



### Features

- Compliant USB 1.1/2.0 for up to 480Mbps transmission
- 2-port RS-422/485 speed up to 921.6 Kbps
- Supports terminator and biasing functions
- 15KV ESD protection for all RS-422/485 signals
- 2.5KV isolation between USB and RS-422/485 interface
- Low power consumption with USB bus powered
- USB Drivers provide for Windows and Linux operating system
- Din-Rail mount or wall mount robust housing
- Wide operating temperature (-40 to 70°C)

## Introduction

The RS-485/422 protocol has been widely used in most of industrial equipments for serial port communication. The USB interface also has been built in the personal computer or embedded system device. RS-485/422 and USB offer better transmission speed, wide range and networking capabilities. Hence, the AMC-2320, USB to 2-port RS-422/485 converter takes the important interface and popular to be deployed in the industrial communication network and higher reliable applications.

## USB Drivers for Windows and Linux

The AMC-2320 provides USB drivers for Windows XP/Vista/7/8 and Linux operating system. It is easy to create two serial ports for monitoring and utilization.

## Isolation and ESD protection

The AMC-2320 offers 2.5KV isolation protection between USB and RS-422/485 interfaces

However two ports RS-422/485 do not isolate each other. It also has 15KV ESD protection on all RS-422/485 signals and USB signals.

## Serial mode, Terminator and Biasing functions

The AMC-2320 serial converter supports RS-422, half-duplex 2-wire RS-485 and full-duplex 4-wire RS-485 modes selection, it is easy to use in the serial multi-drop networking application. There are terminators and biasing resistor for tuning networking characteristics.

## Wide operating temperature

For most of industrial applications are harsh environment, all AMC-2320 series provide the operating temperature from -40 to 70°C, give you a reliable solution of a USB to RS-422/485 converter for wide temperature application.

## Wall-mount or Din-Rail solution

The AMC-2320 provides wall-mount and DIN-Rail installation solutions; allow you easily screw it by wall mount screws or mount it on the DIN-Rail by DIN rail mount kit.

## Specifications

### USB Interface

Number of Ports: 1

Compliance: USB1.1/ 2.0 compliant

Connector: USB type B

Speed: 480 Mbps (Hi-speed USB) and 12 Mbps (Full-speed USB)

Indicator: Red for USB bus powered

# Industrial USB to 2-Port RS-422/485 Converter

## Driver Support

Windows(XP/Vista/7/8 x86/x64)

Linux 2.4, Linux (2.6 x86/x64)

## RS-422/485 Interface

Number of Ports: 2

Connector: DB9 male

Interface selection: setting by internal jumpers

Terminator and Biasing functions: setting by internal jumpers

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

RS-485 4-wire signals: TxD+, TxD-, RxD+, RxD-, GND

RS-485 2-wire: Data+, Data-, GND

Indicator: Green for TxD, Red for RxD

Definition of pin-out (DB-9)

## Port 1 Configuration

JP1, JP2: Port 1 serial mode

JP3: Port 1 terminator

JP7, JP8: Port 2 biasing resistors

## Port 2 Configuration

JP4, JP5: Port 2 serial mode

JP6: Port 2 terminator

JP9, JP10: Port 2 biasing resistors

## Connection Distance

USB: 5 meters

RS-422: 1200 meters (4000 feet)

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

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

**Isolation:** 2.5KV between USB and RS-422/485

## Performance

Baud rate: 300 to 921.6Kbps

## Serial Parameters

Data bits: 7, 8

Stop bits: 1, 2

Parity: None, Even, Odd, Space, Mark

Flow control: RTS/CTS, XON/XOFF

## Physical Characteristics

Housing: SECC sheet metal (1mm), IP30 protection

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

Weight: 241 g

## Environment Operating

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

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

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

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

## Safety and Certifications

EMC: CE, FCC

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

EMS: EN55024: 2010

EN61000-4-2: 2009 (Level 4)

EN61000-4-3: 2006 + A2: 2010

EN61000-4-4: 2004 + A2: 2010

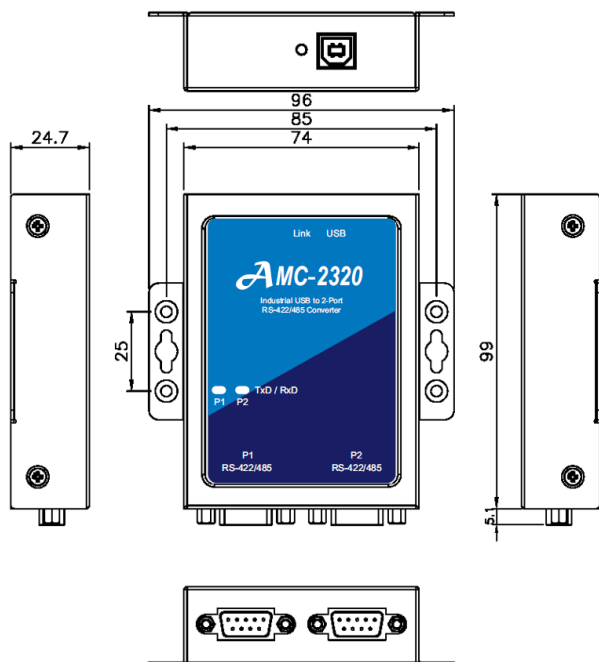
EN61000-4-8: 2010

Green Product: RoHS, CRoHS, WEEE

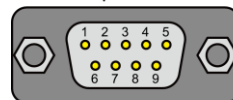
**Power Requirements:** 200mA@5V bus powered

**Warranty:** 3 years

## Dimension Drawing



DB9 Male pinout definition



PIN	RS-422	RS-485-4w	RS-485-2w
1	Tx-	Tx-	
2	Tx+	Tx+	
3	Rx+	Rx+	Data+
4	Rx-	Rx-	Data-
5	GND	GND	GND
6			
7			
8			
9			

## Ordering Information

P/N	Product Description	Operating Temp	Isolation Protection
AMC-2320	Industrial USB to 2-Port to RS-422/485 Converter with isolation	-40 ~ 70 °C	2.5KV(RS-422/485)

### Includes:

- AMC-2320
- USB 2.0 cable 100 cm A-to-B
- Din rail kit
- Quick start and driver CD-ROM