TRP-C39
User's Manual

Fiber to RS232/422/485 Isolated

Converter, ST Multi-Mode

User's Manual

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1.Introduction

The TRP-C39 fiber converter allows RS232/422/485 signals to be bi-directionally converted to fiber optic and extend the distance up to 2KM over multi-mode. By using fiber optic transmission technology TRP-C39 secures a stable and error free data transmission over the industrial environments present electrical noise and ground differential challenges, especially over long distances. TRP-C39 support data format, baud rate and data direction auto configuration, it also provides with 3000V DC isolation and internal surge protection. The industry DIN rail and panel mounting design enable user a fast and professional installation.

1-1.Features

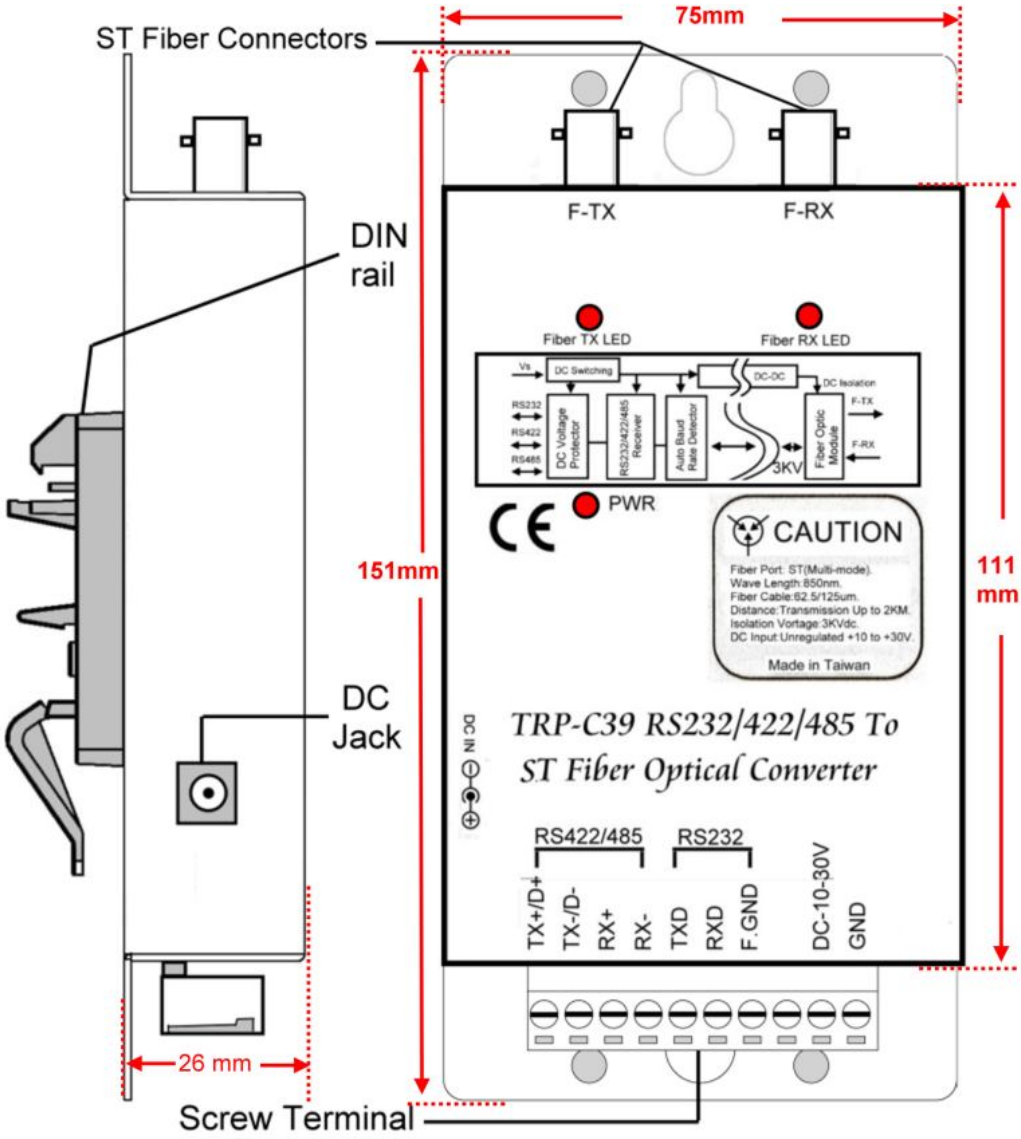
- Wide range power input voltage.
- ST Multi-mode fiber port.
- Auto direction flow control on RS-485.
- Automatically switch signal RS232, RS422 and RS485.
- Support 3000V DC isolation protection.
- All RS422/485 signals provide surge and over current protection.
- Power/TX/RX mode LED indicator.
- Fiber transmission distance up to 2KM.
- Auto baud rate switching from 300bps to 115.2Kbps.
- Support Din-Rail and panel mount.

1-2.Specifications

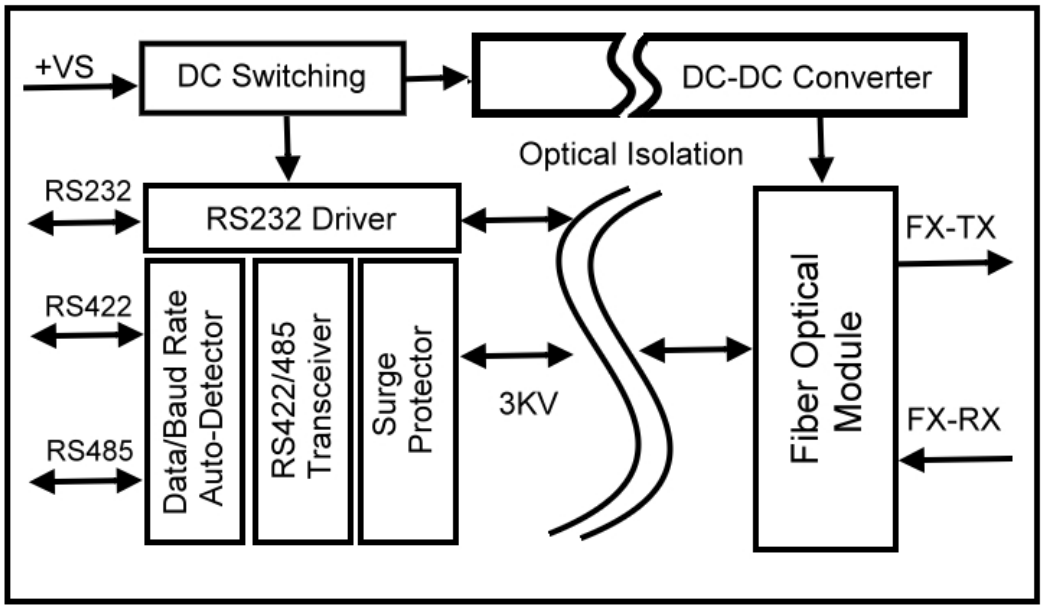
- Power Input Voltage: DC +10V to +30V.
- Interface: RS232/422/485 auto switching to Fiber (Multi-mode).
- RS232: 3 full-duplex (TXD, RXD, GND).
- RS422: Differential 4 full-duplex wires (TX+, RX+, TX-, and RX-).
- RS485: Differential 2 half-duplex wires (D+, D-).
- Cable: Fiber ST Cable (62.5/125um).
- Wavelength: 820 nM.
- Distance: RS422/485 up to 4000ft. (1250M), and Fiber up to 2 KM.
- Baud Rate: From 300bps to 115.2kbps (maximum).
- Operating System: Windows/Linux/Unix/MAC.
- Connection type: Screw terminal for maximum AWG 12 wire.
- Signal LED: Power on, TX, RX.
- Power supply: Screw terminal, or standard external DC adapter.
- Power consumption: 1.6W.
- Isolation Voltage: 3000V DC.
- Operating temperature: -20 to 65C.
- Storage temperature: -20 to 65C.
- Humidity: 10-90% non-condensing.
- Dimension: 151 mm X 75mm X 2 6mm.
- Weight: 375g.

2. Hardware description

2-1.TRP-C39 panel layout



2-2. TRP-C39 Hardware structure



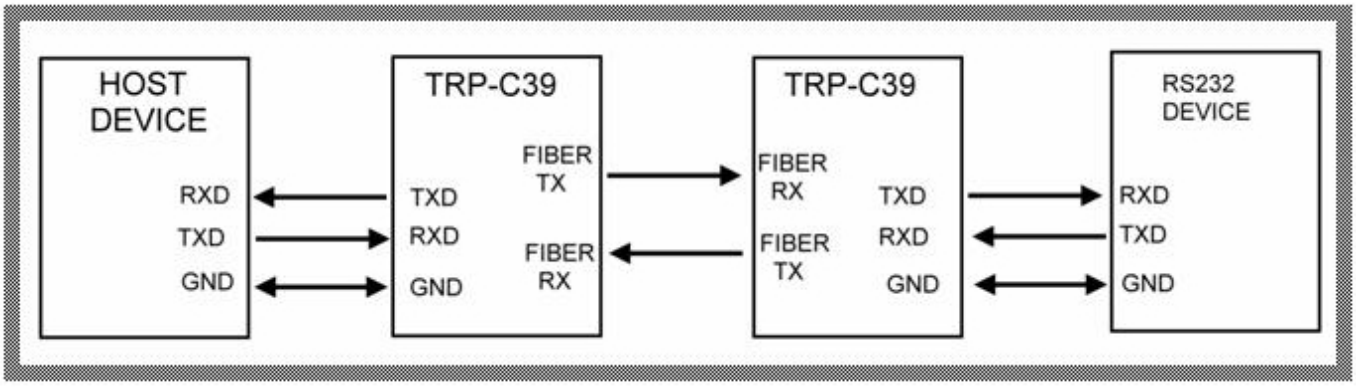
3. Install TRP-C39

3-1. Power connection

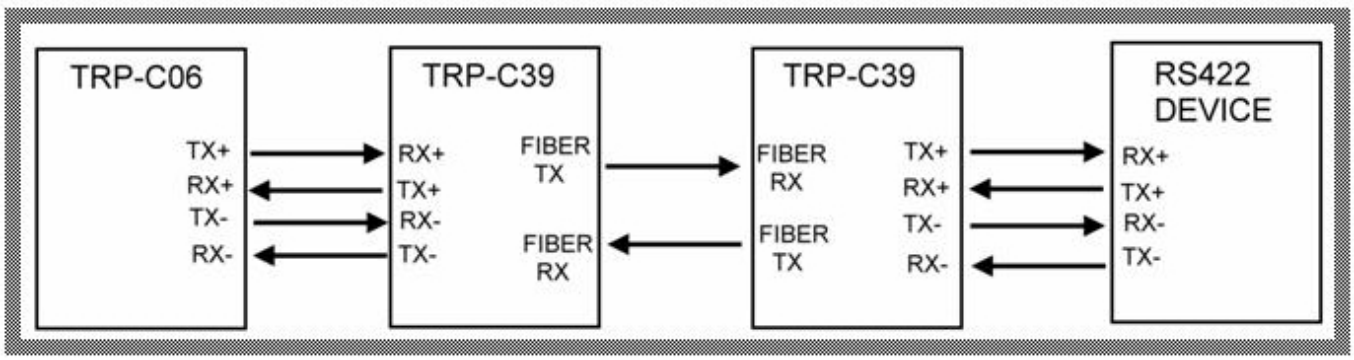
The TRP-C39 is equipped with a 2-pin terminal block and power jack. Power can be supplied from terminal block or external power adapter and supports wide input range from + 10~30V. When power is correctly supplied the PWR LED will lighting and indicates the system is up. It is highly recommended use the power jack specification 5.5*2.1*12mm if the power supply is from external DC plug.

3-2. RS232/422/485 serial devices connection

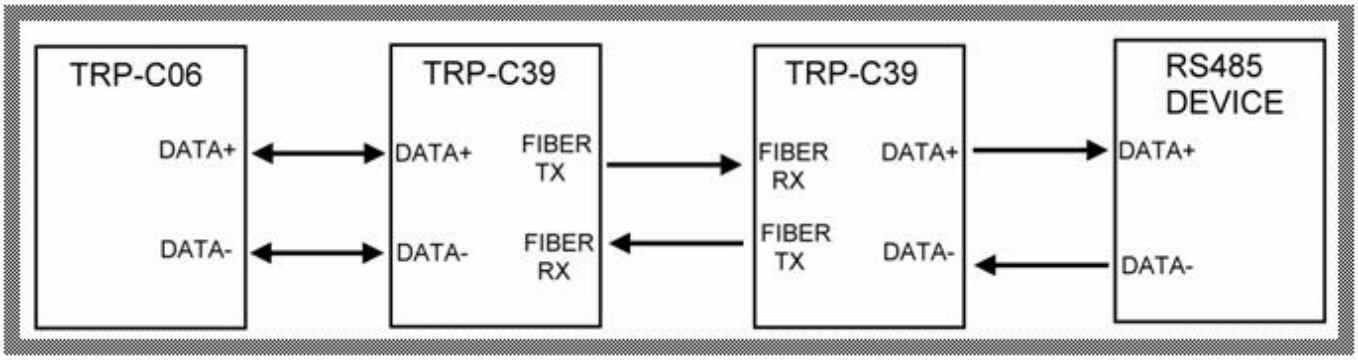
3-2-1.RS232 wiring connection



3-2-2.RS422 wiring connection



3-2-3.RS485 wiring connection

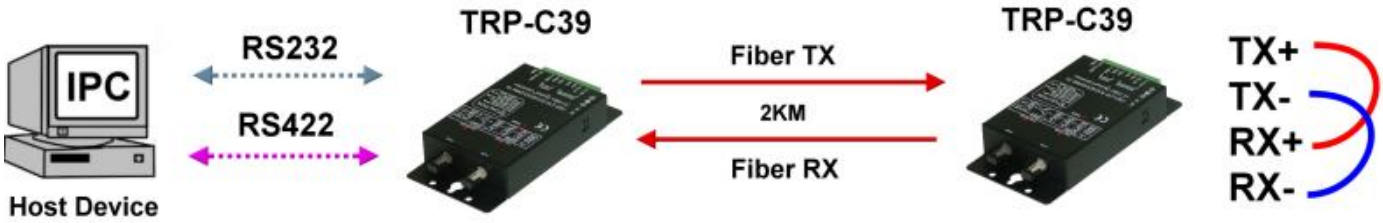


4. How to test TRP-C39

Trycom Technology Co.,Ltd offers test utility, this is utilities may help user to demo and test TRP-C39 fast and easily. User may find the utilities in Trycom support CD or download from Trycom web www.trycom.com.tw , direct to perform TRPCOM.exe from the directory.

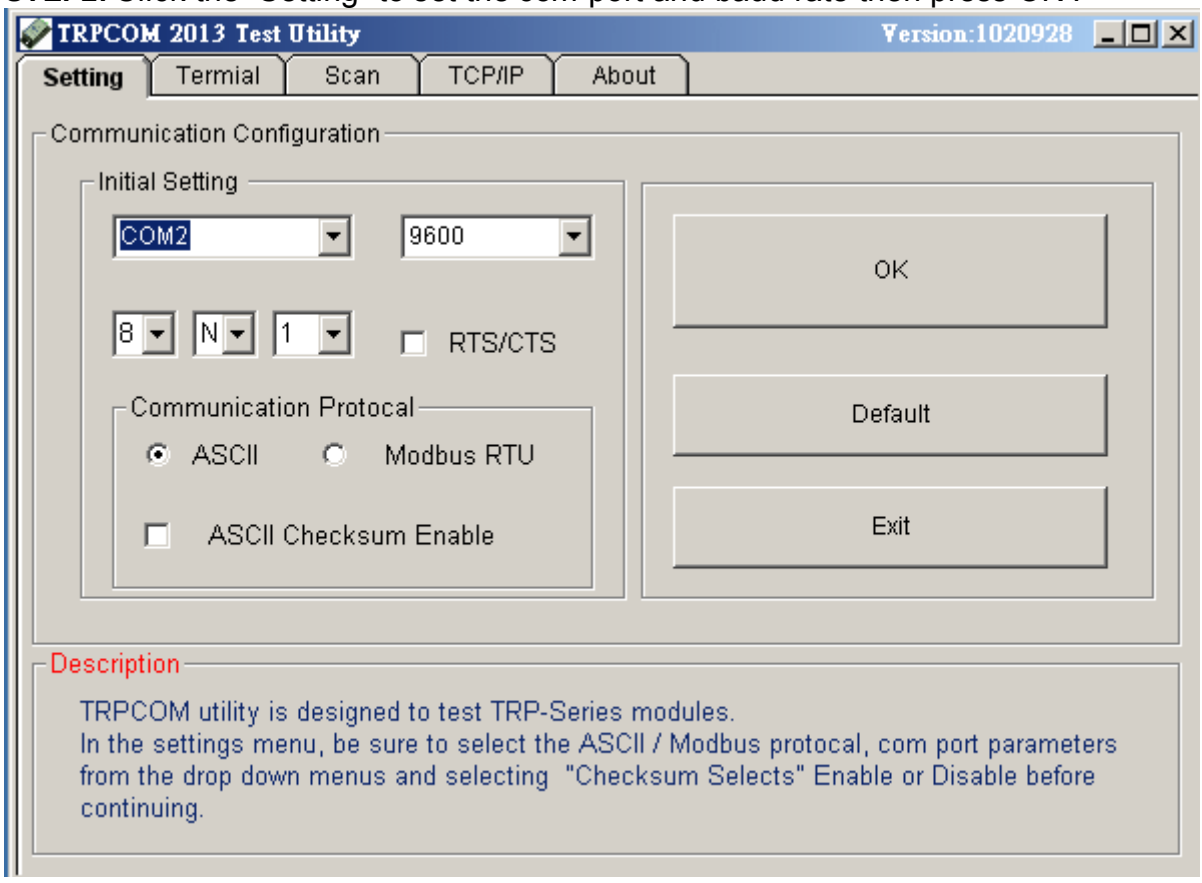
4-1. RS422 loop back Test

Refer to wire connection as below.



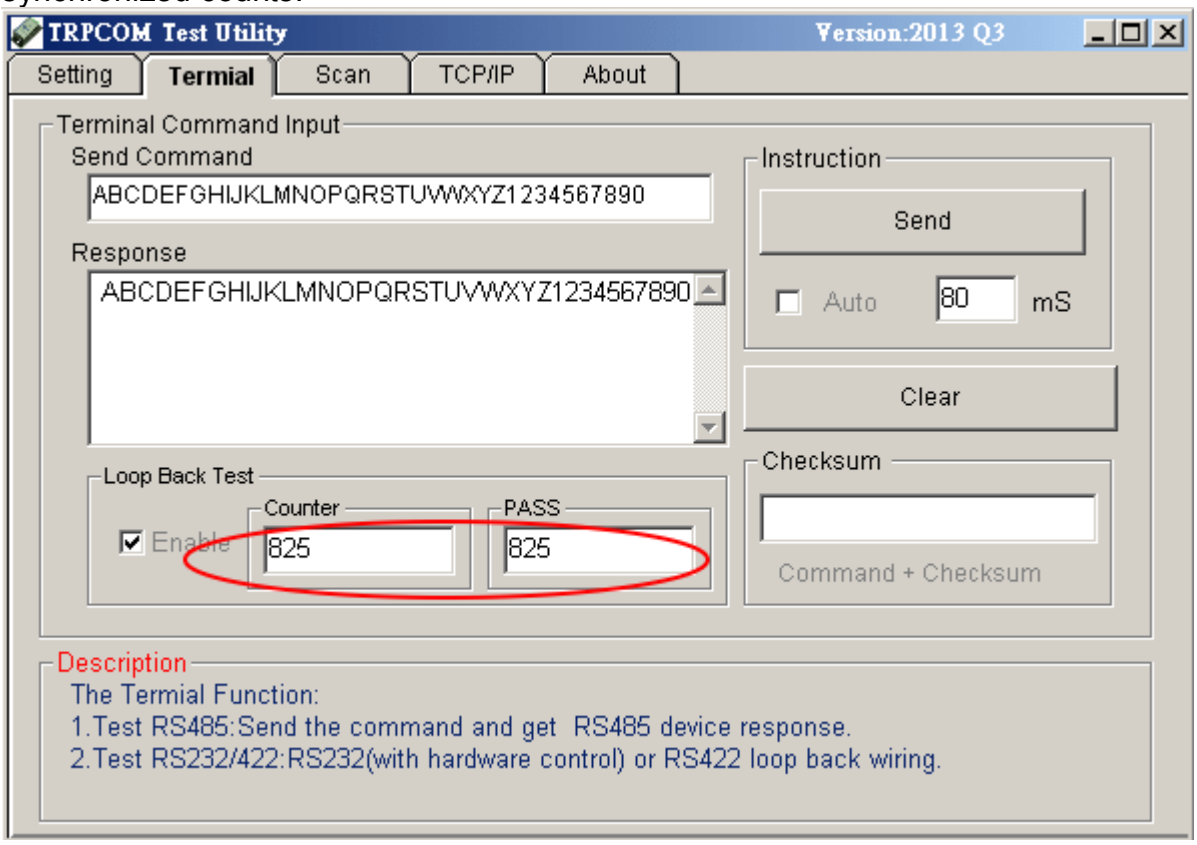
STEP1: Run the "TRPCOM.EXE" utility.

STEP2: Click the "Setting" to set the com port and baud rate then press OK .



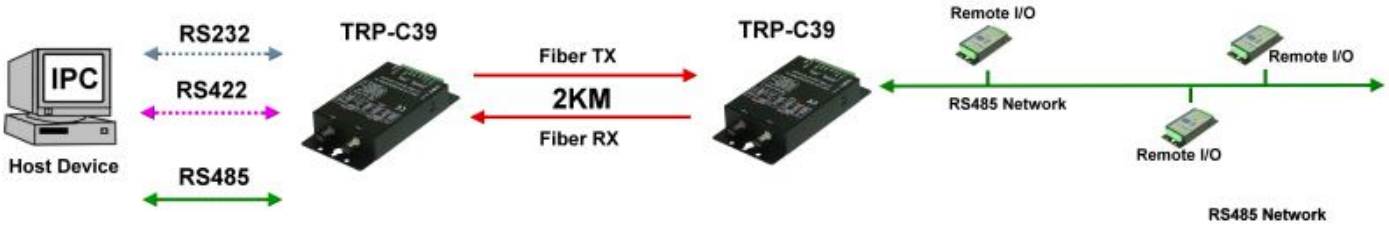
*Please note: “COM2” is an example of COM port number; the real COM number is assigned by user PC.

STEP3:. Click the "Terminal" then select Loop back enable, the counter value and pass value will be synchronized counts.



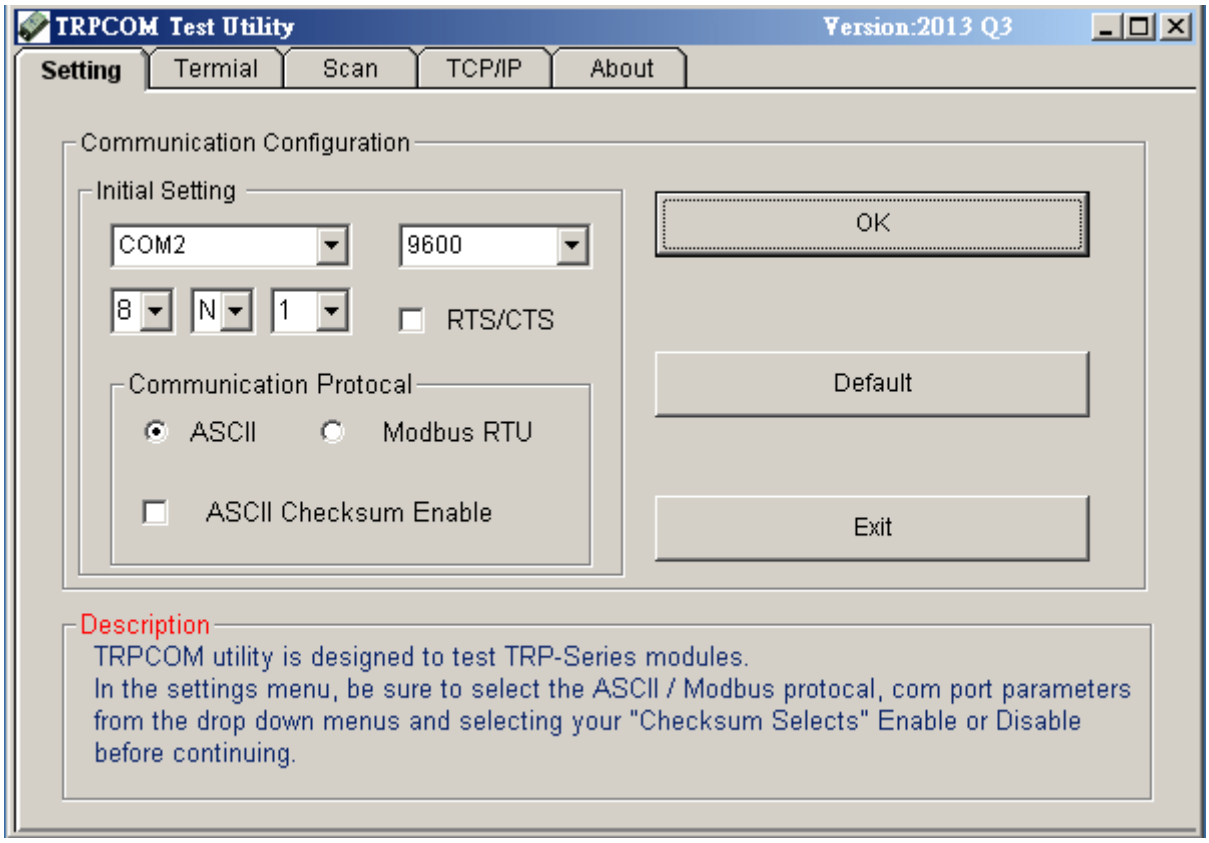
4-2. RS485 test

RS485 test mode, it can be connected to RS485 Device, such as connecting TRP-C28, send "$01M" instruction from the client side, when the TRP-C28 received command that will response "!01TRPC28" indicates execution completed.



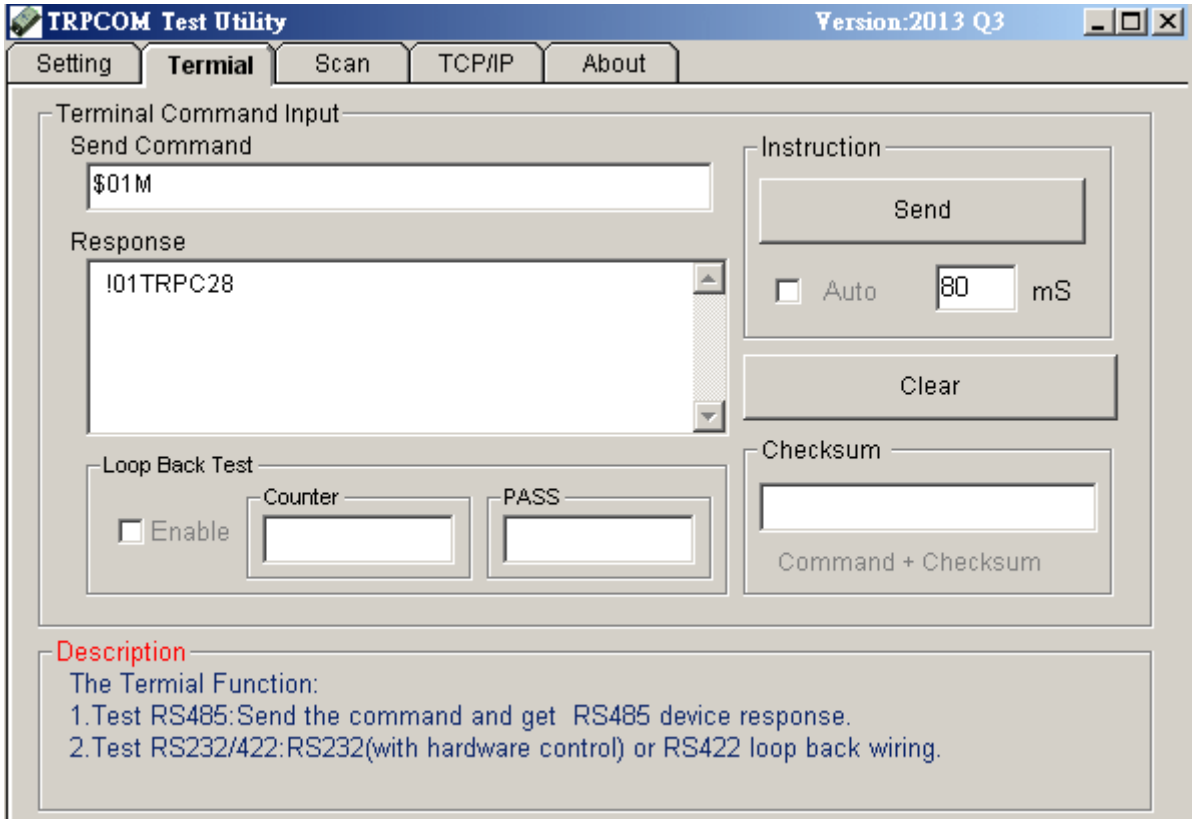
Step1. Run the “TRPCOM.EXE” utility.

Step2. Click the “Setting” to set the com port and baud rate then press OK.

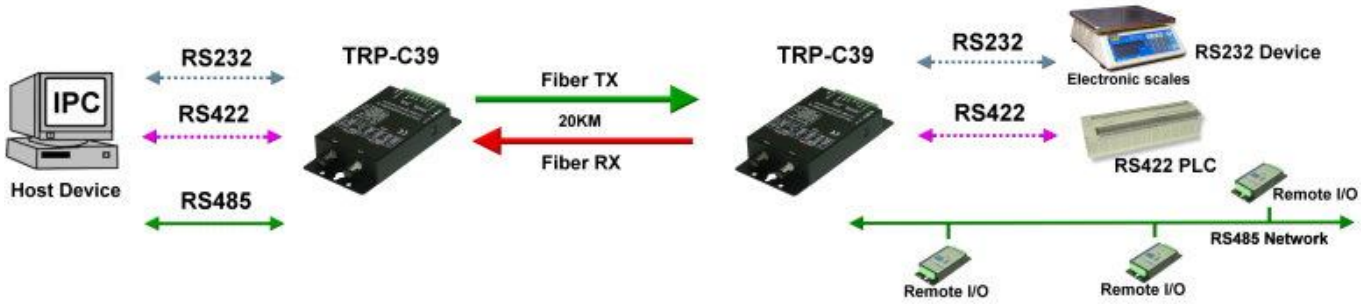


Step3.Send command “$01M” and press “Send” button.

Step4. TRP-C28 response received.



5. TRP-C39 Application.


IPC
Host Device
RS232
RS422
RS485
TRP-C39
Fiber TX
20KM
Fiber RX
TRP-C39
RS232
RS232 Device
Electronic scales
RS422
RS422 PLC
Remote I/O
RS485 Network
Remote I/O
Remote I/O