

|   | Product Name  | Key Feature   |
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|  | <p style="text-align: center;"><b>UT-850A</b></p> <p style="text-align: center;"><b>1-port USB to RS-485/422<br/>Serial Converter with ESD<br/>protection</b></p> |    |

## INTRODUCED

### I. Summary:

With rapid development of computer industry, USD is taking the place of various kinds of traditional low speed peripheral interfaces. However, RS-485/RS-422 interface designs are still used in many of the important facilities under current industrial environment, therefore, converter is used by many users to implement the data transmission from USB of a computer to RS-485/RS-422 equipment. UT-850 is a universal USB/RS-485/422 converter. without external power supply needed. Compatible with USB RS-422 and RS-485 standards UT-850 is capable to perform the conversion from single-ended USB signal into balance differenced signal of RS-422 or RS-485. Quick state- of-the -art transient voltage suppressor (TVS) and discharge tube are adopted to protect the RS-422/RS-485 interfaces. Under normal conditions the TVS tube is in the state of high resistance. However when both ends of the TVS tube are hit by a transient high energy the impedence at both ends can be depressed by the TVS at a very high speed, and after absorbing a high current, the voltage between the two ends is suppressed and kept at a pre-set value, therefore no damage is caused to the electrical components behind by the transient high voltage impact. The protector can effectively restrain lightning or ESD (electro static discharge) with a protection voltage of 600W on each line for lightning surge and surge voltage or transient over voltage possibly caused up by various reasons, and at the same time, a high-speed transmission of RS-422/ RS-485 interfaces is ensured by the tiny capacitance between the poles. RJ-45 and DB9 male connectors are used for connection from RS-422 and RS-485 to other equipment. The unique I/O circuit of the internal zero delay auto transceiver contained in the converter controls the data stream direction automatically without any handshaking signal (for example RTS, DTR etc). The converter is plug-and-play without any jumper settings needed fo r mode shift between full duplex (RS-422) and half duplex (RS-485). All these features ensure a universal application on all the existing communication software and hardware interfaces.

A reliable and stable point-to-point and point-to-multipoint communication can be ensured by UT-850 photoelectric isolation interface converter. For point-to-multipoint communication, as many as 32 interface facilities of RS-422 or RS-485 standard can be connected to each converter, and a high data transmission rate of 300-128000bps can be achieved. Power indicator light and data traffic indicator light are also available with the converter for malfunction indication. Conversions from USB to RS-422 and USB to RS-485 are supported.

### II. Specification:

- Standards: conforming to USBV1.1 and 1.0, EIA RS-485 and RS-422, backwards compatible.
- USB signals: VCC DATA+ DATA- GND FG
- RS-485 signals: T+, T-, GND.
- RS-422 signals: T+, T-, R+, R-, GND.
- Working modes: asynchronous, point-to-point or point to- multipoint, 2-line half duplex and 4-line full duplex.
- Direction control: adoption of automatic data stream control for automatic recognition and control of data transmission direction.

- Baud rate: 300-128,000bps, automatic detection of the transmission rate of the serial interface signal.
- Workload ability: point-to-multipoint supported, a maximum of 32 RS-422 or RS-485 interface equipment are supported.
- Transmission distance: 1200 meters for RS-485/422 end (when 9,600bps) and a maximum of 5 meters for USB.
- Interface protection: 600W lightning strike and surge protection and 5KV electrostatic protection.
- Interface forms: A interface female connector, RJ-45 and DB9 male connectors for USB end.
- Transmission media: twisted-pair cable or shielded cable.
- Transmission rate: 128,000bps to 300M. 38,400bps to 600M. 9,600bps to 1200M.
- Dimensions: 150mm 36mm 16mm.
- Working environment: -25 to 70 , relative humidity 5% to 95%.
- Transmission distance: 0-1200meters (128,000bps- 9,600bps)
- Windows95/98/2000/XP/Vista/Win7/Linux and IMAG are supported.

## INFORMATION ORDER

**MODEL: UT-850A** 1-port USB to RS-485/422 Serial Converter with ESD protection