

# Model:UT-880I

USB to RS-232 interface converter

# Datasheet

## 1. Overview

As the PC industry continues to evolve, the USB interface is gradually replacing the various low-speed peripheral interfaces of older PCs. However, many important devices in the current industrial environment still use the RS-232 interface design, so many users use USB to RS-232 converters to implement data transfer between PCs and RS-232 devices.

UT-880I is a universal USB/RS-232 converter, which is compatible with USB and RS-232 standards without external power supply, and can convert single-ended USB signal to RS-232 signal with zero delay automatic transceiver conversion inside the converter, and the unique I/O circuitry automatically controls the data flow direction. Ensures compatibility for all existing communication software and interface hardware. The built-in opto-isolator is capable of providing isolation voltages up to 2500Vrms with fast transient voltage suppression protector and discharge tube, which is designed to protect the RS-232 interface with today's advanced TVS (TRANSIENT VOLTAGE SUPPRESSOR) transient voltage suppressor and discharge tube. Under normal conditions, the TVS tube and discharge tube are in a high resistance state. When the TVS tube and discharge tube are subjected to an instantaneous high-energy shock at both ends, it can reduce the impedance at both ends at a very high speed and absorb a large current, so that the voltage at both ends is clamped at a predetermined value to protect the circuit components behind from damage due to transient high-voltage shock. This protector can effectively suppress lightning (LIGHTNING) and ESD, providing 1500W of lightning surge protection power per line, as well as surge voltages and transient over voltages generated by various causes on the line, and the extremely small inter-pole capacitance ensures high-speed transmission of the RS-232 interface. The RS-232 interface end is connected to a compatible RS-232C standard interface via a DB9 female connector. The converter comes with internal zero-latency automatic transceiver conversion, and the unique I/O circuitry automatically controls the direction of data flow without any handshaking signals (such as RTS, DTR, etc.).

UT-880I interface converter is point to point, data communication rate 300-460800bps, with power indicator and data flow indicator can indicate the fault situation, support the communication mode of USB to RS-232 conversion.

## 2. Main functions and feature

- USB to RS-232 interface converter

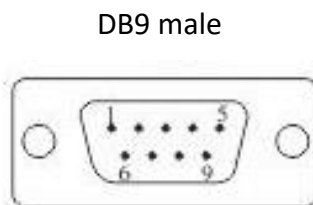
## 3. Technical Parameter

- Standards: USBV1.0, 1.1, 2.0 compliant EIA RS-232 standard
- USB signal: VCC, DATA+, DATA-, GND, FG
- RS-232 signal: RXD TXD GND
- Working mode: Asynchronous work, point-to-point work
- Direction control: Automatic data flow control technology is used to automatically identify and control the direction of data transmission
- Baud rate: 300-460800bps, automatic detection of serial signal rate
- Protection level: USB side surge protection 500W  
RS-232 end surge protection 600W,  $\pm 15KV$  electrostatic protection
- Isolation degree: isolation voltage 2500Vrms, 500DC continuous, DC/DC module

- Load capacity: Support point-to-point communication mode
- Transmission distance : RS-232 terminal 5m, USB port no more than 5m
- Interface form : USB B type male, DB9 male connector
- Signal indication: 2 signal indicators transmit (TXD) receive (RXD) 1 power indicator (POWER)
- Transmission medium: twisted pair or shielded wire
- Dimension: 96mm×64mm×26mm (L×W×H)
- Operating environment: -40~85°C, relative humidity of 5~95%

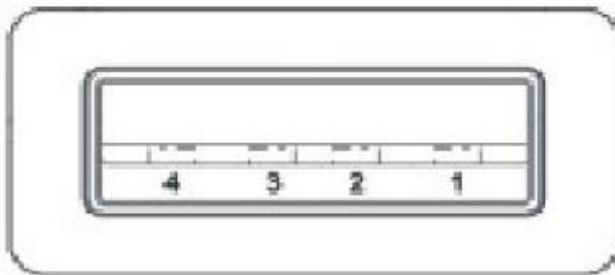
## 4. Hardware Definition and Initial Definition

- RS-232C Pin Assignment



DB9 male (PIN)	RS-232C Interface signal
1	NC
2	SIN(RSD)
3	SOUT(TXD)
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

- USB-A type: USB signal input and pin assignment

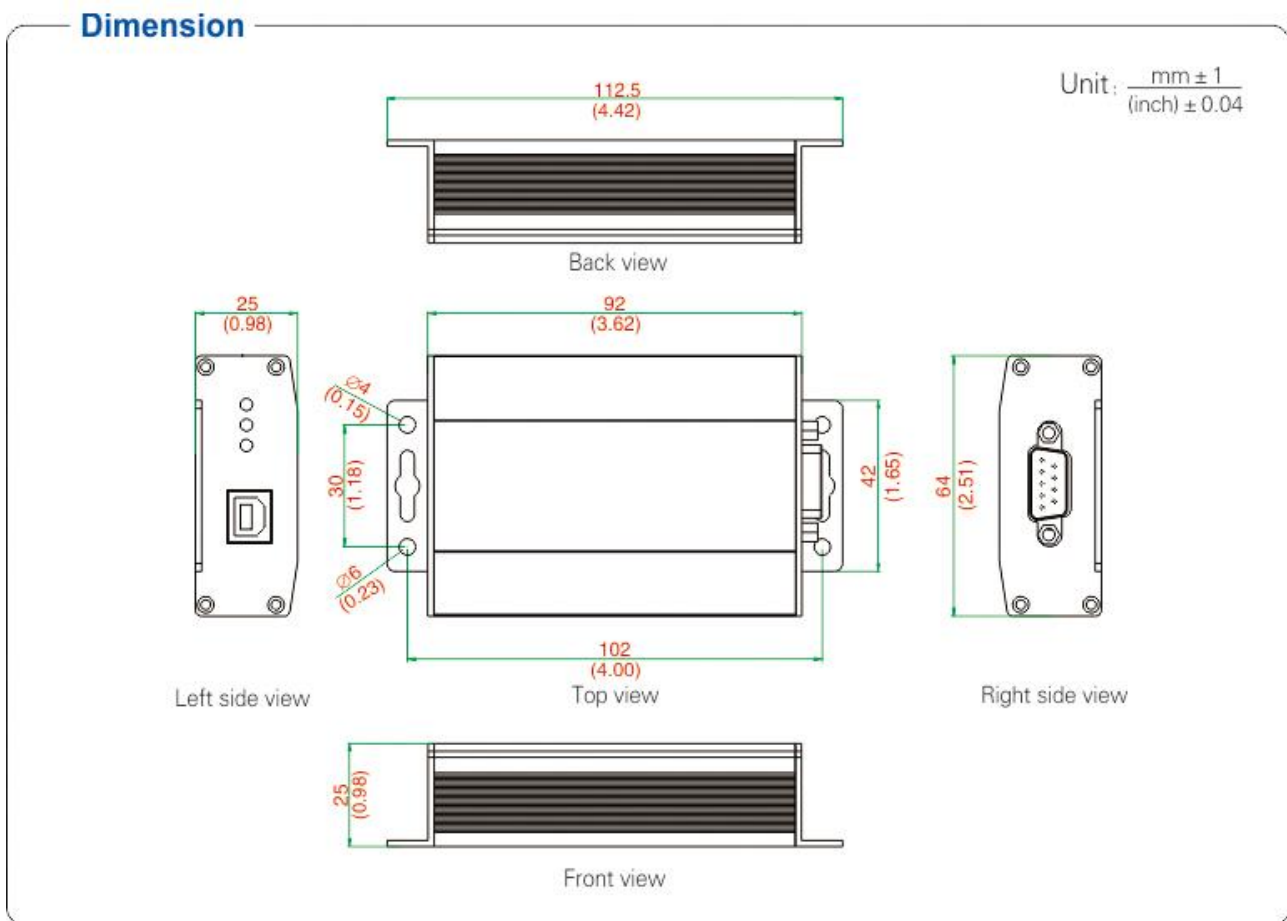


1. VCC
2. DATA-(DM)
3. DATA+(DP)
4. GND

## 5. Product View (Appearance)



## 6. Structure Dimension



## 7. Ordering

Model	Signal/Interface			Protection level		Baud rate	Operating Environment			Power	
	USB	RS-232	RS-485 /422	RS-232	RS-485/ 422		Temperature		Humidity	plug and play	External power
	USB-B						0~70°C	-40~85°C	5~95%		
UT-880I	√	DB9 male		600W Surge		300bps-460.8Kbps		√	√	√	