

# IT-232P33-TTL

## RS-232 to 3.3V TTL Converter ( DB9 )

#### INTRODUCTION:

The Intellisystem IT-232P33-TTL is a bi-directional port powered RS-232 to 3.3V TTL converter in a 9 pin format. It can convert any standard full duplex RS-232C port to a 3.3V TTL signal and vice versa. The unit is powered from the RS-232 data lines. It also supports data direction auto-turnaround. Therefore, no external power or flow control is required. The data direction auto-turnaround automatically enables the TTL driver when data is present on the RS-232 side making the device plug-and-play, requiring no software drivers. The IT-232P33-TTL has a DB9 female connector on the RS-232 side and either a DB9 male connector or 5-way terminal block on the TTL side. Separate terminal block is included in package.

#### PACKING LIST:

IT-232P33-TTL is shipped with following items.

- 1. TTL-232-33P×1
- 2. Separate terminal block (DB9F to 5 bit) ×1
- 3. User manual ×1



#### **FEATURES:**

- 1. Port Powered: no external power is necessary
- 2. Data Direction, auto-turnaround, no flow control is necessary
- 3. Plug-and-Play (Device is hot-pluggable)
- 4. Built-in surge protection, static protection and circuit protection

### **PINOUT CONFIGURATION:**

RS-232 port adopt DB9F (Female), 3.3V TTL side adopt DB9M or 5 bit terminal block, no power supply Input.



DB9F (Female/hole)



DB9M (Male/needle)

#### RS-232 side:

| Signal   | DCD  | DTR | DSR | RTS  | CTS | TX | RX | GND |
|----------|------|-----|-----|------|-----|----|----|-----|
| Pin#     | 1    | 4   | 6   | 7    | 8   | 2  | 3  | 5   |
| Function | TIED |     |     | TIED |     | TX | RX | GND |

#### 3.3V TTL side:

| Signal   | NC | TTL IN | TTL OUT | NC | GND |
|----------|----|--------|---------|----|-----|
| Pin#     | 1  | 2      | 3       | 4  | 5   |
| Function | NC | TTL IN | TTL OUT | NC | GND |



#### SPECIFICATIONS:

Standards: EIA RS-232C standard

RS-232 signal: TX, RX, GND

TTL signal: IN, OUT, GND

Baud rate: 300~115200bps

Transfer distance: 3.3V TTL side: 3m

RS-232 side: no less than 5m

Connectors: RS-232 Side: DB9 Female and

3.3V TTL Side: DB9 Male or 5 bit Terminal Block

Port protect: 600W surge protection, 15KV ESD protection

Power

Power: Port powered from RS-232 data lines

Current consumption: Less than 10mA

**Environment** 

Operating temperature: -10°C to 60°C

Storage temperature: -40°C to 85°C

Humidity: 5% to 95% (no condensation)

**Appearance** 

Dimensions: 62.8mm×33.8mm×17.8mm

80.3mm×33.4mm×18.6mm (with terminal block)

Material: Iron (shell)

Color: White

Weight: 24g (with terminal block: 36g)

Warranty: 5 years

## Troubleshooting instructions:

Perform a loop back test on one IT-232P33-TTL converter. Tie signals TTL OUT to TTL IN of the TTL-232-33P. Attach the converter to a serial port on a PC and using HyperTerminal send a character from one and see if it echoes to the other. This will test both TTL input and TTL output functions.



## **APPLICATIONS:**



| 2 | RX  | TX  | 2 | 9        | 2 | TTLIN  | OUT  | 0.0000000000 |
|---|-----|-----|---|----------|---|--------|------|--------------|
| _ | TX  | RX  | 2 | 3.3V TTL | 3 | TTLOUT | IN   | 3,3V T       |
| 3 | GND | GND | 5 | 3.34 116 | ř | GND    | CNID | DEVIC        |
| 5 | 10  |     | 2 |          | 5 |        | GNU  |              |

HOST/PC/DTE

Connecting the RS232 port to a 3.3V TTL Device

## **CERTIFICATIONS:**











