USB TO RS485/422 CONVERTER

OPERATION MANUAL

Version 1.2

I. Pre words

1. Please read the manual carefully.
2. Before using the USB TO RS485/422, please shut down host computer or machine, and make sure the grounding system in good condition to avoid damage from static surge.
3. The USB port only works with the USB port of host computer other than camera, scanner, or printer, etc.

II. Introduction

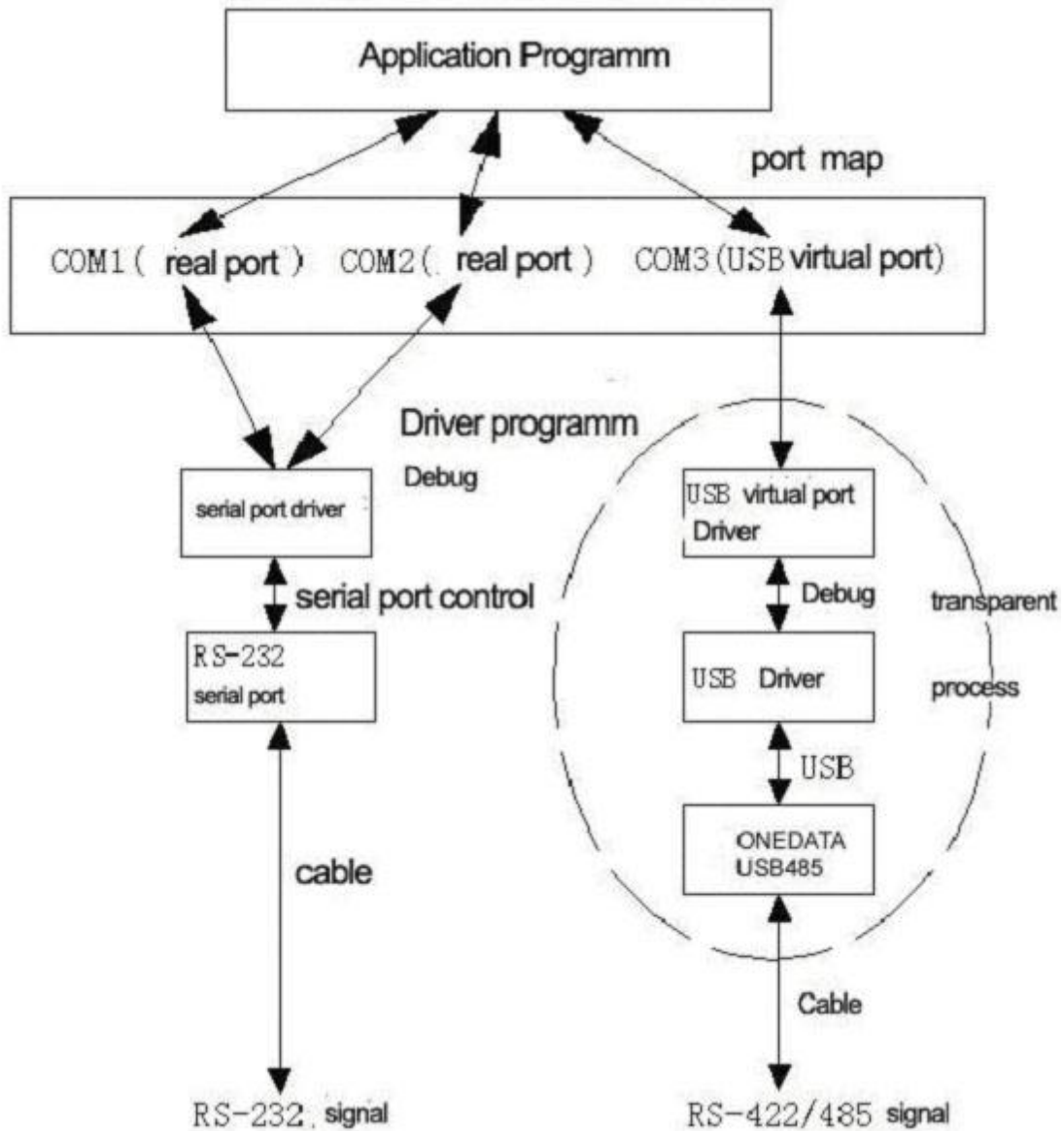USB to RS485-422 is the solution to adapt USB to RS485-422 signal system.

USB to RS485-422 converter comes with the following advantages:

1) to realize the communication between the RS485-422 device and the host computer that does not have RS232 serial port (for example, Laptop)

2) to increase the transmission rate during RS485 or 422 communication, as USB transmission rate can be up to 10Mbps

3) USB port can supply strong power need for the converter.

How USB to RS485-422 works?

1) Connect the converter to host computer.
2) Install the driver.
3) The driver will create virtual serial port, like COM3, or COM4, COM5, etc
4) For laptop computer without COM port, COM1 is usually created.
5) Application software chooses the created serial port to work.

Please refer to the chart for the working process:

```
                    ┌─────────────────────────────┐
                    │    Application Programm      │
                    └─────────────────────────────┘
                                                   port map
     ┌──────────────────────────────────────────────────────────┐
     │ COM1( real port )  COM2( real port )  COM3(USB virtual port) │
     └──────────────────────────────────────────────────────────┘

                              Driver programm
                          Debug              USB virtual port
                    ┌──────────────────┐    Driver
                    │ serial port driver │   ┌──────────────────┐
                    └──────────────────┘   │ USB virtual port  │
                                           │ Driver            │
                     serial port control   └──────────────────┘
                                                   Debug      transparent
                    ┌──────────────────┐   ┌──────────────────┐
                    │ RS-232           │   │ USB  Driver      │  process
                    │ serial port      │   └──────────────────┘
                    └──────────────────┘         USB
                                           ┌──────────────────┐
                                           │ ONEDATA          │
                          cable            │ USB485           │
                                           └──────────────────┘

                                                Cable

        RS-232  signal                     RS-422/485  signal
```

III. Application

USB to RS485 –422 usually works in these applications:

Industrial control automatic system, Barcode scanner, Palm, PLC&PLD, PDA(Win CE system), Label printer, POS system, Data collection system, Access control system, etc.

IV. Features

● USB port to serial port signal conversion.
● Regular voltage range of RS-485 port:-7V~+12V

- Support Windows98/ME and Windows2000/XP
- Support MAC Apple and Linux v5.0
- Compatible with USB v1.1 and USB CDC V1.1
- USB full-speed transmission
- USB bus self powered
- Support auto-handshaking agreement
- Transmission speed up to 57.6kbps in the distance of 1200m
- RS485-422 standard of TIA/EIA
- Support remote waking up and power management
- Support communication of multiple ends up to 32 RS485-422 equipment

TIPS

The transmission speed of USB to RS485-422 is decided by the distance.
The longer the distance, the lower the speed rate would be. (Table)

Distance	0~10m	300m	1200m	5000m
Rate (Max)	230kbps	115kbps	57.6kbps	9600bps

Ⅴ. PIN OUT

RS485/RSRS422（DB9M pin）

DB9M	1	2	3	4	5	6	7	8	9
RS485-422	**T-/D-**	**T+/D+**	**R+**	**R-**	**GND**				

Ⅵ. System requirement

- Intel CPU compatible 486DX4-100 MHz or higher
- One standard USB interface (4-pin)
- Windows 98/Me or Windows 2000/XP operating system
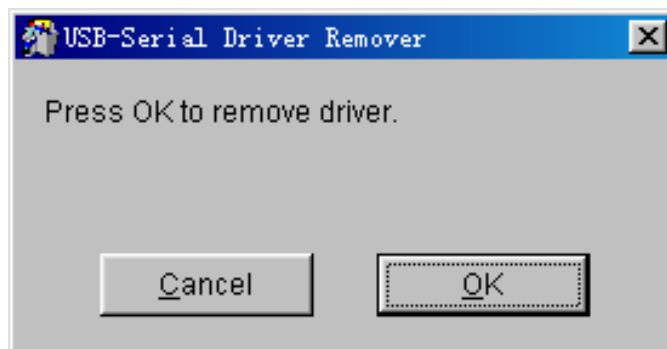
Ⅶ. Driver installation

1) Put in drive disk

2) Find Pcomm26 folder, and run [Setup]
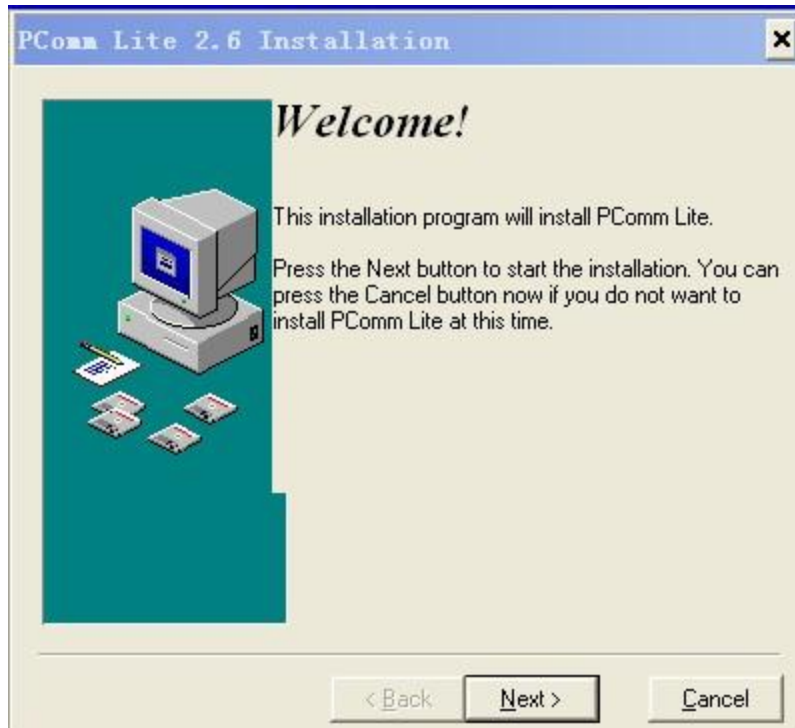
Please follow up the pop up Windows to complete all the steps.

Ⅷ. Driver removing

1) Put in the driver disk

2) Find folder [Dremover98_2K], and run the program

3) Follow the pop up window to remove the driver.