RS-232 to RS-422/485 Converter

User Manual

Ver. 1.00

Contents:

Chapter 1: Introduction

1.1 Product Introduction

This RS-232 to RS-422/485 Converter is bi-directional connector converter between RS-232 and RS-422/485; it is mainly used for communication between main controller machines or Peripherals, it achieve request-response communication between multi-machines, it is mainly used for the field of electricity, industrial automatic control, IC card billing system, such as one card solution, access control system, parking system, and so on.

1.2 Features

- RS-232 to RS-422 conversion with RTS/CTS support
- RS-232 to 2/4-wire RS-485 conversion
- Wall mount design
- PWR, Tx and Rx LEDs
- Supports baud rate up to 1Mbps and Auto Baud Rate Detection
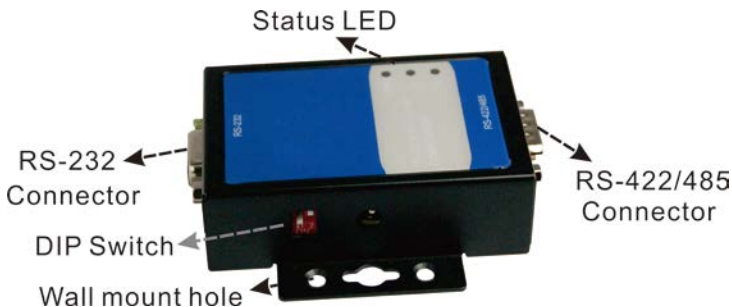- RS-422 and RS-485 auto detect and switching

● ±15KV ESD protection on all signal pins

1.3 Package Contents

● 1 x RS-232 to RS-422/485 Converter

● 1 x User Manual

● 1 x 5V/1A Power Adapter

Chapter 2: Getting Started

2.1 Hardware Layout

- **Status LED**:
1. PWR – Green, Light when the power is on
2. Rx – Yellow, Blink when serial data received
3. Tx – Yellow, Blink when serial data sent

- **DIP Switch: RS-422/485 Mode Selector**

This RS-232 to RS-422/485 Converter equips independent DIP switch for each serial port.

1). Auto RS-422/485 (Default)

This COM can automatically detect the state of RS-422 full duplex or RS-485 half duplex and control the data transmitting and receiving wires at the same port.

SW1	
1: On; 2:Off	

2). RS-422 (4-Wire RS-485)

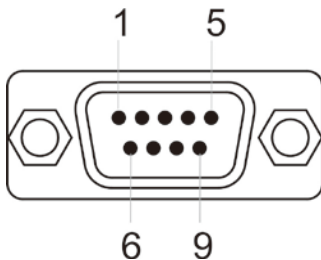This COM port forces to run RS-422 full duplex mode.

SW1	
1: Off; 2:On	

2.2 Pin Assignment

The RS-232 side of the RS-232 to RS-422/485 Converter is a female DB9 and pinouts are standard to all PC serial COM Ports (Pin 2: RxD; Pin 3: TxD; Pin 5: GND; Pin 7: RTS; Pin 8: CTS)
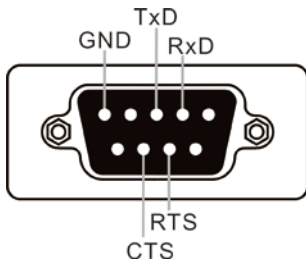
Female DB9 Connector: RS-232 Side

Pin	Transmission Signals		
	RS-422	4-Wire RS-485	2-Wire RS-485
1	Tx-	Tx-	D-
2	Tx+	Tx+	D+
3	Rx+	Rx+	
4	Rx-	Rx-	
5	GND	GND	GND
6	RTS-	RTS-	
7	RTS+	RTS+	
8	CTS+	CTS+	
9	CTS-	CTS-	

Male DB9: RS-422/485 Side

2.3 Jumper Settings

This RS-232 to RS-422/485 Converter equips independent TX&RX and RTS&CTS termination resistors for RS-422/485 connector. User can modify the jumper setting (short the pins) to avoid impedance mismatched problem when operate under Multi-drop transmission. Resistors should be added near the receiving side. Note: Stands for termination resistor near the receiving side.

●● Short (Default)   **○○** Open

Factory default jumper setting is Short (enable 120 ohms termination resistors across the two wires)