ATC-820B

USB ⟺ RS-485 Interface Converter

User's Manual

Introduction

The ATC-820B module is a cost-effective way to convert RS485 industrial buses to a USB interface. When connected to a PC USB port the ATC-820B module is automatically detected and is installed as a native COM port which is compatible with any existing serial communication application. Muliple modules can be installed when using USB hubs thus allowing a hassle free configuration of a multi serial system without any IRQ or DMA configuration.They have 600W protect between the USB port and RS485 protects the PC from spykes or possible misconnections in the communication bus.

Features

The ATC-820B converter can be configured for RS485 two-wire (Half Duplex) networks. When operating in two-wire RS485 the data transfer control is automatically done by the converter.Two independent and RS485 networks can be supported by one ATC-820B module thus duplicating the possible number of remote devices.

● Computer interface: USB V1.1 2.0 Plug and Play.

● Operational system virtual serial port driver.

● Supports Windows 98/ME/XP/2000/CE, MAC & Linux 2.4.20 or superior.

● Field Interfaces: RS-485 Half Duplex (dual buses),

● Automatic flow control for RS485 Half Duplex.

● Transmission rate: from 300 bps to 1Mbps.

● Maximum RS-485 cable length : 1200 m

● Maximum number of devices in the RS485 network: Half Duplex to 32 devices

● Power: from the USB port.

● Consumption: <100 mA.

● RS-485 bus protection: 600W.

● USB connection: Mini-B connector.150mm cable with the module.

● RS-485 connector: RJ-45 type accepting

● ABS enclosure: 67 x 30 x 24 mm(not include cable)

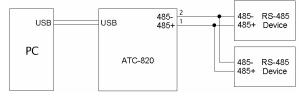● Operating environment: 0 to 70°C, 10 to 90% relative humidity, non-condensing.

Wiring configuration

The RS-485 termination of the Interface is implemented as RJ-45 plug. The pin assignments for the connector can be found in the following table as well as on a sticker applied to the unit.

RS-485 Pinout at RJ-45

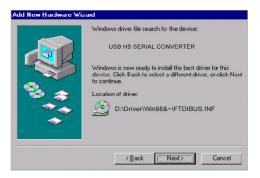| PIN#	RS-485
1	485+
2	485-

Wiring examples

RS-485 2- Wire application

Driver Installation

Follow the steps below to install driver of USB-High Speed Serial Converter:
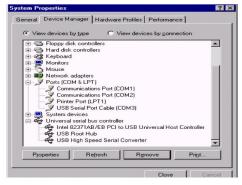
1. Power on your computer and make sure that the USB port is enabled and working properly.

2. Plug in the USB-High Speed Serial Converter into the USB port   and run the **Add New Hardware Wizard** to assist you in setting up the new device. Click **Next** to continue.

3. Insert the USB-HS Serial Converter software driver into the CD-ROM drive   and click Next to continue. For Windows 98, click **Search for the best driver for your device** and click to search driver from the floppy drive D:\DRIVER\Win98&Win2000.

4. Windows will detect the driver (**FTDIBUS.INF**) and shows the **USB HS SERIAL CONVERTER**. Click Next to continue installation.

5. Click Next to continue and let Windows copy the needed files to your hard disk.

6. When Windows finished installing the software required for the new **USB to Serial Cable**, click Finish.
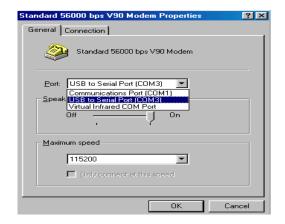
Setting Up the RS232 Serial Device

Follow the steps below to connect your RS232 Serial Device (ie: Modem) to the USB port of your PC:

1. Turn off your Modem. Plug the DB 9 (or DB 25) connector of the USB-HS Serial Converter into your Modem. Connect the other end of the USB-HS Serial Converter to an USB type A to type B cable. Turn on the Modem afterwards.

2. Turn on your computer and plug in the USB connector of the USB-HS Serial Converter into the USB port.

3. If you have already installed a Modem device before, click Start, Settings, Modems. Open Modems
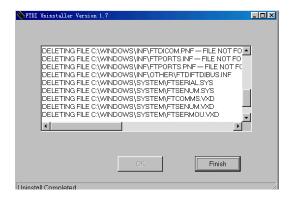
4. Properties, select the Modem, click Properties. In General tab, please change the **Port** value to **USB Serial Port (COM3)**.

5. After finishing these processes, you can use USB to Serial Bridge Cable to connect RS232 Serial 56K FAX Modem and execute the Dial-up fuction to connect Internet, and send the FAX with the FAX software(ie: Microsoft FAX) properly.

Uninstalling the Driver Program

If you want to remove the USB-HS Serial Converterr driver program, you can uninstall it by following the steps below:

1. Unplug the USB-HS Serial Converter from your PC.

2. Run the **D:\Driver\Win98&win2000\FTDIUNIN.EXE** program from the software CD-ROM, Clik finish then reboot the PC.

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