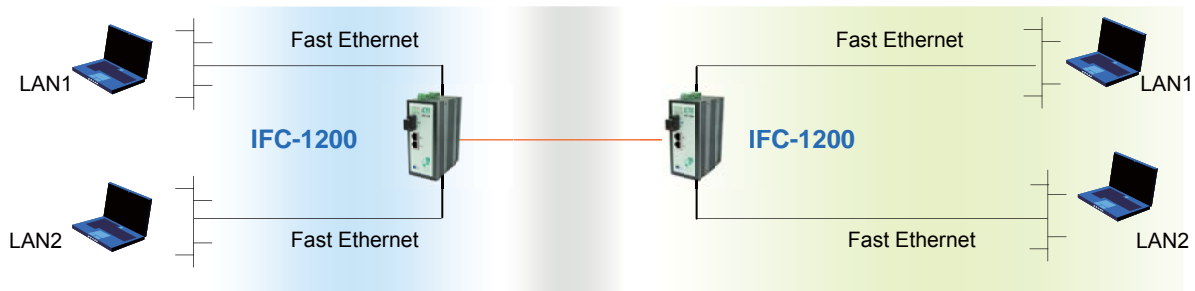
EN61000-4-11

**MTBF** 401,000 hrs

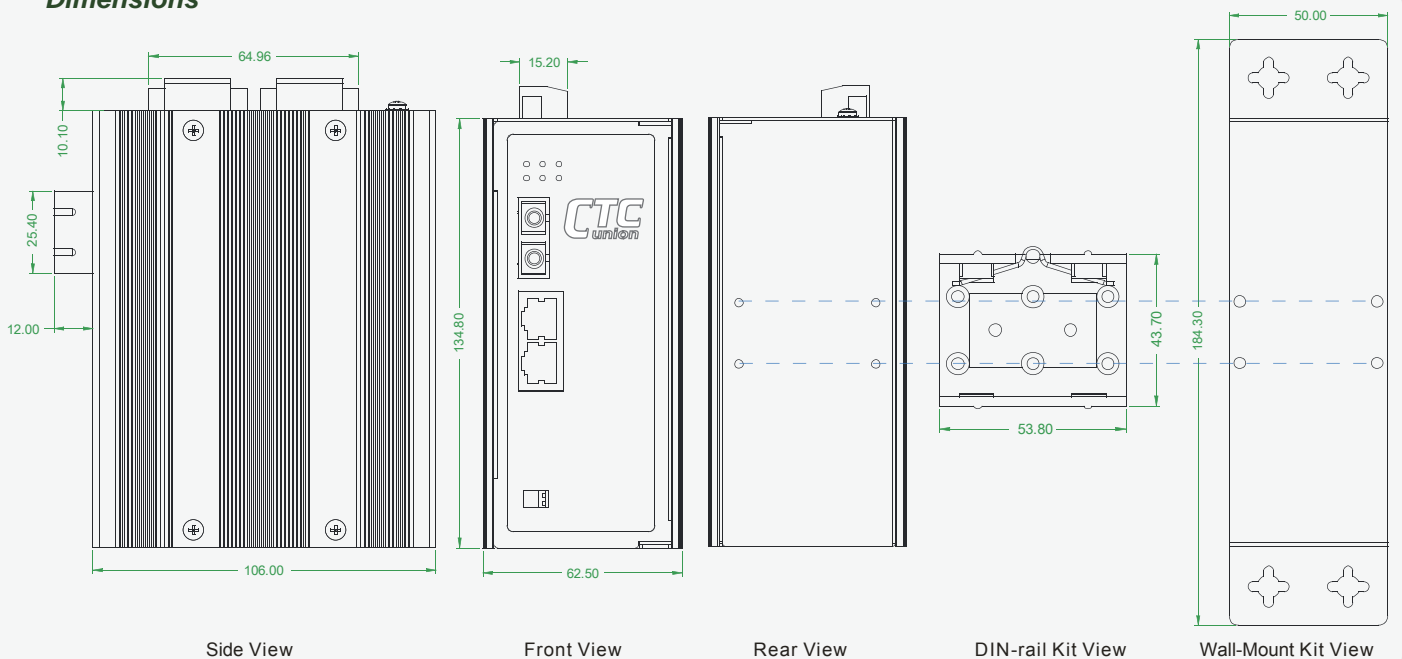
###### Warranty

5 years

## Applications



## Dimensions



## Ordering Information

| Product Type | Connector Type | Connectivity Distance           | Wide Temperature Range  |
|--------------|----------------|---------------------------------|---|
| IFC-1200     | SC             | 002:2km *20A: WDM 20km A type   | X:-40~85°C operating range<br>*Standard model(IFC-1200) has 0 to 60°C operating range |
| IFC-1200-X   | ST<br>FC       | 015:15km *20B: WDM 20km B type  |   |
|              |                | 030:30km *40A: WDM 40km A type  |   |
|              |                | 050:50km *40B: WDM 40km B type  |   |
|              |                | 080:80km *60A: WDM 60km A type  |   |
|              |                | 120:120km *60B: WDM 60km B type |   |
|              |                | *80A: WDM 80km A type           |   |
|              |                | *80B: WDM 80km B type           |   |

### Optional Accessories

DRK01: Din Rail mount kit (standardized 35 mm wide)

WMK01:Wall mount kit

Sample: IFC-1200-SC002  
IFC-DRK01

## Industrial Fast Ethernet Media Converter IFC-1200-X



The IFC-1200-X is industrial grade fiber media converter that provides 2-port 10/100Base-TX and 1-port 100Base-FX. The reliable hardware design is suitable for keeping industrial automation application running continuously. Each IFC-1200-X media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-1200-X media converter supports operating temperatures of -40 to 85 degree C.

### Features

- 2-port 10/100Base-TX to 100Base-FX Converter
- Auto-Negotiation on two LAN port
- Auto MDI/MDIX
- Support max forwarding packet length 1552 bytes
- Supports Q in Q double tagged frame transparent
- Supports IEEE 802.1q Tag VLAN pass thru
- Support flow control (Pause)
- Supports Far End Fault
- Support two Relay out (Arc-Free Contact)

### Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Support DIN-Rail & wall mount
- -40 to 85°C operating temperature range
- Redundant dual DC power inputs

### Specifications

#### Optical Interface

**Connector:** 1x9 (SC,FC,ST)

**Data rate:** 100Mbps

**Duplex mode:** Full duplex

#### Fiber

MM 50/125µm, 62.5/125µm.

SM 9/125µm

#### Distance

MM 2km, SM 15/30/50/80/120km,

WDM 20/40/60/80km

#### Wavelength

MM 1310nm, SM 1310,1550nm

WDM 1310Tx/1550Rx (type A)

1550Tx/1310Rx (type B)

#### Electrical Interface

**Connector:** RJ45

**Data rate:** 10Mbps, 100Mbps

**Duplex mode:** Half / Full duplex

#### Cable

10Base-T Cat.3, 4, 5, UTP,

100Base-TX Cat.5, 5e or higher

#### Standard

IEEE 802.3, IEEE 802.3u

#### LED Indications

PWR 1/2, FX-Link/Act, LAN1-Link/Act,  
LAN2-Link/Act, Alarm (Power or Optical Fiber

Failure Alarm)

#### Power

##### Power Input

PWR : 1/2

DC12-48 VDC

**Power Consumption:** < 4.8W

#### Mechanical

##### Dimension

106 x 62.5 x 134.8mm (DxWxH)

##### Weight

460g

##### Physical Characteristics

Housing: Metal

##### IP Protection

IP30

#### Environmental

##### Temperature

Operating: -40 ~ 85°C

Storage: -40 ~ 85°C

##### Humidity

0 ~ 90% non-condensing

#### Approvals

##### Safety

CSA C22.2 No.60950-1, EN60950-1

##### EMI

FCC Part 15, CISPR(EN55022) ClassA

##### EMS

EN61000-4-2 (ESD), Level3

EN61000-4-3 (RS), Level3

EN61000-4-4 (EFT), Level3

EN61000-4-5 (Surge), Level3

EN61000-4-6 (CS), Level3

EN61000-4-8

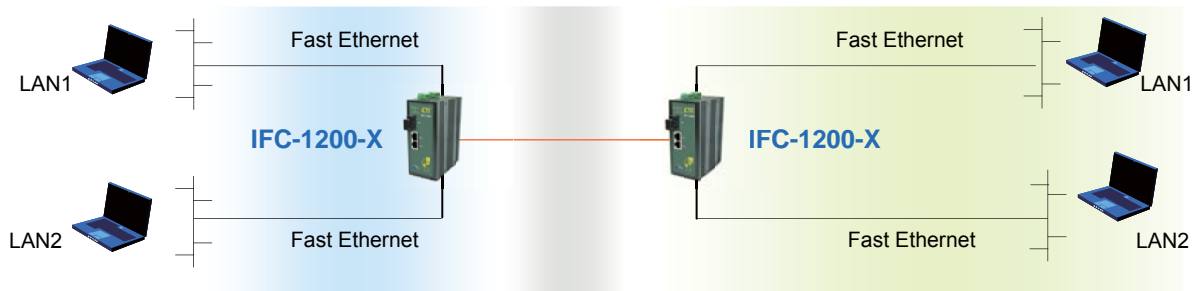
EN61000-4-11

**MTBF** 401,000 hrs

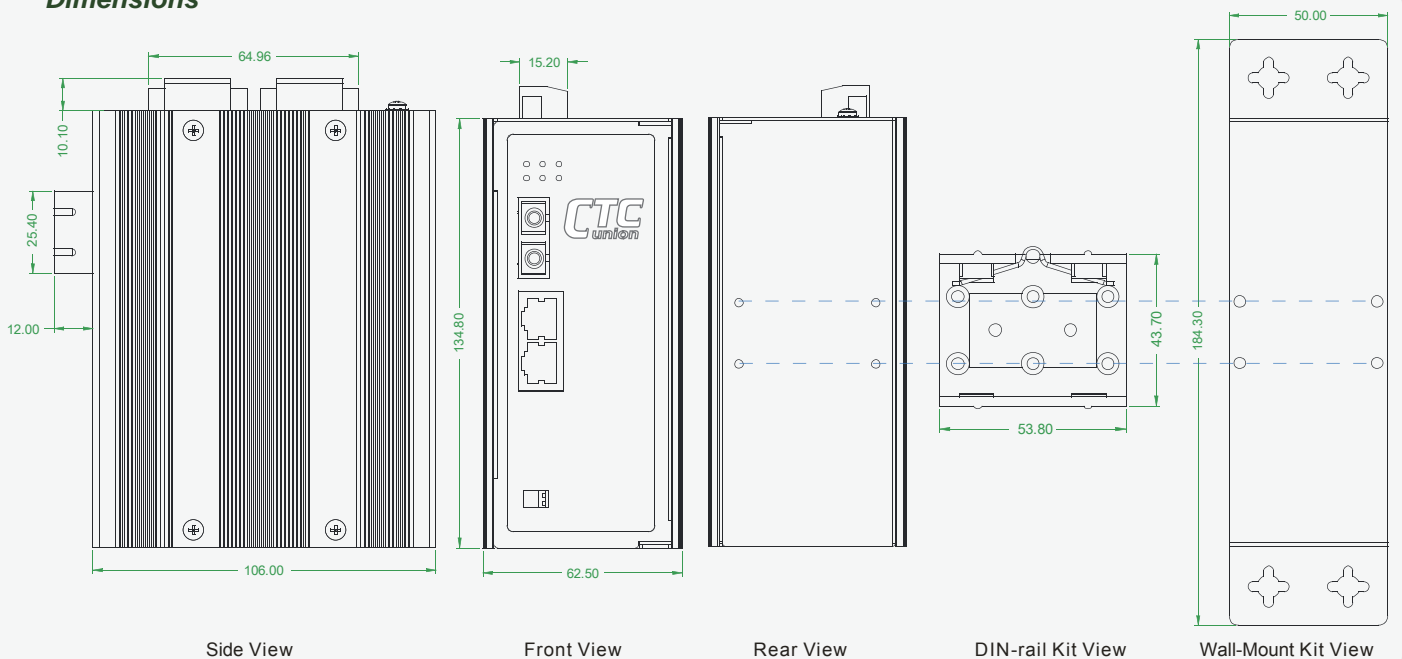
##### Warranty

5 years

## Applications



## Dimensions



## Ordering Information

| Product Type  | Connector Type | Connectivity Distance | Wide Temperature Range   |
|---|----------------|-----------------------|--|
| IFC-1200  | SC             | 002:2km               | X: -40~85°C operating range<br><br>*Standard model(IFC-1200) has 0 to 60°C operating range |
| IFC-1200-X  | ST<br>FC       | *20A: WDM 20km A type |  |
|   |                | 015:15km              |  |
|   |                | *20B: WDM 20km B type |  |
|   |                | *40A: WDM 40km A type |  |
|   |                | 030:30km              |  |
|   |                | *40B: WDM 40km B type |  |
|   |                | 050:50km              |  |
|   |                | *60A: WDM 60km A type |  |
| 080:80km  |                |                       |  |
| *60B: WDM 60km B type                               |                |                       |  |
| 120:120km   |                |                       |  |
| *80A: WDM 80km A type                               |                |                       |  |
| *80B: WDM 80km B type                               |                |                       |  |
| <b>Optional Accessories</b>                         |                |                       |  |
| DRK01: Din Rail mount kit (standardized 35 mm wide) |                |                       |  |
| WMK01:Wall mount kit                                |                |                       |  |

Sample: IFC-1200-X-SC002  
IFC-DRK01

## Industrial Fast Ethernet Switch

### IFC-1400



The IFC-1400 is industrial grade Fast Ethernet Switch that provides 4-port 10/100Base-TX and 1-port 100Base-FX. The reliable hardware design is suitable for keeping industrial automation application running continuously. Each IFC-1400 media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-1400 media converter is available in models that support operating temperatures of 0 to 60 degree C.

#### Features

- 4-port 10/100Base-TX to 100Base-FX Switch
- Auto-Negotiation on two LAN port
- Auto MDI/MDIX
- Supports max forwarding packet length 1552 bytes
- Supports Q in Q double tagged frame transparent
- Supports IEEE 802.1q Tag VLAN pass thru
- Supports flow control (Pause)
- Supports Far End Fault
- Supports two Relay out (Arc-Free Contact)

#### Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Supports DIN-Rail & wall mount
- Redundant dual DC power inputs

#### Specifications

##### Optical Interface

**Connector:** 1x9 (SC,FC,ST)

**Data rate:** 100Mbps

**Duplex mode:** Full duplex

##### Fiber

MM 50/125 $\mu$ m, 62.5/125 $\mu$ m.

SM 9/125 $\mu$ m

##### Distance

MM 2km, SM 15/30/50/80/120km,

WDM 20/40/60/80km

##### Wavelength

MM 1310nm, SM 1310,1550nm

WDM 1310Tx/1550Rx (type A)

1550Tx/1310Rx (type B)

##### Electrical Interface

**Connector:** RJ45

**Data rate:** 10Mbps, 100Mbps

**Duplex mode:** Half / Full duplex

##### Cable

10Base-T Cat.3, 4, 5, UTP,

100Base-TX Cat.5, 5e or higher

##### Standard

IEEE 802.3, IEEE 802.3u

##### LED Indications

PWR 1/2, FX-Link/Act, LAN1-Link/Act,

LAN2-Link/Act, Alarm

(Power or Optical Fiber Failure Alarm)

##### Power

###### Power Input

PWR : 1/2

DC12-48 VDC

**Power Consumption** < 4.8W

##### Mechanical

###### Dimension

106 x 62.5 x 134.8mm (DxWxH)

###### Weight

460g

###### Physical Characteristics

Housing: Metal

###### IP Protection

IP30

##### Environmental

###### Temperature

Operating: 0 ~ 60°C

Storage: -10 ~ 70°C

###### Humidity

0 ~ 90% non-condensing

##### Approvals

###### Safety

CSA C22.2 No.60950-1, EN60950-1

###### EMI

FCC Part 15, CISPR(EN55022) ClassA

###### EMS

EN61000-4-2 (ESD), Level3

EN61000-4-3 (RS), Level3

EN61000-4-4 (EFT), Level3

EN61000-4-5 (Surge), Level3

EN61000-4-6 (CS), Level3

EN61000-4-8

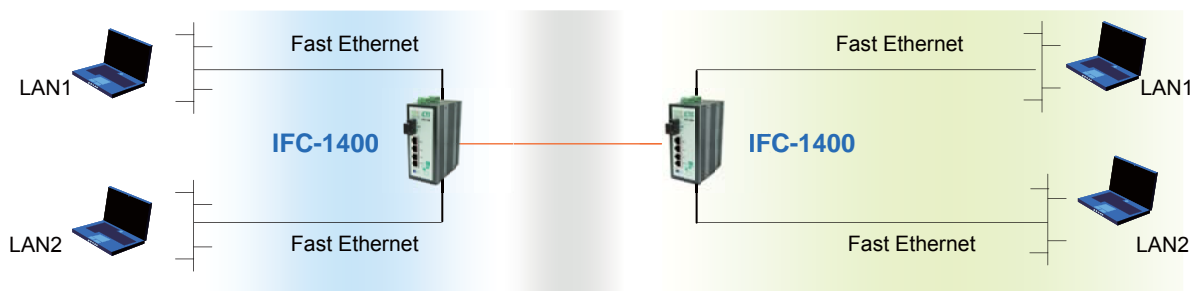
EN61000-4-11

**MTBF** 401,000 hrs

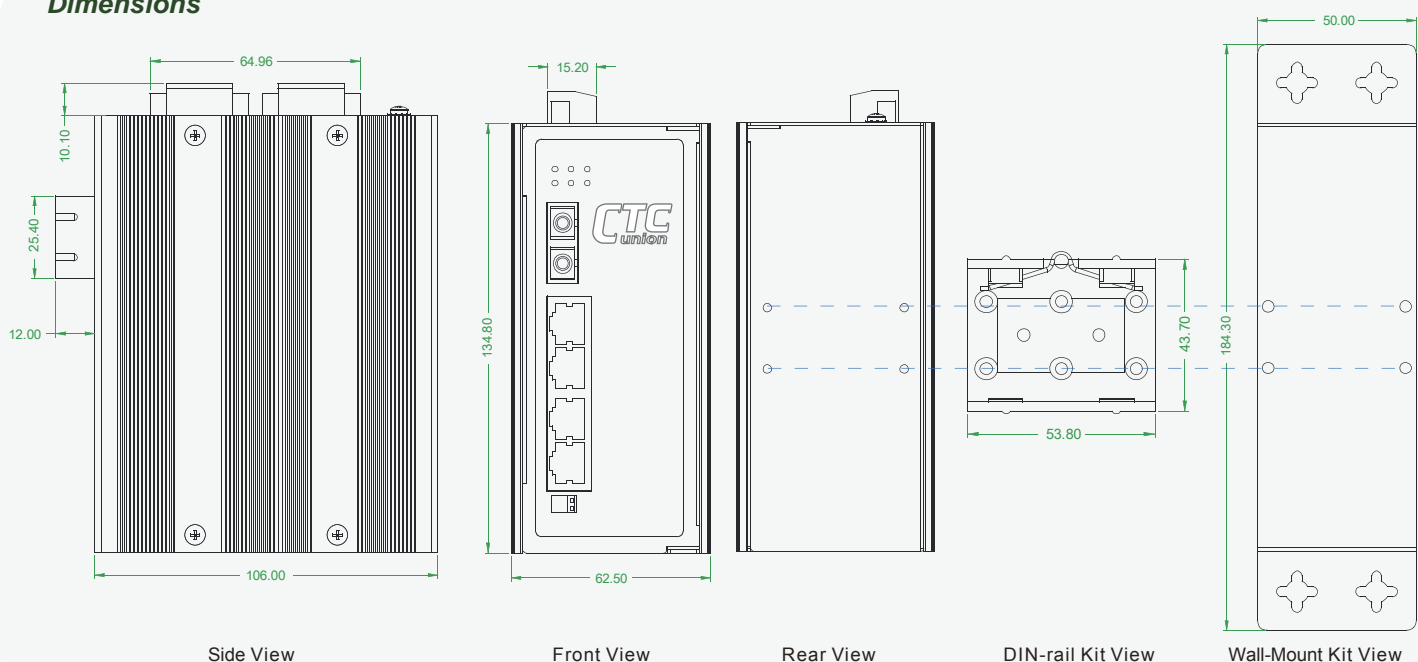
###### Warranty

5 years

## Applications



## Dimensions



## Ordering Information

| Product Type  | Connector Type | Connectivity Distance | Wide Temperature Range   |
|---|----------------|-----------------------|--|
| IFC-1400  | SC             | 002:2km               | X: -40~85°C operating range<br><br>*Standard model(IFC-1400) has 0 to 60°C operating range |
| IFC-1400-X  | ST<br>FC       | *20A: WDM 20km A type |  |
|   |                | 015:15km              |  |
|   |                | *20B: WDM 20km B type |  |
|   |                | *40A: WDM 40km A type |  |
|   |                | 030:30km              |  |
|   |                | *40B: WDM 40km B type |  |
|   |                | 050:50km              |  |
|   |                | *60A: WDM 60km A type |  |
| 080:80km  |                |                       |  |
| *60B: WDM 60km B type                               |                |                       |  |
| 120:120km   |                |                       |  |
| *80A: WDM 80km A type                               |                |                       |  |
| *80B: WDM 80km B type                               |                |                       |  |
| <b>Optional Accessories</b>                         |                |                       |  |
| DRK01: Din Rail mount kit (standardized 35 mm wide) |                |                       |  |
| WMK01: Wall mount kit                               |                |                       |  |

Sample: IFC-1400-SC002  
IFC-DRK01

## Industrial Fast Ethernet Switch

### IFC-1400-X



The IFC-1400-X is industrial grade Fast Ethernet Switch that provides 4-port 10/100Base-TX and 1-port 100Base-FX. The reliable hardware design is suitable for keeping industrial automation application running continuously. Each IFC-1400-X media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-1400-X media converter is available in models that support operating temperatures of -40 to 85 degree C.

#### Features

- 4-port 10/100Base-TX to 100Base-FX Switch
- Auto-Negotiation on two LAN port
- Auto MDI/MDIX
- Supports max forwarding packet length 1552 bytes
- Supports Q in Q double tagged frame transparent
- Supports IEEE 802.1q Tag VLAN pass thru
- Supports flow control (Pause)
- Supports Far End Fault
- Supports two Relay out (Arc-Free Contact)

#### Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Supports DIN-Rail & wall mount
- -40 to 85°C operating temperature range
- Redundant dual DC power inputs

#### Specifications

##### Optical Interface

**Connector:** 1x9 (SC,FC,ST)

**Data rate:** 100Mbps

**Duplex mode:** Full duplex

##### Fiber

MM 50/125µm, 62.5/125µm.

SM 9/125µm

##### Distance

MM 2km, SM 15/30/50/80/120km,

WDM 20/40/60/80km

##### Wavelength

MM 1310nm, SM 1310,1550nm

WDM 1310Tx/1550Rx (type A)

1550Tx/1310Rx (type B)

##### Electrical Interface

**Connector:** RJ45

**Data rate:** 10Mbps, 100Mbps

**Duplex mode:** Half / Full duplex

##### Cable

10Base-T Cat.3, 4, 5, UTP,

100Base-TX Cat.5, 5e or higher

##### Standard

IEEE 802.3, IEEE 802.3u

##### LED Indications

PWR 1/2, FX-Link/Act, LAN1-Link/Act,

LAN2-Link/Act, Alarm (Power or Optical Fiber

Failure Alarm)

##### Power

##### Power Input

PWR : 1/2

DC12-48 VDC

**Power Consumption:** < 4.8W

##### Mechanical

##### Dimension

106 x 62.5 x 134.8mm (DxWxH)

##### Weight

460g

##### Physical Characteristics

Housing: Metal

##### IP Protection

IP30

##### Environmental

##### Temperature

Operating: -40 ~ 85°C

Storage: -40 ~ 85°C

##### Humidity

0 ~ 90% non-condensing

##### Approvals

##### Safety

CSA C22.2 No.60950-1, EN60950-1

##### EMI

FCC Part 15, CISPR(EN55022) ClassA

##### EMS

EN61000-4-2 (ESD), Level3

EN61000-4-3 (RS), Level3

EN61000-4-4 (EFT), Level3

EN61000-4-5 (Surge), Level3

EN61000-4-6 (CS), Level3

EN61000-4-8

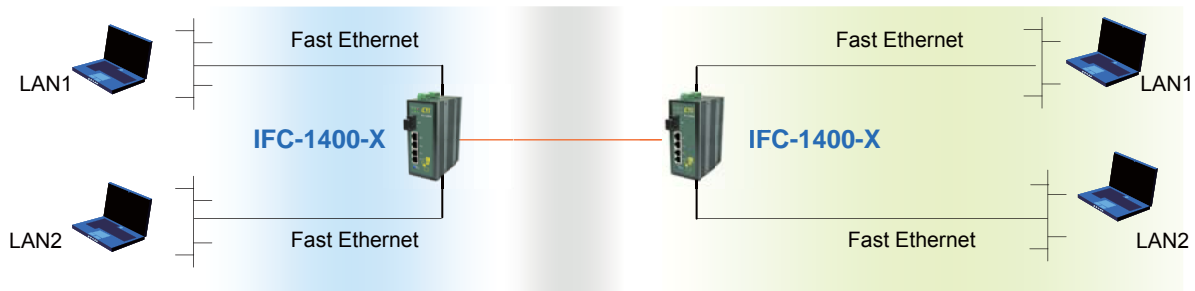
EN61000-4-11

**MTBF** 401,000 hrs

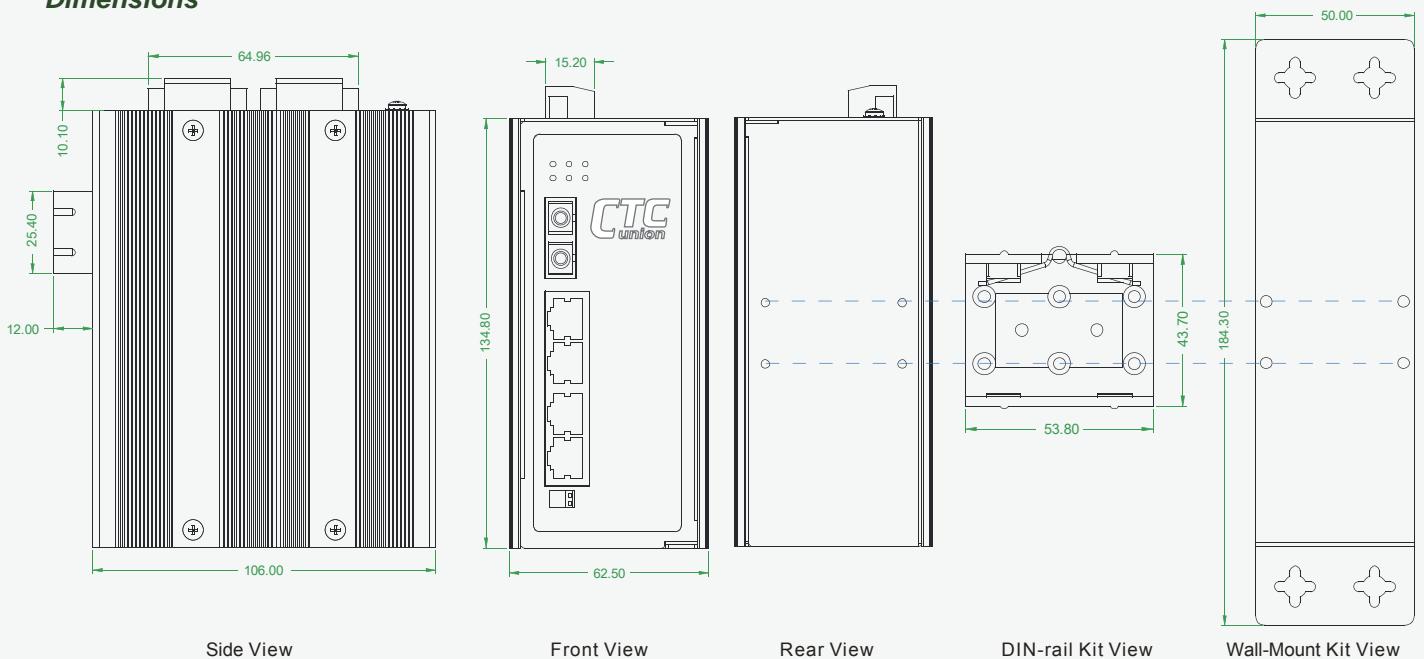
##### Warranty

5 years

## Applications



## Dimensions



## Ordering Information

| Product Type  | Connector Type        | Connectivity Distance | Wide Temperature Range  |
|---|-----------------------|-----------------------|---|
| IFC-1400  | SC                    | 002:2km               | X: -40~85°C operating range<br>*Standard model(IFC-1200)has 0 to 60°C operating range |
| IFC-1400-X  | ST<br>FC              | *20A: WDM 20km A type |   |
|   |                       | 015:15km              |   |
|   |                       | *20B: WDM 20km B type |   |
|   |                       | *40A: WDM 40km A type |   |
|   |                       | 030:30km              |   |
|   |                       | *40B: WDM 40km B type |   |
|   |                       | 050:50km              |   |
|   |                       | *60A: WDM 60km A type |   |
|   |                       | 080:80km              |   |
| *60B: WDM 60km B type                               |                       |                       |   |
| 120:120km   | *80A: WDM 80km A type |                       |   |
|   | *80B: WDM 80km B type |                       |   |
| <b>Optional Accessories</b>                         |                       |                       |   |
| DRK01: Din Rail mount kit (standardized 35 mm wide) |                       |                       |   |
| WMK01:Wall mount kit                                |                       |                       |   |

Sample: IFC-1400-X-SC002  
IFC-DRK01





## RS485/422/232 Fiber Converter IFC-Serial

The IFC-Serial is industrial grade fiber media converter that provides a solution to extend asynchronous RS-485 or RS-232 transmission distance up to 2km over multimode fiber or up to 120km over single mode fiber. The converter is equipped with multiple interface circuits for connection to RS-232 or RS-485/422 (2 or 4 wire, full or half duplex). The IFC-Serial secures data transmission over EMI resistant fiber at speeds up to 460kbps for RS-232 or up to 1024kbps for RS-485/422. The IFC-Serial reliable industrial design is suitable for keeping your industrial automation applications running continuously. Each IFC-Serial media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-Serial media converter is available in models that support operating temperatures of 0 to 60°C.

### Features

- Extend asynchronous serial transmission from 2km to 120km over fiber
- Dip Switch selectable data interface for RS232/ 422/ 485
- Dip Switch selectable two wires (half duplex) or four wires (full duplex) RS485
- Dip Switch selectable three or five wires RS232
- Speeds up to 256kbps for RS232 (Async. mode)
- Speeds up to 1Mbps for RS485/422

### Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Supports DIN-Rail & wall mount
- Redundant dual DC power inputs

### Specifications

#### Optical Interface

**Connector** : 1x9 (SC, ST, FC) or SFP LC

**Data rate** : 36.864Mbps

**Line coding** : Scrambled NRZ

**Bit Error Rate** : Less than 10<sup>-10</sup>

**Cable type** : MM 62.2/125µm, 50/125µm,  
SM 9/125µm

**Distance** : MM 2km, SM 15/30/50/80/120km,  
WDM 20/40/60/80km

**Wavelength** : MM 1310nm, SM 1310, 1550nm,  
WDM 1310Tx/1550Rx(type A)  
1550Tx/1310Rx(type B)

#### Electrical Interface

**Connector**: 6 pins Terminal block

**Data:** Signal Formats  
RS485 2-wire  
RS422 4-wire  
RS232 RTS/CTS 5-wire  
RS232 3-wire

**Baud Rate** : RS422, RS485 up to 1024kbps  
RS232 up to 256kbps

**Bit Error Rate**: Less than 10<sup>-10</sup>

#### Standard

EIA/TIA RS485, RS422, RS232

#### LED Indications

Power, FX Link, DI, DO, Test

#### Power

##### Power Input

Standalone : AC, DC options

**Power Consumption** < 5W

#### Mechanical

##### Dimension

155 x 88 x 23mm (D x W x H)

##### Weight

460g

##### Physical Characteristics

Housing: Metal

##### IP Protection

IP30

#### Environmental

##### Temperature

Operating: 0 ~ 60°C ,

Storage: -10 ~ 70°C

##### Humidity

10 ~ 90% non-condensing

##### Approvals

##### Safety

CSA C22.2 No.60950-1, EN60950-1

##### EMI

FCC Part 15, CISPR(EN55022) ClassA

##### EMS

EN61000-4-2 (ESD), Level3

EN61000-4-3 (RS), Level3

EN61000-4-4 (EFT), Level3

EN61000-4-5 (Surge), Level3

EN61000-4-6 (CS), Level3

EN61000-4-8

EN61000-4-11

##### MTBF

401,000 hrs

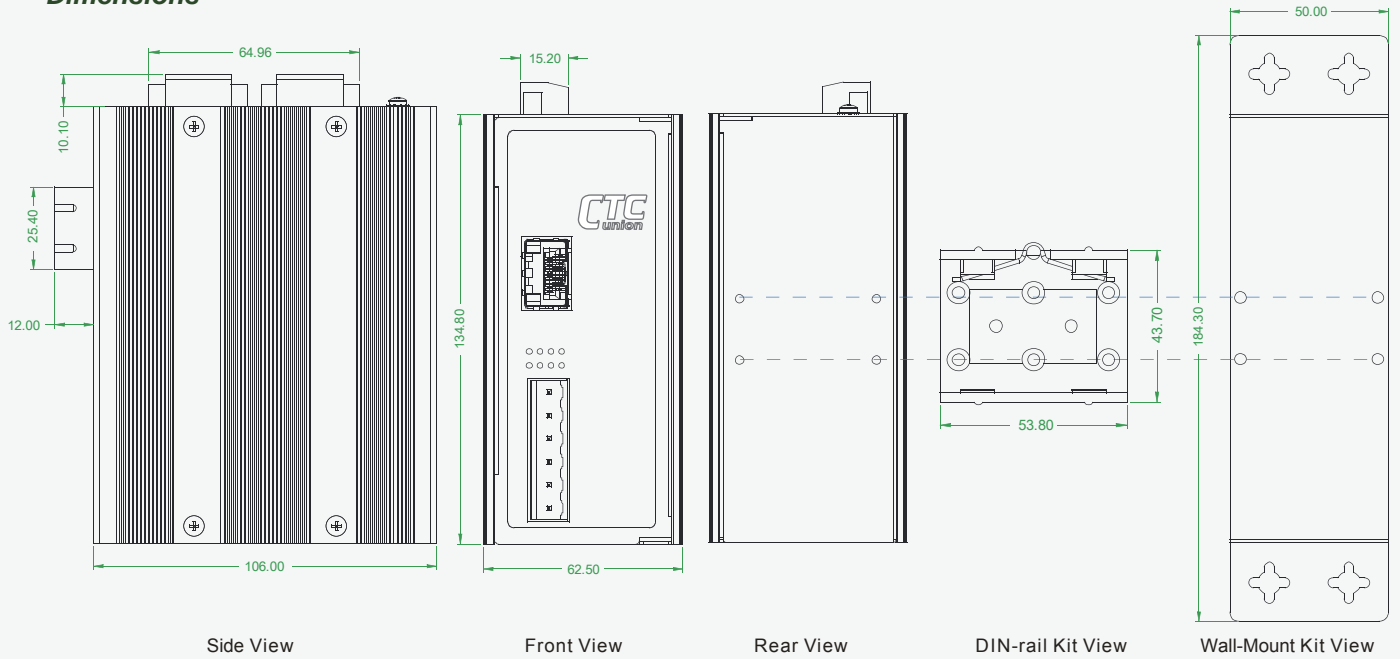
##### Warranty

5 years

## Applications



## Dimensions



## Ordering Information

| Product Type  | Connector Type | Connectivity Distance                          | Wide Temperature Range  |
|---|----------------|--|---|
| IFC-Serial  | SC             | 002:2km *20A: WDM 20km A type                  | X:-40~85°C operating range<br><br>*Standard model (IFC-Serial)has 0 to 60°C operating range |
| IFC-Serial-X  | ST             | 015:15km *20B: WDM 20km B type                 |   |
|   | FC             | 030:30km *40A: WDM 40km A type                 |   |
|   |                | 050:50km *40B: WDM 40km B type                 |   |
|   |                | 080:80km *60A: WDM 60km A type                 |   |
|   |                | 120:120km *60B: WDM 60km B type                |   |
|   |                | *80A: WDM 80km A type<br>*80B: WDM 80km B type |   |
| <b>Optional Accessories</b>                         |                |  |   |
| DRK01: Din Rail mount kit (standardized 35 mm wide) |                |  |   |
| WMK01:Wall mount kit                                |                |  |   |

Sample: IFC-Serial-SC002  
IFC-DRK01



## RS485/422/232 Fiber Converter IFC-Serial-X

The IFC-Serial-X is industrial grade fiber media converter that provides a solution to extend asynchronous RS-485 or RS-232 transmission distance up to 2km over multimode fiber or up to 120km over single mode fiber. The converter is equipped with multiple interface circuits for connection to RS-232 or RS-485/422 (2 or 4 wire, full or half duplex). The IFC-Serial-X secures data transmission over EMI resistant fiber at speeds up to 460kbps for RS-232 or up to 1024kbps for RS-485/422. The IFC-Serial reliable industrial design is suitable for keeping your industrial automation applications running continuously. Each IFC-Serial media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-Serial-X media converter is available in models that support operating temperatures of -40 to 85°C.

### Features

- Extend asynchronous serial transmission from 2km to 120km over fiber
- Dip switch selectable data interface for RS232/ 422/ 485
- Dip switch selectable two wires (half duplex) or four wires (full duplex) RS485
- Dip switch selectable three or five wires RS232
- Speeds up to 256kbps for RS232 (Async. mode)
- Speeds up to 1Mbps for RS485/422

### Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Support DIN-Rail & wall mount
- -40 to 85°C operating temperature range
- Redundant dual DC power inputs

### Specifications

#### Optical Interface

**Connector** : 1x9 (SC, ST, FC) or SFP LC

**Data rate** : 36.864Mbps

**Line coding** : Scrambled NRZ

**Bit Error Rate** : Less than  $10^{-10}$

**Cable type** : MM 62.2/125 $\mu$ m, 50/125 $\mu$ m,  
SM 9/125 $\mu$ m

**Distance** : MM 2km, SM 15/30/50/80/120km,  
WDM 20/40/60/80km

**Wavelength** : MM 1310nm, SM 1310, 1550nm,  
WDM 1310Tx/1550Rx(type A)  
1550Tx/1310Rx(type B)

#### Electrical Interface

**Connector**: 6 pins Terminal block

**Data**: Signal Formats  
RS485 2-wire  
RS422 4-wire  
RS232 RTS/CTS 5-wire  
RS232 3-wire

**Baud Rate** : RS422, RS485 up to 1024kbps  
RS232 up to 256kbps

**Bit Error Rate**: Less than  $10^{-10}$

#### Standard

EIA/TIA RS485, RS422, RS232

#### Certification

CE, FCC, LVD, RoHS

#### LED Indications

Power, FX Link, DI, DO, Test

#### Power

##### Power Input

Standalone : AC, DC options

**Power Consumption** < 5W

#### Mechanical

##### Dimension

155 x 88 x 23mm (D x W x H)

##### Weight

460g

##### Physical Characteristics

Housing: Metal

##### IP Protection

IP30

#### Environmental

##### Temperature

Operating: -40 ~ 85°C ,

Storage: -40 ~ 85°C

##### Humidity

10 ~ 90% non-condensing

##### Approvals

##### Safety

CSA C22.2 No.60950-1, EN60950-1

##### EMI

FCC Part 15, CISPR(EN55022) ClassA

##### EMS

EN61000-4-2 (ESD), Level3

EN61000-4-3 (RS), Level3

EN61000-4-4 (EFT), Level3

EN61000-4-5 (Surge), Level3

EN61000-4-6 (CS), Level3

EN61000-4-8

EN61000-4-11

##### MTBF

401,000 hrs

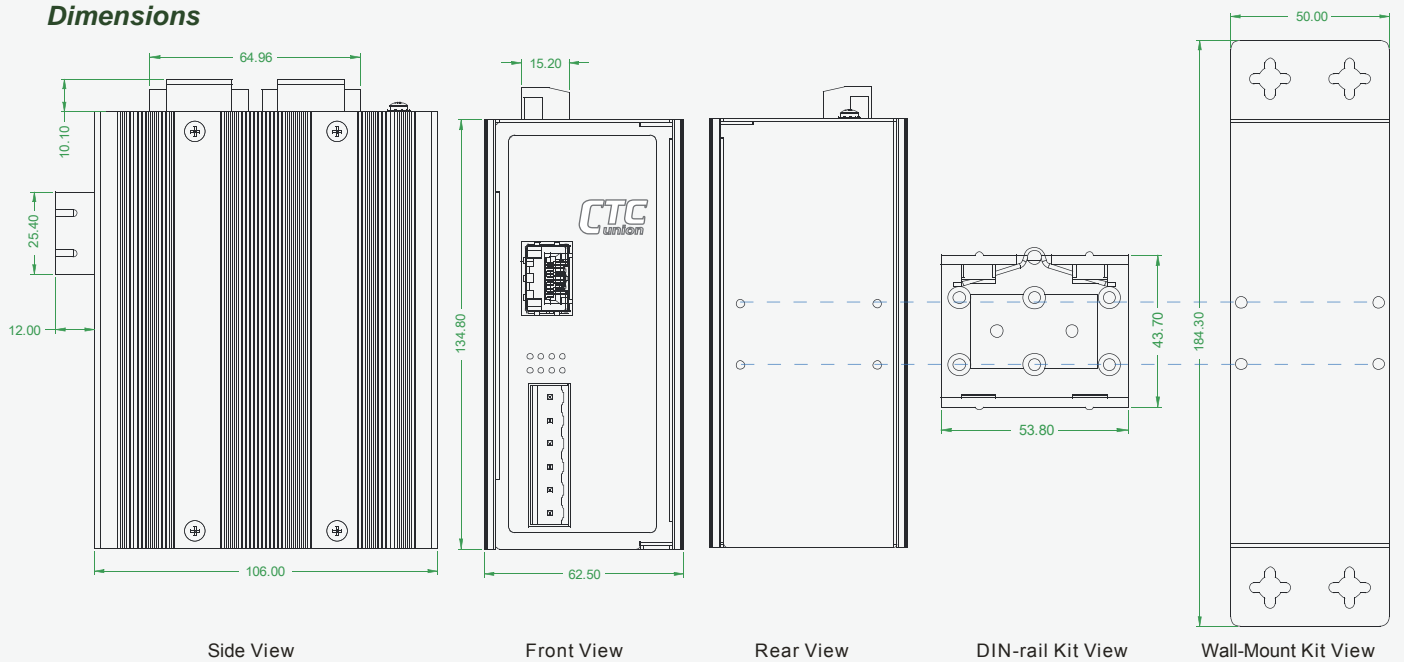
##### Warranty

5 years

## Applications



## Dimensions



## Ordering Information

| Product Type  | Connector Type | Connectivity Distance           | Wide Temperature Range   |
|---|----------------|---------------------------------|--|
| IFC-Serial  | SC             | 002:2km *20A: WDM 20km A type   | X:-40~85°C operating range<br><br>*Standard model (IFC-Serial)has<br>0 to 60°C operating range |
| IFC-Serial-X  | ST             | 015:15km *20B: WDM 20km B type  |  |
|   | FC             | 030:30km *40A: WDM 40km A type  |  |
|   |                | 050:50km *40B: WDM 40km B type  |  |
|   |                | 080:80km *60A: WDM 60km A type  |  |
|   |                | 120:120km *60B: WDM 60km B type |  |
|   |                | *80A: WDM 80km A type           |  |
|   |                | *80B: WDM 80km B type           |  |
| <b>Optional Accessories</b>                         |                |                                 |  |
| DRK01: Din Rail mount kit (standardized 35 mm wide) |                |                                 |  |
| WMK01:Wall mount kit                                |                |                                 |  |

Sample: IFC-Serial-X-SC002  
IFC-DRK01



## RS485/232 Daisy Chain Fiber Converter IFC-Serial/FDC



The IFC-Serial/FDC is industrial grade fiber media converter that provides a dual fiber connection converter solution to extend asynchronous RS-485 or RS-232 transmission distance up to 2km over multimode fiber or up to 120km over single mode fiber. The dual fiber inputs allow connecting multiple devices in a cascade or "daisy chain" fashion as well as creating ring architecture for fiber redundancy. The converter is equipped with multiple interface circuits for connection to RS-232 or RS-485/422 (2 or 4 wire, full or half duplex). The IFC-Serial/FDC secures data transmission over EMI resistant fiber at speeds up to 256kbps for RS-232 or up to 1024kbps for RS-485/422. The IFC-Serial/FDC reliable industrial design is suitable for keeping your industrial automation applications running continuously. Each IFC-Serial/FDC media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-Serial/FDC media converter is available in models that support operating temperatures of 0 to 60°C.

### Features

- Extend asynchronous serial transmission from 2km to 120km over fiber
- Two fiber ports support daisy chain and ring architecture
- Multi-drop operation over fiber ring
- Dip switch selectable data interface for RS232/ 422/ 485
- Dip switch selectable two wires (half duplex) or four wires (full duplex) RS485
- Dip switch selectable three or five wires RS232
- Speeds up to 256kbps for RS232 (Async. mode)
- Speeds up to 1Mbps for RS485/422

### Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Supports DIN-Rail & wall mount
- Redundant dual DC power inputs

### Specifications

#### Optical Interface

**Connector** : SFP LC  
**Data rate** : 31.104Mbps  
**Line coding** : Scrambled NRZ  
**Bit Error Rate** : Less than  $10^{-11}$   
**Cable type** : MM 62.2/125µm, 50/125µm, SM 9/125µm  
**Distance** : MM 2km, SM 15/30/50/80/120km, WDM 20/40/60/80km  
**Wavelength** : 1310nm, 1550nm

#### Electrical Interface

**Connector**: 6 pins Terminal block  
**Data**: Signal Formats  
 RS485/422 2-wire, 4-wire  
 RS232 RTS/CTS 5-wire, 3-wire  
 RS423 RTS/CTS 5-wire, 3-wire  
 TTL 3-wire  
**Baud Rate** : RS422, RS485 up to 1024kbps  
 RS232 up to 256kbps  
 TTL up to 1024kbps

#### Standard

EIA/TIA RS485, RS422, RS232

#### LED Indications

Power, FX-Link1, FX-Link2, Test, Master, Ring TD, RD

#### Power

**Power Input**  
 AC adapter: 100~240VAC to 12VDC  
 AC 100~240V, DC -18~75V  
**Power Consumption** < 5W

#### Mechanical

**Dimension**  
 DC12 : 160x88x24mm(DxWxH)  
 AC/DC48/AD: 201x135x35mm(DxWxH)

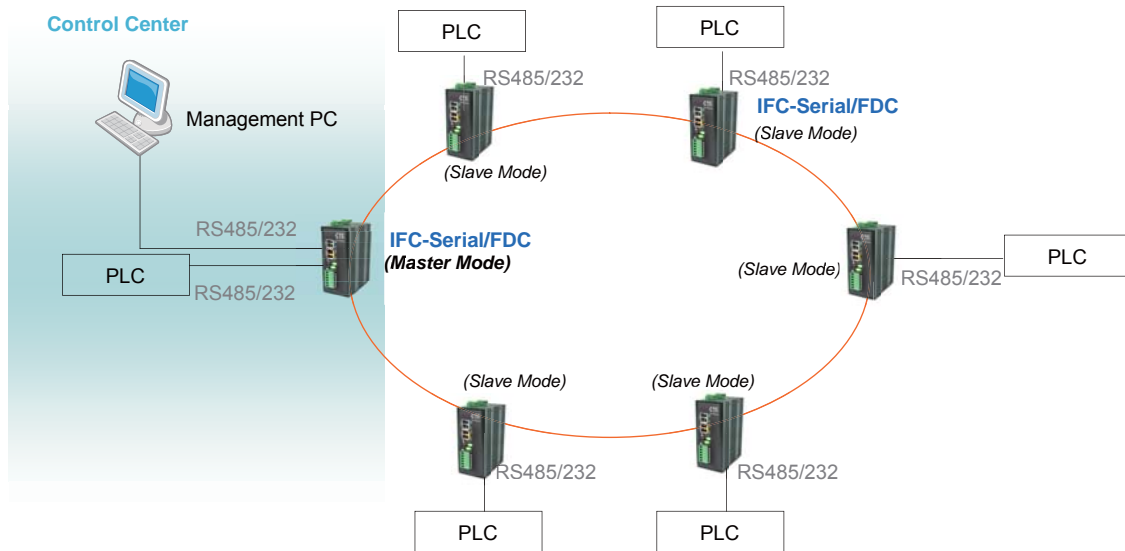
#### Physical Characteristics

Housing: Metal  
**IP Protection**  
 IP30

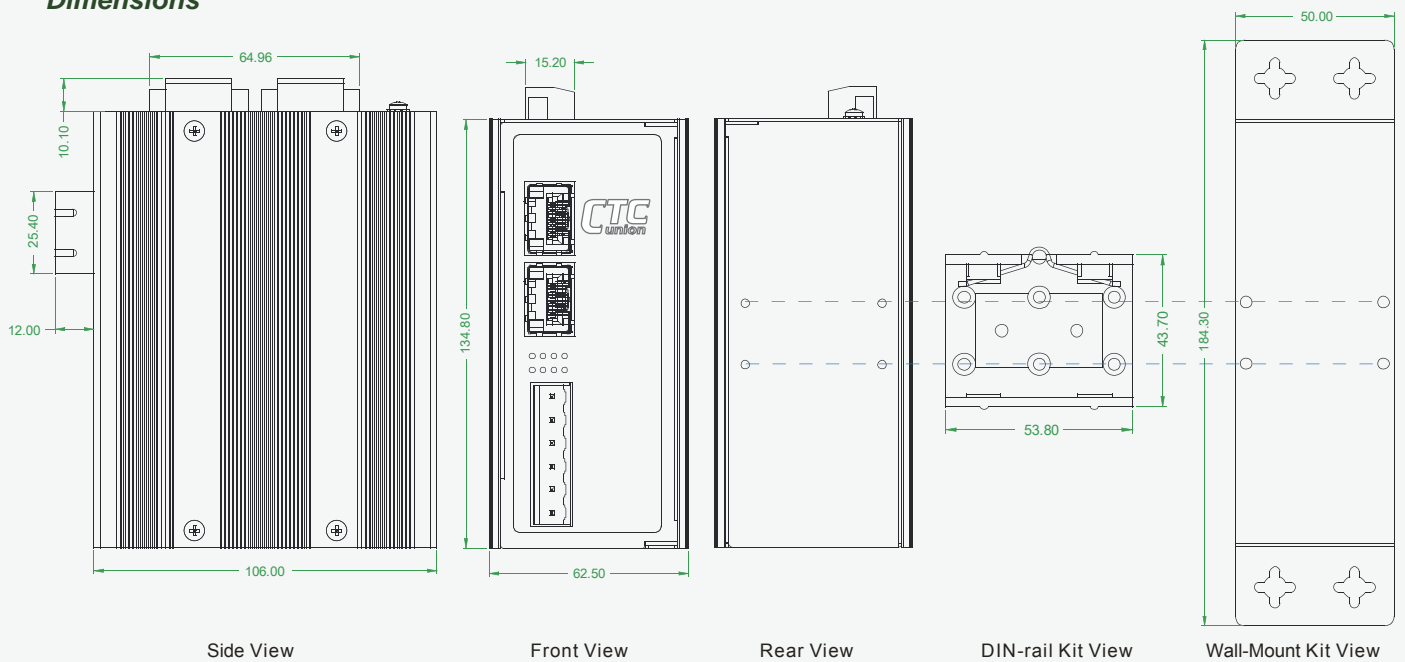
#### Environmental

**Temperature**  
 Operating: 0 ~ 60°C ,  
 Storage: -10 ~ 70°C  
**Humidity**  
 0 ~ 90% non-condensing  
**Approvals**  
**Safety**  
 CSA C22.2 No.60950-1, EN60950-1  
**EMI**  
 FCC Part 15, CISPR(EN55022) ClassA  
**EMS**  
 EN61000-4-2 (ESD), Level3  
 EN61000-4-3 (RS), Level3  
 EN61000-4-4 (EFT), Level3  
 EN61000-4-5 (Surge), Level3  
 EN61000-4-6 (CS), Level3  
 EN61000-4-8  
 EN61000-4-11  
**MTBF**  
 401,000 hrs  
**Warranty**  
 5 years

## Applications



## Dimensions



## Ordering Information

| Product Type  | Connector Type        | Connectivity Distance | Wide Temperature Range   |
|---|-----------------------|-----------------------|--|
| IFC-Serial/FDC                                      | SC                    | 002:2km               | X:-40~85°C operating range<br><br>*Standard model (IFC-Serial/FDC) has 0 to 60°C operating range |
| IFC-Serial/FDC-X                                    | ST<br>FC              | *20A: WDM 20km A type |  |
|   |                       | 015:15km              |  |
|   |                       | *20B: WDM 20km B type |  |
|   |                       | *40A: WDM 40km A type |  |
|   |                       | 030:30km              |  |
|   |                       | *40B: WDM 40km B type |  |
|   |                       | 050:50km              |  |
|   |                       | *60A: WDM 60km A type |  |
|   |                       | 080:80km              |  |
| *60B: WDM 60km B type                               |                       |                       |  |
| 120:120km   | *80A: WDM 60km A type |                       |  |
|   | *80B: WDM 60km B type |                       |  |
| <b>Optional Accessories</b>                         |                       |                       |  |
| DRK01: Din Rail mount kit (standardized 35 mm wide) |                       |                       |  |
| WMK01: Wall mount kit                               |                       |                       |  |

Sample: IFC-Serial/FDC-SC002  
IFC-DRK01



## RS485/232 Daisy Chain Fiber Converter IFC-Serial/FDC-X

The IFC-Serial/FDC-X is industrial grade fiber media converter that provides a dual fiber connection converter solution to extend asynchronous RS-485 or RS-232 transmission distance up to 2km over multimode fiber or up to 120km over single mode fiber. The dual fiber inputs allow connecting multiple devices in a cascade or "daisy chain" fashion as well as creating ring architecture for fiber redundancy. The converter is equipped with multiple interface circuits for connection to RS-232 or RS-485/422 (2 or 4 wire, full or half duplex). The IFC-Serial/FDC-X secures data transmission over EMI resistant fiber at speeds up to 256kbps for RS-232 or up to 1024kbps for RS-485/422. The IFC-Serial/FDC-X reliable industrial design is suitable for keeping your industrial automation applications running continuously. Each IFC-Serial/FDC-X media converter comes with two relay output alarms and two redundant DC power inputs to help prevent damage and loss. The IFC-Serial/FDC-X media converter is available in models that support operating temperatures of -40 to 85°C.

### Features

- Extend asynchronous serial transmission from 2km to 120km over fiber
- Two fiber ports support daisy chain and ring architecture
- Multi-drop operation over fiber ring
- Dip switch selectable data interface for RS232/ 422/ 485
- Dip switch selectable two wires (half duplex) or four wires (full duplex) RS485
- Dip switch selectable three or five wires RS232
- Speeds up to 256kbps for RS232 (Async. mode)
- Speeds up to 1Mbps for RS485/422

### Industrial Grade Performance

- Power or Optical Fiber failure alarm by relay output
- Supports DIN-Rail & wall mount
- -40 to 85°C operating temperature
- Redundant dual DC power inputs

### Specifications

#### Optical Interface

**Connector** : SFP LC  
**Data rate** : 31.104Mbps  
**Line coding** : Scrambled NRZ  
**Bit Error Rate** : Less than 10<sup>-11</sup>  
**Cable type** : MM 62.2/125µm, 5/125µm.  
 SM 9/125µm  
**Distance** : MM 2km, SM 15/30/50/80/120km,  
 WDM 20/40/60/80km  
**Wavelength** : 1310nm, 1550nm

#### Electrical Interface

**Connector**: 6 pins Terminal block  
**Data**: Signal Formats  
 RS485/422 2-wire , 4-wire  
 RS232 RTS/CTS 5-wire, 3-wire  
 RS423 RTS/CTS 5-wire, 3-wire  
 TTL 3-wire  
**Baud Rate** : RS422, RS485 up to 1024kbps  
 RS232 up to 256kbps  
 TTL up to 1024kbps

#### Standard

EIA/TIA RS485, RS422, RS232

#### LED Indications

Power, FX-Link1, FX-Link2, Test, Master, Ring  
 TD, RD

#### Power

**Power Input**  
 AC adapter: 100~240VAC to 12VDC  
 AC 100~240V, DC -18~75V  
**Power Consumption** < 5W

#### Mechanical

**Dimension**  
 DC12 : 160x88x24mm(DxWxH)  
 AC/DC48/AD: 201x135x35mm(DxWxH)

#### Weight

460g

#### Physical Characteristics

Housing: Metal

#### IP Protection

IP30

#### Environmental

##### Temperature

Operating: -40 ~ 85°C ,  
 Storage: -40 ~ 85°C

##### Humidity

0 ~ 90% non-condensing

##### Approvals

##### Safety

CSA C22.2 No.60950-1, EN60950-1

##### EMI

FCC Part 15, CISPR(EN55022) ClassA

##### EMS

EN61000-4-2 (ESD), Level3  
 EN61000-4-3 (RS), Level3  
 EN61000-4-4 (EFT), Level3  
 EN61000-4-5 (Surge), Level3  
 EN61000-4-6 (CS), Level3  
 EN61000-4-8  
 EN61000-4-11

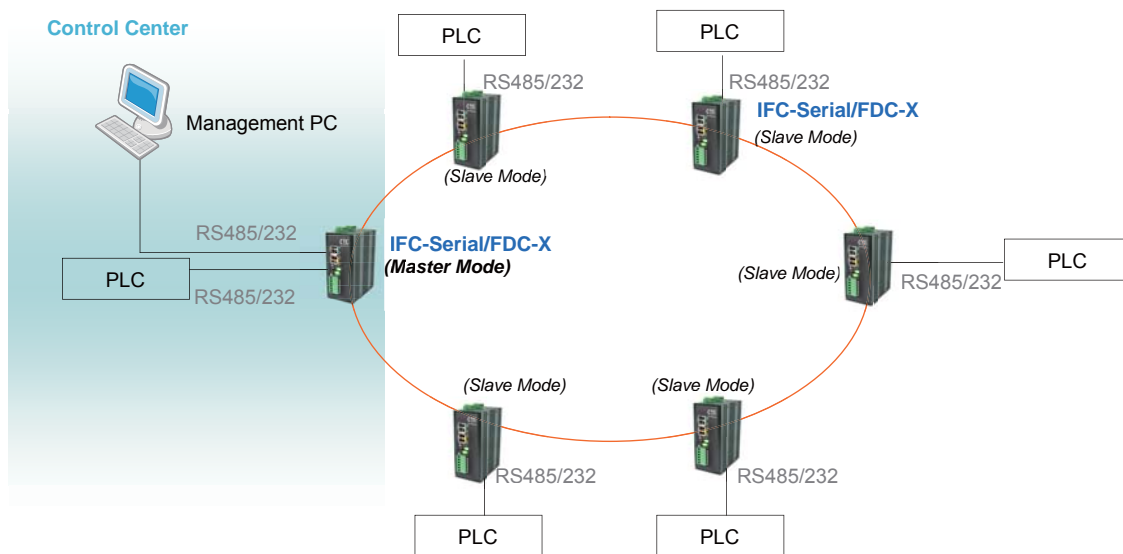
##### MTBF

401,000 hrs

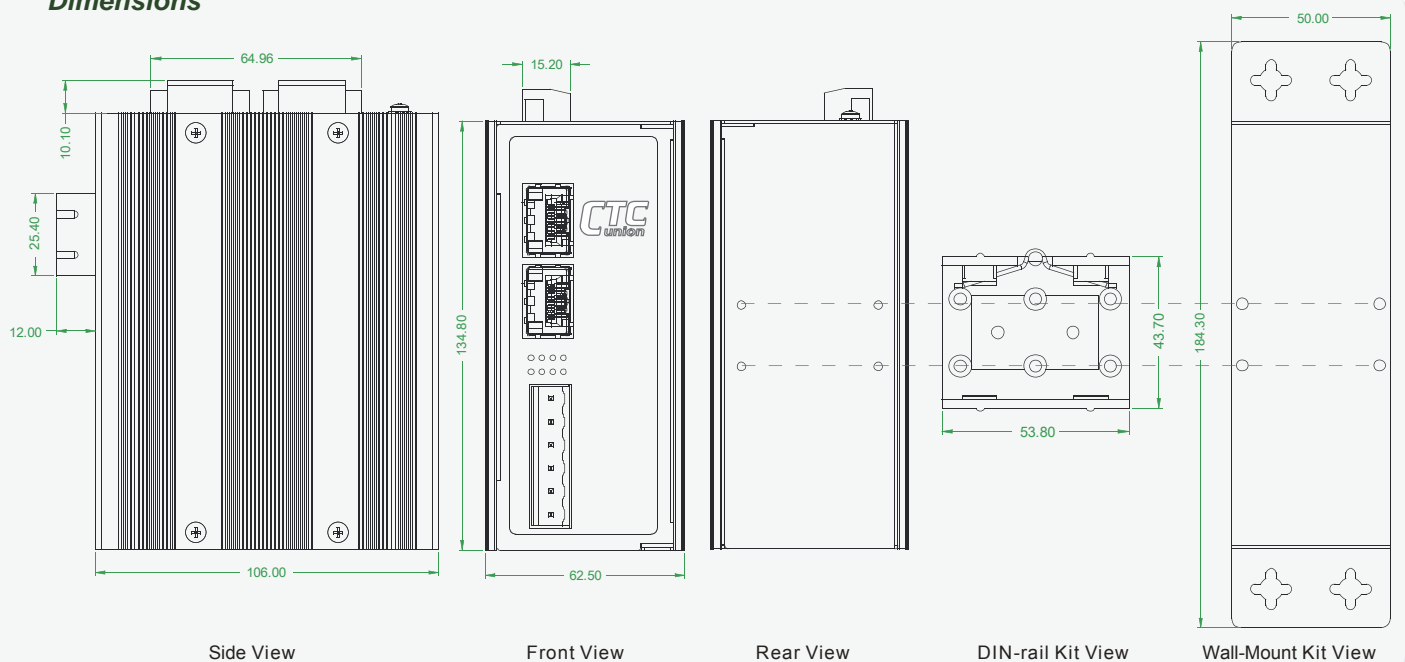
##### Warranty

5 years

## Applications



## Dimensions



## Ordering Information

| Product Type  | Connector Type | Connectivity Distance           | Wide Temperature Range   |
|---|----------------|---------------------------------|--|
| IFC-Serial/FDC                                      | SC             | 002:2km *20A: WDM 20km A type   | X:-40~85°C operating range                                     |
| IFC-Serial/FDC-X                                    | ST             | 015:15km *20B: WDM 20km B type  |  |
|   | FC             | 030:30km *40A: WDM 40km A type  | *Standard model (IFC-Serial/FDC) has 0 to 60°C operating range |
|   |                | 050:50km *40B: WDM 40km B type  |  |
|   |                | 080:80km *60A: WDM 60km A type  |  |
|   |                | 120:120km *60B: WDM 60km B type |  |
|   |                | *80A: WDM 80km A type           |  |
|   |                | *80B: WDM 80km B type           |  |
| <b>Optional Accessories</b>                         |                |                                 |  |
| DRK01: Din Rail mount kit (standardized 35 mm wide) |                |                                 |  |
| WMK01:Wall mount kit                                |                |                                 |  |

Sample: IFC-Serial/FDC-X-SC002  
IFC-DRK01



## Single Port IP to Serial Device Server STE100A/RS232



The IP Serial Server provides the serial device server for Windows hosts to control serial devices located virtually anywhere through a TCP/IP or UDP/IP connection. The IP Serial Server has the asynchronous serial port connection on one side, and a 10/100 Mbps Ethernet connection on the other side. It connects devices, such as CNC, weight scales, and scanners. Applications include industrial/factory automation, automatic warehouse control, and hospital/laboratory automation. The IP Serial Server Windows driver is designed to control the IP Serial Server devices. The driver installs a virtual COM on Windows which maps the virtual COM port to the IP address of the IP Serial Server device across the network, enabling the Windows applications to access remote serial devices over Ethernet. IP Serial Server can function as a UDP or a server or client for TCP connection. The application scenarios are direct IP mode, virtual COM mode, and paired mode. When in the paired mode one IP Serial Server must set as a client and the other must set as a server in TCP connection.

### Features

- 10/100Mbps Ethernet port
- 230.4kbps serial interface
- TCP Server, TCP client, Virtual com mode, UDP
- Supports for DHCP, HTTP, ICMP, ARP, IP, UDP, TCP
- Easy to use with Windows utility
- Configuration by web browser
- Compact size 53x85x21(mm)
- Low power consumption with single + 12V to +48V input

### Specifications

#### General

LED: Ready, TP Link/Act, RS232 Tx/Rx

Push button for Load Default Configuration

OS supported: Windows XP/2000/2003/2008/VISTA/WIN7

**Serial Interface** RS-232

**Serial Connector** DB-9 male

**Baudrate** 110 to 230.4Kbps

**Data bits** 5, 6, 7, 8

**Stop bits** 1, 1.5 for Data bits 5 mode; 1, 2 for data bits 6, 7, 8 mode

**Parity** None, Even, Odd

**Flow Control** None, RTS/CTS

**Data Packing Delimiter** 1,2

**LAN Interface**

RJ-45 connector, IEEE802.3 10/100BaseT, Auto-detecting,

Full/Half-duplex

**Communication Modes**

TCP Server, TCP Client, Virtual COM mode, UDP

#### Protocols

TCP, UDP, IP, ARP, ICMP, HTTP, DHCP, ICMP

Client requests connection at Power up

TCP Inactivity Time (TCP alive time)

**Management**

Web pages, Firmware upgrade

**Security** Password Access

**Power** AC Adapter, 12VDC output

**Operating Temperature** 0 to 60 °C

**Storage Temperature** -10 to 70 °C

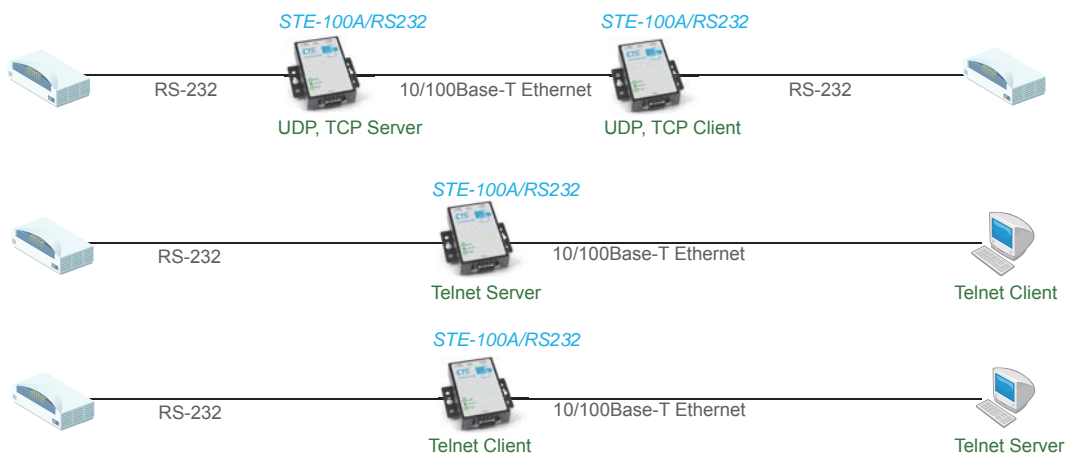
**Humidity** 0 – 90% non-condensing

**DIN rail mount** Yes

**Panel mount** Yes

**Dimensions** 53 x 85 x 21mm(WxDxH)

**Certifications** CE, FCC



### Ordering Information

STE100A/RS232 Single port IP to Serial/RS-232 Device Server

New



# Single Port IP to Serial Device Server STE100A/RS485

The IP Serial Server provides the serial device server for Windows hosts to control serial devices located virtually anywhere through a TCP/IP or UDP/IP connection. The IP Serial Server has the asynchronous serial port connection on one side, and a 10/100 Mbps Ethernet connection on the other side. It connects devices, such as CNC, weight scales, and scanners. Applications include industrial/factory automation, automatic warehouse control, and hospital/laboratory automation. The IP Serial Server Windows driver is designed to control the IP Serial Server devices. The driver installs a virtual COM on Windows which maps the virtual COM port to the IP address of the IP Serial Server device across the network, enabling the Windows applications to access remote serial devices over Ethernet. IP Serial Server can function as a UDP or a server or client for TCP connection. The application scenarios are direct IP mode, virtual COM mode, and paired mode. When in the paired mode one IP Serial Server must set as a client and the other must set as a server in TCP connection.

### Features

- 10/100Mbps Ethernet port
- 230.4kbps serial interface
- TCP Server, TCP client, Virtual com mode, UDP
- Support for DHCP, HTTP, ICMP, ARP, IP, UDP, TCP
- Easy to use with Windows utility
- 2 Wire(half duplex) or 4 Wire(full duplex)RS-485
- Configuration by web browser
- Compack size 53x85x21(mm)
- Low power consumption with single + 12V to +48V input

### Specifications

#### General

LED: Ready, TP Link/Act, Data Tx/Rx  
 Push button for Load Default Configuration  
 OS supported: Windows XP/2000/2003/2008/VISTA/WIN7  
**Serial Interface** RS-485, RS-422 (2 or 4 Wire RS-485; 4 Wire RS-422)  
**Serial Connector** Terminal Block  
**Baudrate** 110 to 230.4Kbps  
**Data bits** 5, 6, 7, 8  
**Stop bits** 1, 1.5 for Data bits 5 mode; 1, 2 for data bits 6, 7, 8 mode  
**Parity** None, Even, Odd  
**Flow Control** Full/ Half Duplex  
**Data Packing Delimiter** 1,2

#### LAN Interface

RJ-45 connector, IEEE802.3 10/100BaseT, Auto-detecting, Full/Half-duplex

#### Communication Modes

TCP Server, TCP Client, Virtual COM mode, UDP

#### Protocols

TCP, UDP, IP, ARP, ICMP, HTTP, DHCP, ICMP  
 Client requests connection at Power up  
 TCP Inactivity Time (TCP alive time)

#### Management

Web pages, Firmware upgrade

#### Security

Password Access

#### Power

AC Adapter, 12VDC output

#### Operating Temperature

0 to 60 °C

#### Storage Temperature

-10 to 70 °C

#### Humidity

0 – 90% non-condensing

#### DIN rail mount

Yes

#### Panel mount

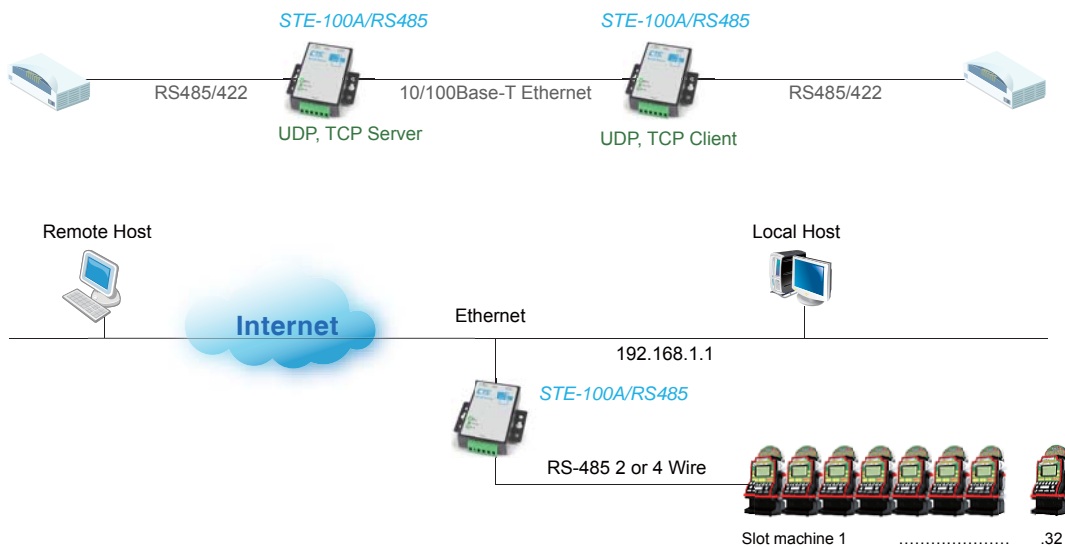
Yes

#### Dimensions

53 x 85 x 21mm(WxDxH)

#### Certifications

CE, FCC



### Ordering Information

STE100A/RS485 Single port IP to Serial/RS-485 Device Server