



### Features

- Industrial serial to fiber media converter
- Speed up to 115.2 Kbps
- Peer to Peer or SFR for serial fiber ring communication
- Auto baud rate and direction control
- Multi-mode 5 km, Single mode 60Km
- 15KV ESD protection
- Wide range power input from 12V to 48Vdc
- Wide operating temperature (-40 to +70°C)
- Terminator and biasing resistors by DIP switch
- 1X9 Standard ST/SC Fiber Transceiver

## Introduction

The standard RS-232/422/485 protocols and interfaces have been widely used in most of industrial equipments for serial port communication. The fiber media material offers ideal insulation and long distance advantages for data transmission. The AMC-5910 series combine many advantages of RS-232/422/485 and fiber media for serial communication. The Peer to Peer (PTP) and Serial Fiber Ring (SFR) modes are typical application modes in the networking communication. The serial interface mode and optical mode are easy setting with DIP switch.

## Automatic Direction and High Speed Transmission

The AMC-5910 series support RS-232, RS-422, half-duplex 2-wire RS-485 and full-duplex 4-wire RS-485 to fiber media converter. The RS-485 offers the automatic data direction control feature. The data rate supports up to 115.2Kbps, satisfying the need of most automatic control systems.

## Wide range Power Input, Temperature, and Insulation Protection

The wide range DC power input from 12V to 48V, this wide range DC power input supports the demanding of versatile industrial applications. Most of industrial applications are harsh environment, The AMC-5910 series provide the operating temperature from -40 to 70 °C, give you a reliable solution of a RS-232/RS-422/485 to fiber media converter for wide temperature application. The AMC-5910 series provide full insulation between two devices with fiber media, every AMC-5910 have 15K ESD protection on the RS-422/485 signal lines.

## Peer to Peer (PTP) and Serial Fiber Ring (SFR) modes

The PTP mode offers fiber media transmission between two devices, it is a simply application for fiber full duplex communication.

The SFR mode offers ring transmission from 5km to 100km distance. It only allows half-duplex communication among devices.

## Specifications

### Serial Interface

Number of Ports: 1

Connector: Terminal Block

RS-232 Signals: TxD, RxD, GND

RS-422 Signals: TxD+, TxD-, RxD+, RxD-, GND

RS-485-4w Signals: TxD+, TxD-, RxD+, RxD-, GND

RS-485-2w Signals: Data+, Data-, GND

Baud rate: 50 bps to 115.2 Kbps

### Serial Connection Distance

RS-232: 15 meters (50 feet)

RS-422: 1200 meters (4000 feet)

RS-485 2/4w: 1200 meters (4000 feet), Max. 32 nodes

### Optical Fiber interface

Number of Ports: 1

Connector: ST or SC type

### Fiber Cable Requirements

Multi-mode fiber: 50 ~ 62.5 / 125 um

Single-mode fiber: 8 ~ 10 / 125 um

### Optical Transmission Distance

Multi-mode 1310nm: 5 KM

Single-mode 1310nm: 60 KM

**ESD Protection:** ESD Contact 8KV, Air 15KV embedded

### Optical Fiber Link Architecture

Peer to Peer (PTP) Mode: Full-duplex

# Industrial Serial RS-232/422/485 to Fiber Media Converter

Serial Fiber Ring (SFR) Mode: Half-duplex

## Physical Characteristics

Housing: Aluminum

Dimension: 74 x 24.7 x 99mm ( W x H x D)

Weight: 140 g

## Environment Operating

Operating Temperature: -40 ~ 70°C (-40 ~ 158°F)

Operating Humidity: 20 ~ 85% @40°C, non-condensing

Storage Temperature: -40 ~ 85°C (-40 ~ 185°F)

Storage Humidity: 10 ~ 90% @40°C, non-condensing

## Safety and Certifications

EMC: CE, FCC

EMI: FCC Part 15 Subpart B Class A, CE EN55022 Class A

EMS: EN55024: 2010

EN61000-4-2: 2009 (Level 4)

EN61000-4-3: 2006 + A2: 2010

EN61000-4-4: 2004 + A2: 2010

EN61000-4-5: 2006 (Level 3)

EN61000-4-6: 2009

EN61000-4-8: 2010

Green Product: RoHS, CRoHS, WEEE

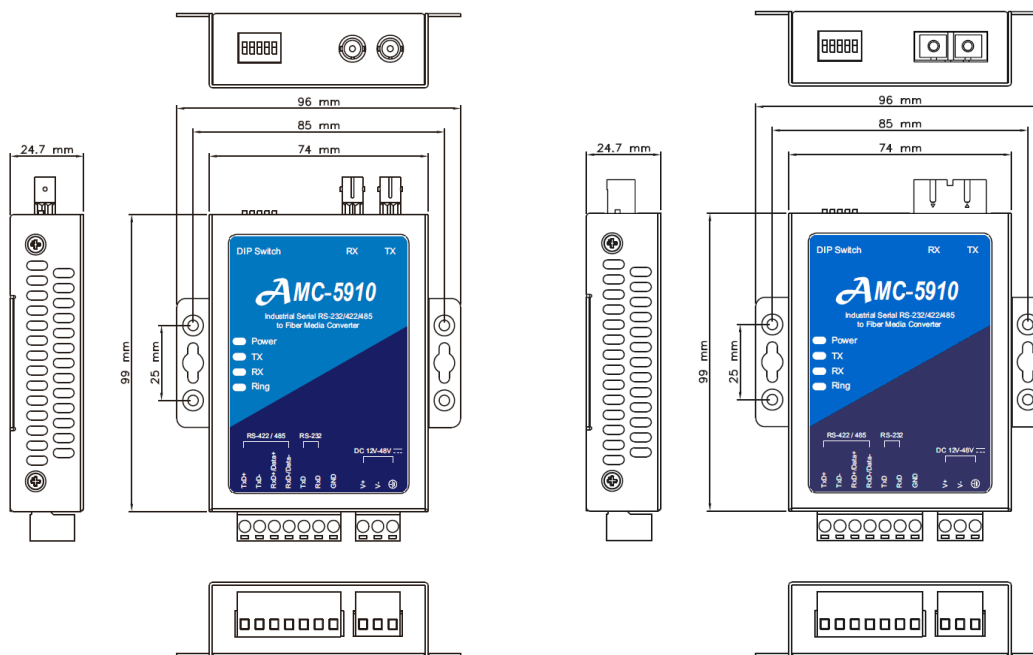
## Power Requirements

AMC-5910-MT: 250mA@24V

AMC-5910-ST: 250mA@24V

Warranty: 3 years

## Dimension Drawing



## Ordering Information

P/N	Product Description	Operating Temperature	Mode	Fiber Connector	Distance
AMC-5910-MT	RS-232/422/485 to Fiber Media Converter	-40 ~ 70 °C	1310 nm Multi-mode	ST Connector	5 KM
AMC-5910-MC	RS-232/422/485 to Fiber Media Converter	-40 ~ 70 °C	1310 nm Multi-mode	SC Connector	5 KM
AMC-5910-ST	RS-232/422/485 to Fiber Media Converter	-40 ~ 70 °C	1310 nm Single-mode	ST Connector	60 KM
AMC-5910-SC	RS-232/422/485 to Fiber Media Converter	-40 ~ 70 °C	1310 nm Single-mode	SC Connector	60 KM

## Includes:

- AMC-5910 converter
- DIN rail kit
- Quick start CD-ROM