

Model:UT-850N

USB to RS-485/422 converter

Datasheet



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1. Overview

UT-850N is a universal USB/RS-485/422 converter, no external power supply, compatible with USB, RS-422, RS-485 standards, capable of converting single-ended USB signals to balanced differential RS-422 or RS-485 signals, providing per-line surge protection power, and surge voltage generated on the line is very small. The inter-pole capacitance ensures high speed transmission of RS-422/RS-485 interface, and the RS-422 and RS-485 ends are connected via DB9 male connectors. The converter is equipped with zero-latency automatic transceiver, and the unique I/O circuitry automatically controls the data flow direction without any handshaking signals (e.g. RTS, DTR, etc.). No jumper settings are required to achieve full-duplex (RS-422) and half-duplex (RS-485) mode conversion, plug-and-play. All existing communication software and interface hardware is suitable.

UT-850N interface converter can provide reliable connection for point-to-point and point-to-multipoint communication. Point-to-multipoint each converter can allow 32 RS-422 or RS-485 interface devices to be connected with data communication rate 300-921600bps, and the supported communication methods are USB to RS-422 and USB to RS-485 conversion.

2. Major Functions & Features

- Support USB to RS-485/422 converter

3. Technical Parameters

- Standard: Compliant with USBV1.1, EIA RS-485, RS-422 standard
- USB signal: VCC, DATA+, DATA-, GND, FG
- RS-485 signal: T+, T-, GND
- RS-422 signal: T+, T-, R+, R-, GND
- Working mode : Asynchronous, point-to-point or multi-point, 2-wire half-duplex, 4-wire full-duplex
- Directional control: Using automatic data flow control technology to automatically identify and control the direction of data transmission
- Baud rate: 300-921600bps, auto-detection of serial signal rate
- Load capacity: support point to multipoint each converter can allow the connection of 32 RS-422 or RS-485 interface devices
- Transmission distance: RS-485/422 end 1200 meters (9600bps), USB port no more than 5 meters
- Interface protection: Surge protection, $\pm 15000V$ electrostatic protection
- Interface form: USB end Class A interface female, DB9 male connector connection
- Transmission medium: twisted pair or shielded wire
- Dimension: 35mm \times 20mm \times 69.5mm
- Operating environment: -20~75°C, relative humidity 5~95%
- Transmission distance: 0-1200m (921600bps-9600bps)
- Support Win98/Win2000/WinXP/Vista/Win7/Win8/8.1/10/Linux etc.

Main chip:

Adopted Prolific: PL2303TA

4. Hardware Definition and Initial Setting

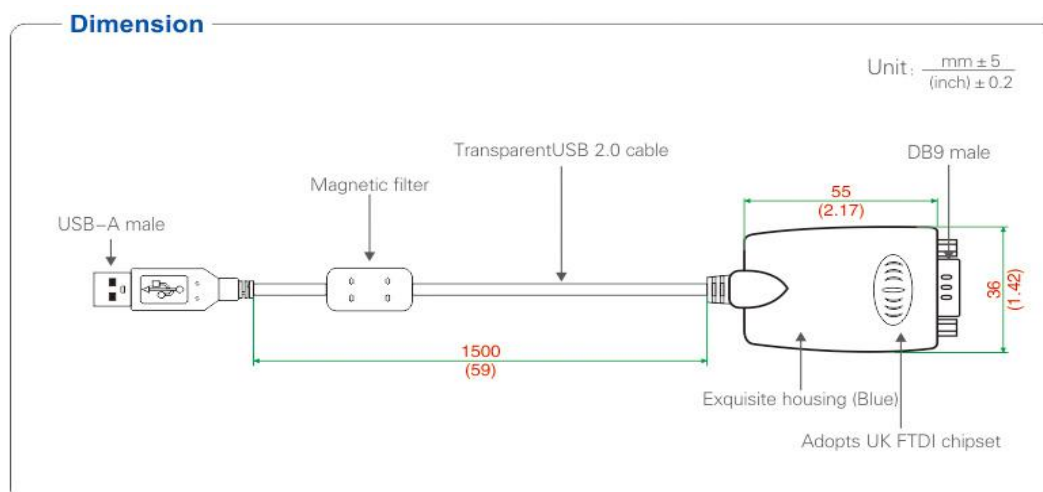
- RS-485/RS-422 output signal and terminal pin assignment

| DB9 male(PIN) | Output signal | RS-422 full-duplex wiring | RS-485 half-duplex wiring |
|---------------|---------------|---------------------------|---------------------------|
| 1 | T/R+ | Transmitting(A+) | RS-485 (A+) |
| 2 | T/R- | Transmitting(B-) | RS-485 (B-) |
| 3 | RXD+ | Receiving(A+) | / |
| 4 | RXD- | Receiving(B-) | / |
| 5 | GND | GND | GND |
| 6 | N/A | | |
| 7 | N/A | | |
| 8 | N/A | | |
| 9 | N/A | | |

5. Product View (Appearance)



6. Structure Dimension



7. Ordering Information

| Model | Signal/ Interface | | | Protection level | | Baud rate | Operating Environment | | | Power | |
|---------|-------------------|-------------|------------|------------------|------------|------------------|-----------------------|----------|----------|------------------|-------------------|
| | USB | RS-232 | RS-485/422 | | | | Temperature | | Humidity | | |
| | USB A male | DB9 male | DB9 female | RS232 | RS-485/422 | | -25~70°C | -40~85°C | 5~95% | plug and play | External power |
| UT-850N | √ | | √ | | 600W surge | 300bps-921.6kbps | √ | | √ | √ | |