

User's Manual

USB to RS-422 & RS-485 Converter

Contents:

- Product Introduction and Specification
- Installation Instructions
- LED Indication
- Pin-Assignment

Introduction

This converter is designed to make massive data communication become quick and simple through an USB port of PC. By taking the advantage of the feature of USB port and Serial port, it provides an easier and more convenient connectivity than ever for efficient and friendly interaction between RS-422 or RS-485 devices and your computer systems.

The interface of RS-422 and RS-485 are very common adopted in data acquisition world. Both standards feature reliable performance of full-duplex or half-duplex multi-drop communication network with faster data rates and longer communication distance than RS-232. Application devices include telecommunication units, LAN, data concentration, data multiplexers, ISDN, POS, industrial controls, etc.

Features

- Connectivity of RS-422 or RS-485 devices and PC through USB port
- Short Circuit and over-current protection
- Plug and play and hot-swapping
- No external power supply is required
- Supports data transmission at high rates over long distance (4,000 Ft.)
- Isolation protected
- Nullifies the effects of ground shifts and noise signals of the voltages on a network
- Supports USB 1.1 at full rate speed up to 12 Mbps
- Supports Windows 98/ME/2000/XP, Mac OS 8.6/9.X/10.X and Linux

Specification

USB to DB-9

| Model No. | | UTS-485 | UTS-422 | UTS-M12 | UTS-M14 |
|-----------------------|----------|-----------------|---------|-----------------|-------------------|
| Chipset | | FTDI | | | |
| Interface | | RS-485 | RS-422 | RS-422/RS-485 | |
| Compliant USB Version | | USB 1.1 | | | |
| Data Speed | | Min. 3 Mbps | | | |
| Selection Mode | | Auto | | Slide Switch | |
| Connector | Upstream | USB Type A Male | | | USB Type B Female |
| | Device | DB-9 Pin Male*1 | | DB-9 Pin Male*2 | DB-9 Pin Male*4 |
| Power Mode | | Bus | | | |
| Cable Length | | 1M | | 0.6M | 1.8M |
| Housing | | PVC Molding | | Plastic | Aluminum |

USB to Terminal Block

| Model No. | | UTS-422TB | UTS-485TB |
|-----------------------|----------|-------------------------------|------------------------|
| Chipset | | FTDI | |
| Device Interface | | RS-422 | RS-485 |
| Communication Mode | | Full-duplex-Multi-drop | Half-duplex-Multi-drop |
| Compliant USB Version | | USB 1.1 | |
| Data Speed | | Min. 3 Mbps | |
| Connector | Upstream | USB Type A Male | |
| | Device | Shield*1 and Terminal Block*4 | |
| Power Mode | | Bus | |
| Cable Length | | 1M | |
| Housing | | Plastic | |

USB to RJ-11

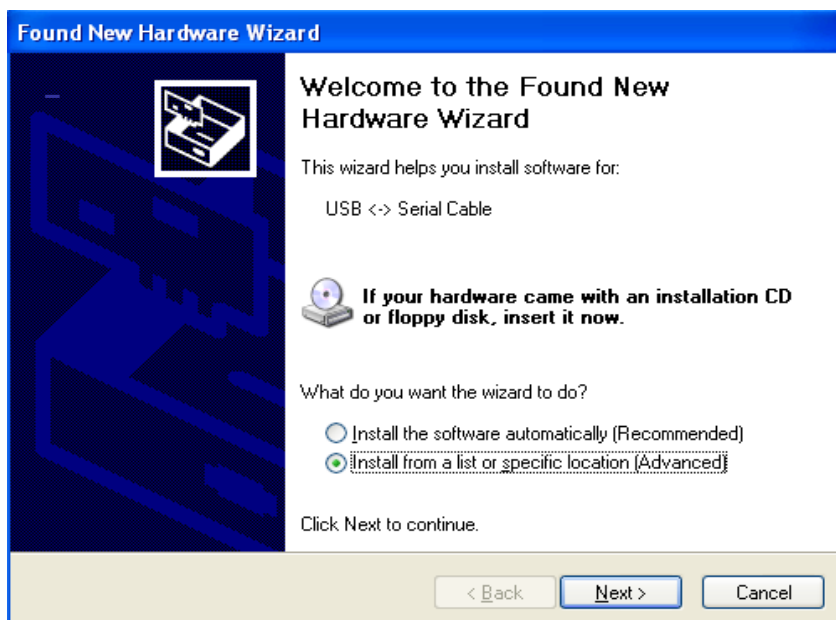
| Model No. | | UTS-200J2 | UTS-200J5 | UTS-200J |
|-----------------------|----------|------------------------------|-----------|---------------|
| Chipset | | FTDI | | |
| Device Interface | | RS-422 | RS-485 | RS-422/RS-485 |
| Compliant USB Version | | USB 1.1 | | |
| Data Speed | | Min. 3 Mbps | | |
| Selection Mode | | Auto | | Slide Switch |
| Connector | Upstream | USB Type A Male | | |
| | Device | RJ-11 6P phone jack/Female*2 | | |
| Power Mode | | Bus | | |
| Cable Length | | 1M | | |
| Housing | | Plastic | | |

Driver Installation

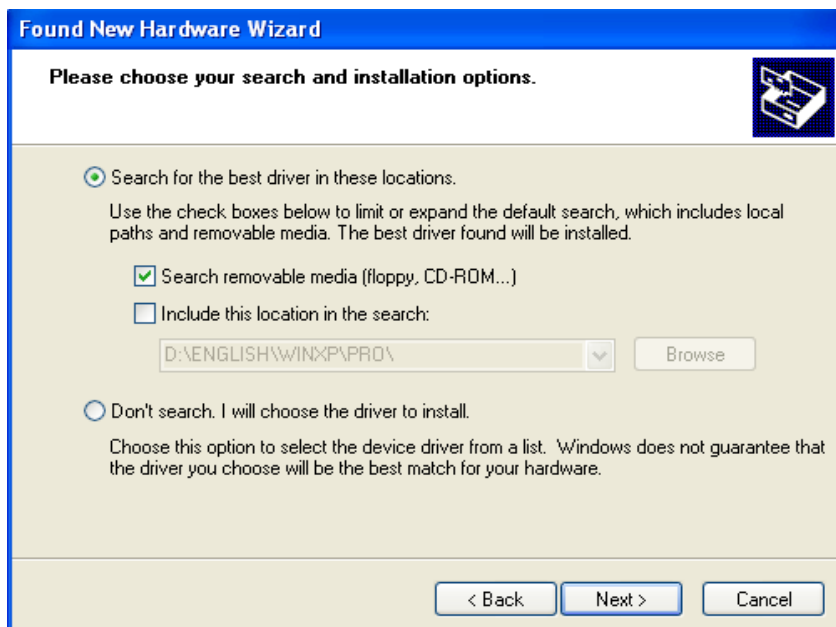
1. Please plug the UTS-422TB or UTS-485TB converter into the USB port of PC first.
2. Insert the driver CD into the CD-ROM drive of your computer. The setup program will begin to run automatically.
3. If it's the first time you install the driver of USB to Serial device, you will need to install the driver twice. One is for the device under Universal Serial Bus Controller; the other is for COM port.

You will be prompted by following screen dialogs to complete the work.

1. What do you want Windows to do?



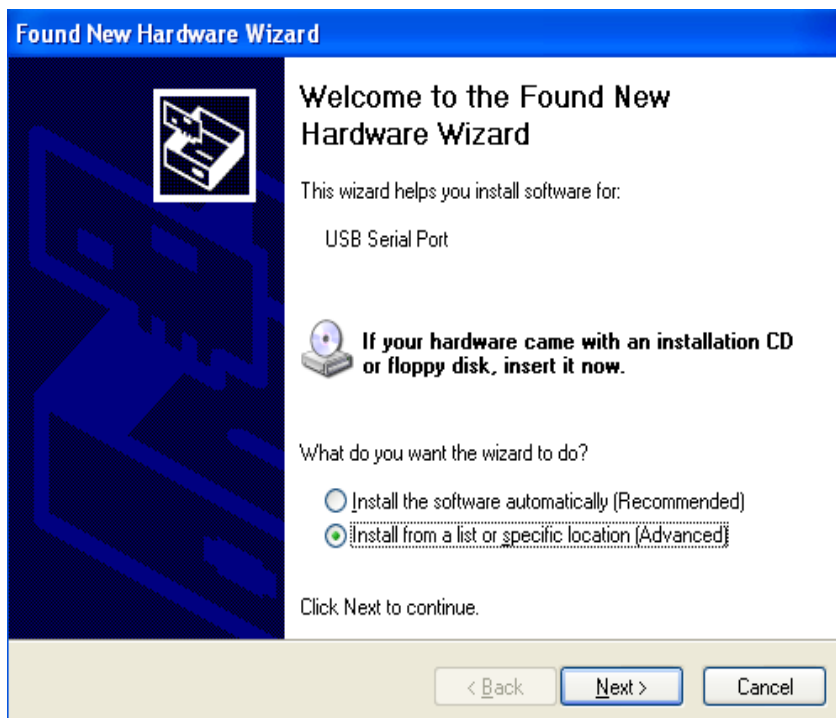
2. Searching locations for new driver



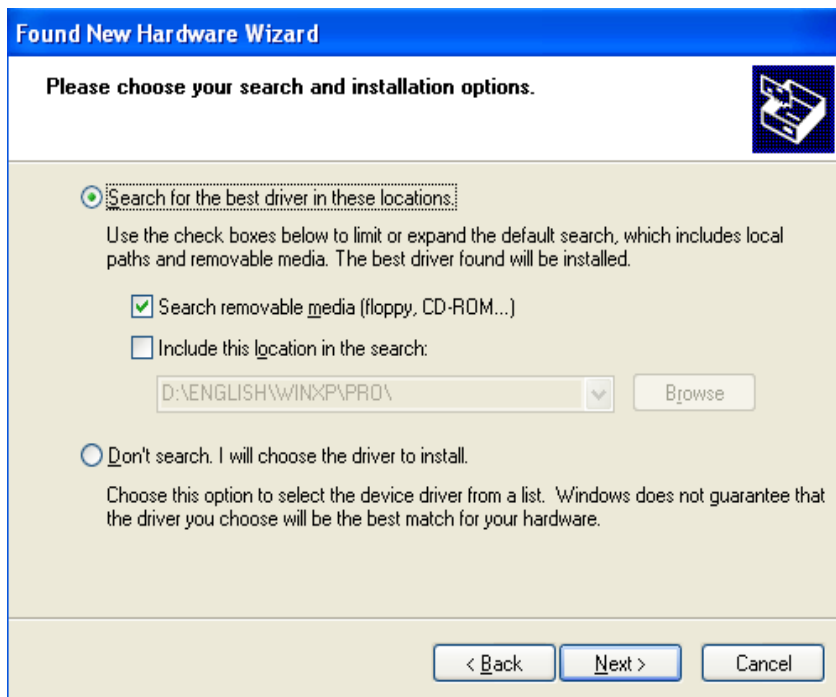
3. Windows has finished installing the software for USB Serial Converter



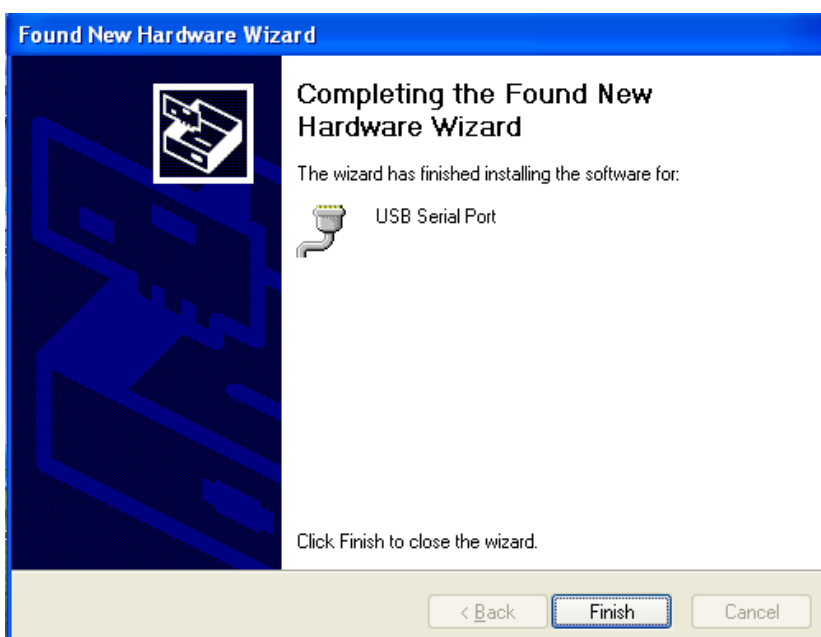
4. What do you want Windows to do?



5. Searching locations for new driver

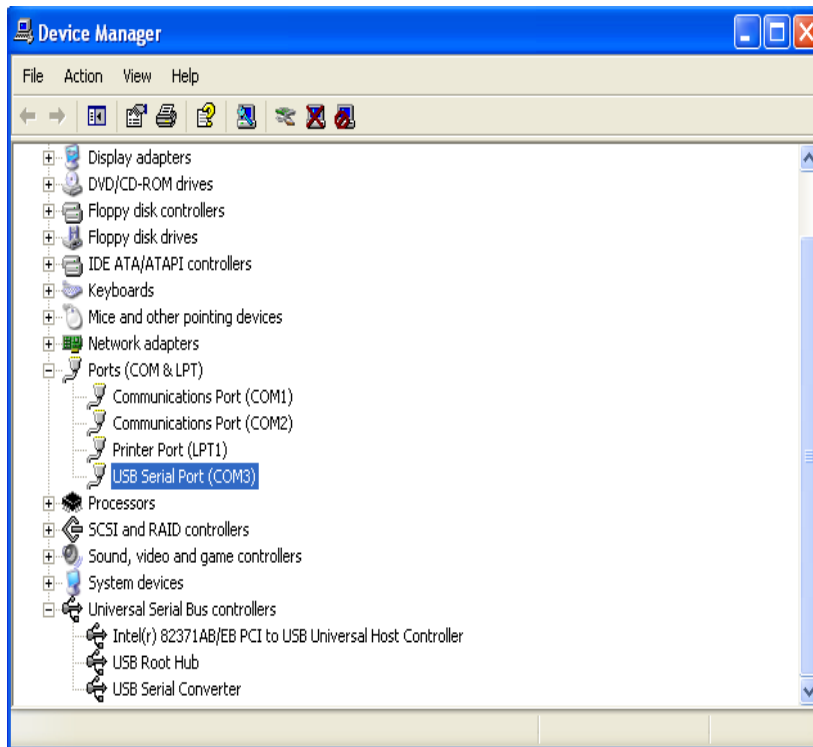


6. Windows has finished installing the software "USB Serial Port"



7. Make sure the driver installation is finished

Plug UTS-422TB or UTS-485TB unit into the USB port of the computer then click " Start " -> " Settings " -> " Control Panel " -> " System " -> " Device Manager " to see if there are " USB Serial Port (COM3)" under Ports (COM) and "USB Serial Converter " under Universal Serial Bus controllers.



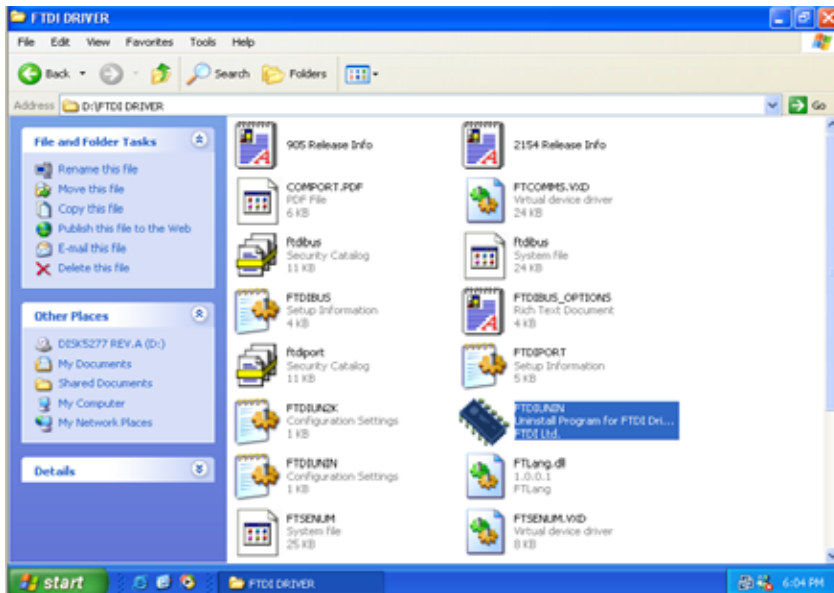
Note:

If you have any difficulties with the drivers we provided in this CD, you may download the updated or appropriate versions from FTDI Web site www.ftdichip.com/Drivers/VCP.htm, supported device "FT232BM".

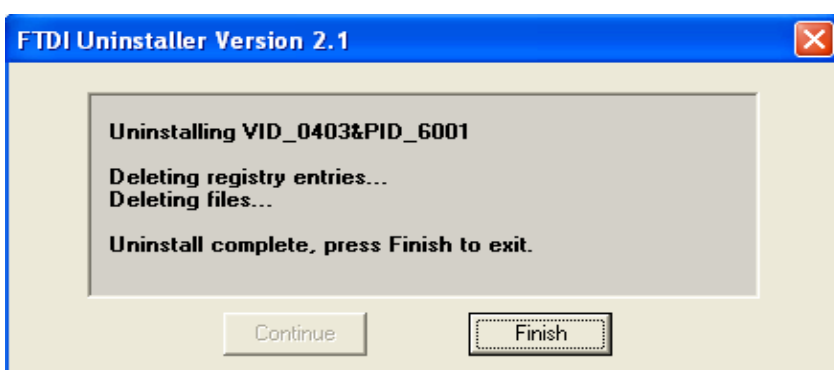
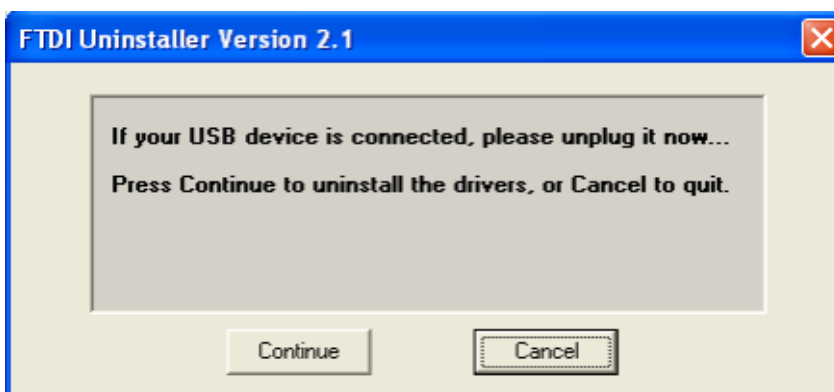
Removal of Driver Software

Place the driver CD into the CD-ROM disk drive of the computer first then find and execute file "FTDI UNI N.EXE" by following steps:

1. Execute FTDI UNI N.EXE program



2. Unplug UTS-422TB or UTS-485TB device, click "Continue" to uninstall the drivers then click "Finish" to exit.

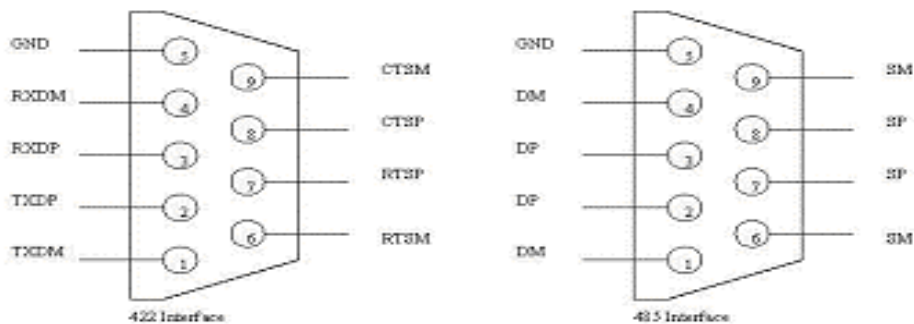


LED Indication

- LINK---When the UTS-422TB or UTS-485TB unit is ready for use.
- RX---When the data is being sent from RS-422 or RS-485 device to USB port
- TX---When the data is being sent from USB port to RS-422 or RS-485 device.

PIN Assignments

USB to DB-9

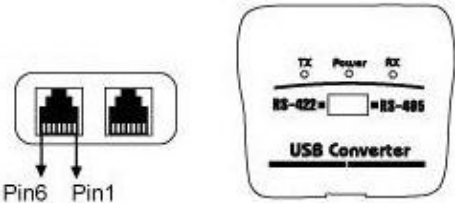


USB to Terminal Block

| G | RX | | TX | |
|---|----|---|----|---|
| | - | + | - | + |

Please note: our product has a 120 ohm termination resistor (R6/R7) mounted; you may remove it when needed.

USB to RJ-11



HALF DUPLEX MODE:

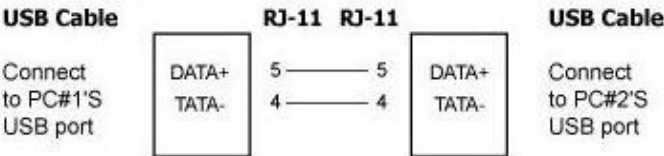
RS-485
PIN5:DATA+
PIN4:DATA-

FULL DUPLEX MODE:

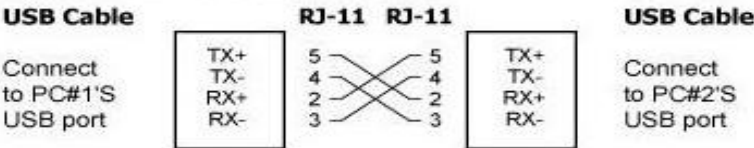
RS-422
PIN5:TX+
PIN4:TX-
PIN2:RX+
PIN3:RX-

INSTALLATION:

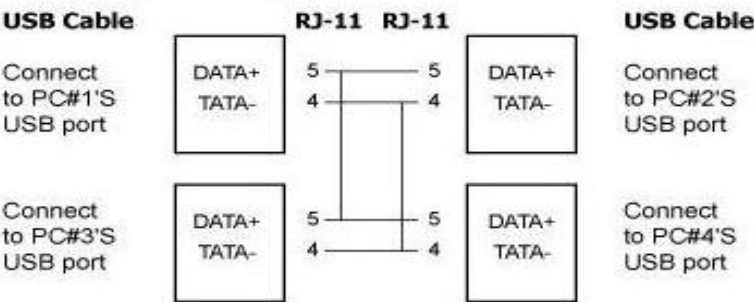
■ Pointer-to-pointer/Half duplex:



■ Pointer-to-pointer/Full duplex:



■ Multi-drop/Half duplex:



■ Pointer-to-pointer/Full duplex:

