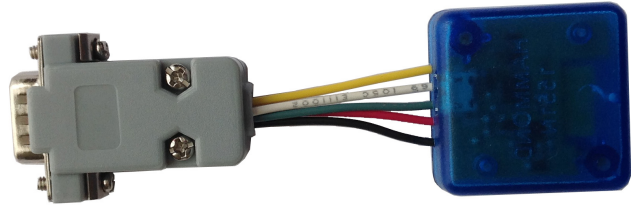## AD0485E Bluetooth RS485/RS422 Adapters with D-sub Connector DB9/DB15/DB25

### Features

- RS485/RS422 interface with DB9/DB15/DB25 connector
- Half-duplex data communication
- ESD, EFT, and surge protection
- Customer defined connector pin assignments
- Bluetooth Class 1 Radio
- Integrated antenna
- Data encryption
- Support Microsoft Windows Bluetooth COM port
- LED indicator
- Configuration via USB

### Specifications

| | |
|---|---|
| Bluetooth | Bluetooth v2.1 + EDR |
| | Class 1 Radio |
| RS485/RS422 | Half-duplex transceiver |
| | 1/8-unit-load receiver input impedance or up to 256 transceivers on one bus |
| | True fail-safe receiver |
| | No integral 120Ohm termination resistor |
| | DB9, DB15, or DB25 connector, male or female |
| | Baud rate: 300bps to 115200bps |
| | Parity: Even, Odd, None, Mark, Space |
| | Data length: 5-bit, 6-bit, 7-bit, 8-bit |
| | Stop bits: 1-bit, 2-bit |
| USB | USB 2.0, USB Micro-B receptacle connector |
| Software | Microsoft Windows 8, Windows 7, Windows Vista, eeTerminal. |
| Power | +5v DC power supply |

### Typical Application - Microsoft Windows Bluetooth COM Port

This application requires install this Bluetooth adapter on Microsoft Windows, and Bluetooth connection to computer is required. A virtual COM port is created for this adapter after installation. User application software can access this adapter's RS485/RS422 interface using the virtual COM port. Here are the steps to install this adapter on Microsoft Windows. The adapter's authentication pin code is 1234.

**Method 1 - Install Bluetooth Adapter Using eeTerminal** Power on Bluetooth adapter. Starts eeTerminal. Select **File** from menu bar, and select **Open Device**. The software lists all compatible devices in a pop-up window. Select the Bluetooth device from the list and click the **Open** button. Follow the on-screen instructions to install the device if this Windows version supports automatic device installation.

**Method 2 - Install Bluetooth Adapter Using Windows Bluetooth Device Manager** Power on Bluetooth adapter. Locate Bluetooth icon on Microsoft Windows taskbar. Click on it and select *Add a Bluetooth Device*. Follow Microsoft Windows on-screen instructions to install the device.

After Windows successfully installs the Bluetooth adapter, a virtual COM port (Outgoing direction) with SPP description will be created.

To check the COM port number, click on Windows taskbar and select *Open (Bluetooth) Settings*. Click *COM Ports* in *Bluetooth Settings* window.

### LED Indicator - Bluetooth connection

| Status | LED Flash Rate |
|---|---|
| Connected | Solid on |
| Waiting for connection | Once per second |

## Assembling and RS485/RS422 Signals

The D-sub connector can be assembled by us if pin assignments are provided. An integral 120 Ohm termination resistor can be installed if requested. RS485/RS422 signals are,

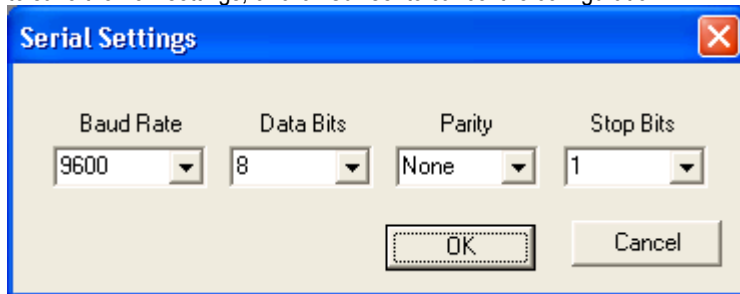| Wire Pin Terminal Color | RS485/RS422 Signal |
| --- | --- |
| Green | TxD+/RxD+ (A) |
| White | TxD-/RxD- (B) |
| Yellow | Signal GND (C) |
| Red | +5v Power Input |
| Black | Power GND Input |

NOTE: use separate ground for signal and power when RS485/RS422 signal is transmitted over a long distance.

## Ordering Information

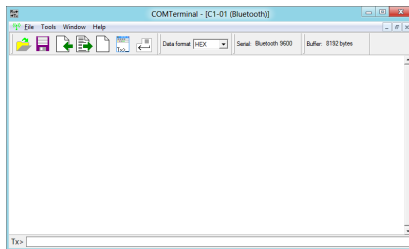| Part Number | Connector Type |
| --- | --- |
| AD0485E9F | DB9 female |
| AD0485E9M | DB9 male |
| AD0485E15F | DB15 female |
| AD0485E15M | DB15 male |
| AD0485E25F | DB25 female |
| AD0485E25M | DB25 male |

## RS485/RS422 Serial Configuration

The adapter's serial settings are configured using eeTerminal (download from www.devicefunctions.com). If the adapter is powered from RS485/RS422 port, disconnect the adapter. Connect the adapter's USB port to a computer's USB port. Start eeTermianl, click **File** from menu bar, and select **Open Device**. eeTerminal lists all compatible devices in a pop-up window. Select **DEVICE FUNCTIONS UART/RS485** and click the **Configure** button. A device configuration window will pop up. Select the required serial settings and click **Ok** to save the new settings, or click **Cancel** to cancel the configuration.

**Serial Settings**

| Baud Rate | Data Bits | Parity | Stop Bits |
| --- | --- | --- | --- |
| 9600 | 8 | None | 1 |

OK    Cancel

## Accessories

### eeTerminal

Configure, read, and write Bluetooth adapters. Upload/download files.

## Environmental Conditions

| | |
|---|---|
| Operating temperature range | -20°C TO +65°C |
| Storage temperature range | -40°C TO +85°C |
| Relative humidity | 0% to 90%, non-condensing |