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## 4. I-7551 : RS-232 to RS-232 Converter

### 4.1 I-7551 Pin Assignment and Specifications:



#### Introduction

The **I-7551** Photo coupler provides a complete full-duplex (including control signal) electrical isolation channel between two RS-232 devices. This isolation is an important consideration if a system uses different power sources, has noisy signals or must operate at different ground potentials.

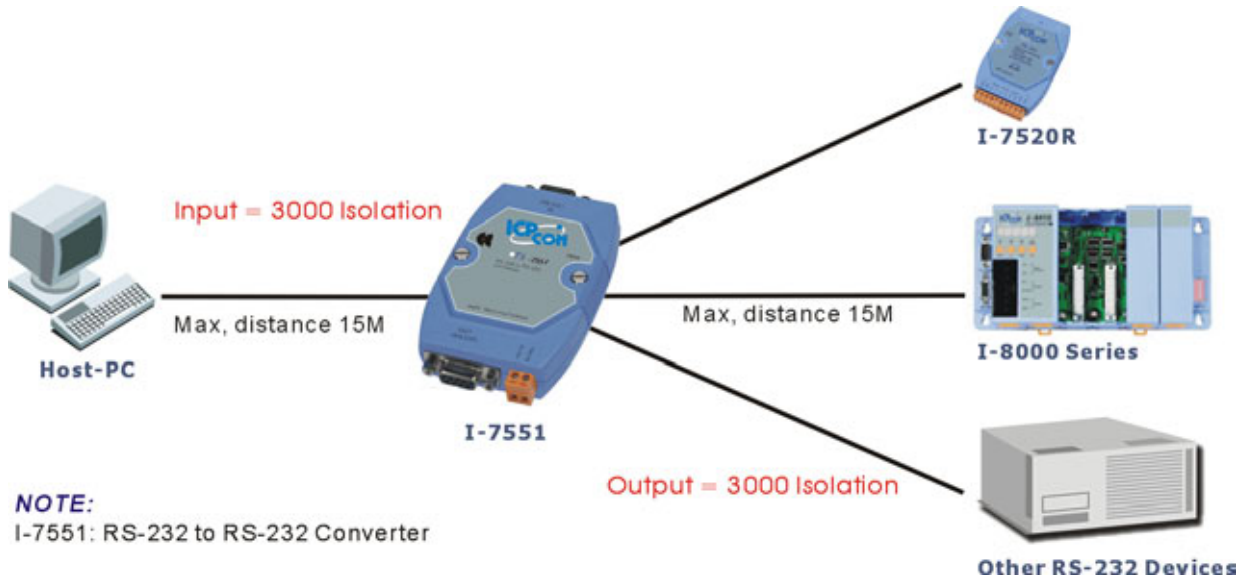
The **I-7551** has the option of reconfiguring which control signal is used. CTS can be selected instead of DSR and RTS instead of DTR. The **I-7551** incorporates two DC-to-DC converters; the isolation site of **I-7551** is located in the input and output interface circuit. In other words, **I-7551** is three-way isolation RS-232-to-RS-232 converter.

#### Specifications

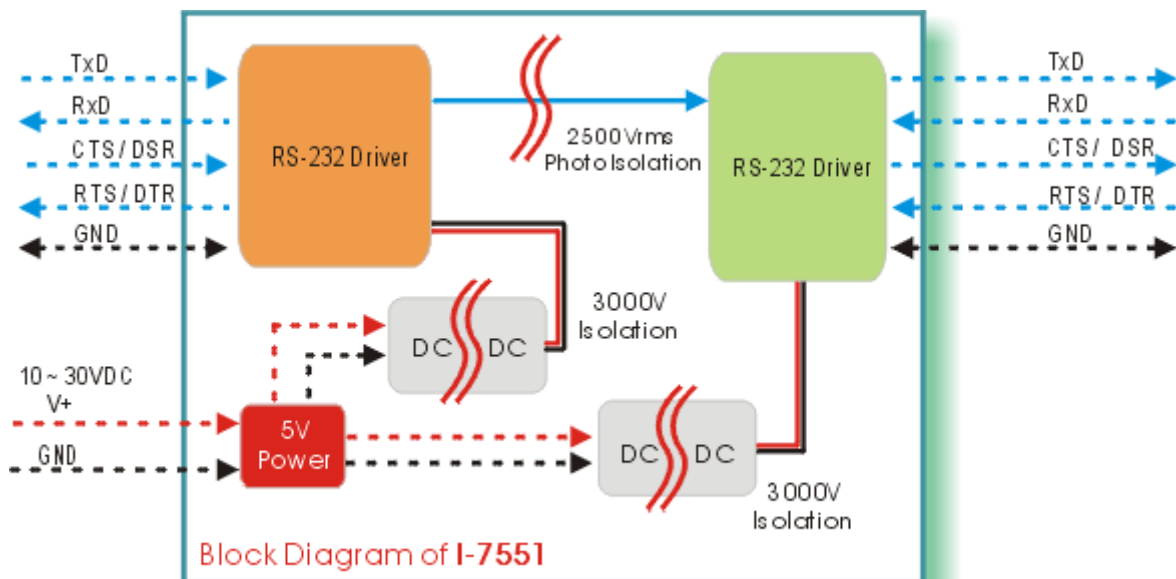
- **Input:**  
RS-232 (TxD, RxD, CTS, RTS, GND or TxD, RxD, DSR, DTR, GND)
- **Output:**  
RS-232 (TxD, RxD, CTS, RTS, GND or TxD, RxD, DSR, DTR, GND)
- **Three-way** Isolation voltage: 3000VDC
- Optical isolation: 2500V rms
- Communication speed: 115.2K bps, Max
- Distance Max: 15Meters
- Power requirements: +10V dc ~ +30V dc
- Power consumption: 1.5 W max.
- Storage temperature: -25°C to +75°C
- Humidity: 5~ 95%

#### 4.1.1 The I-7551 System Network Configuration:

- Multiple Baud Rate
- Multiple Data Format



#### 4.1.2 The I-7551 Block Diagram:



### 4.1.3 I-7551 has two different output types.

Selecting the I-7551 output type.

**NOTE:** The [type1](#) and [type2](#) couldn't be used simultaneously, which means that you can only select 1 type to output.

**Type 1:**

**Input :** TxD, RxD, CTS, RTS, GND. **Output :** TxD, RxD, CTS, RTS, GND.

**Type 2:**

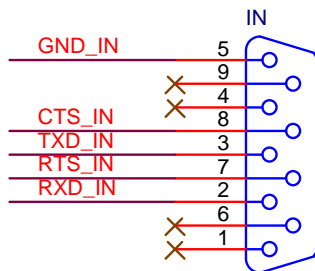
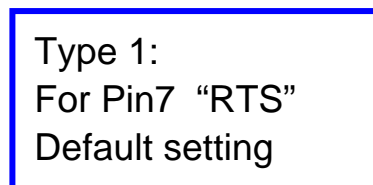
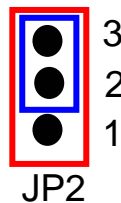
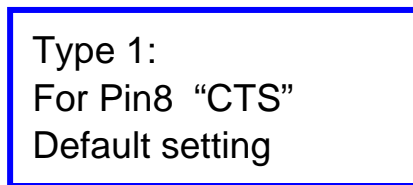
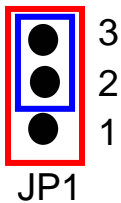
**Input :** TxD, RxD, DSR, DTR, GND. **Output :** TxD, RxD, DSR, DTR, GND.

Type1 and Type2 Jumpers settings:

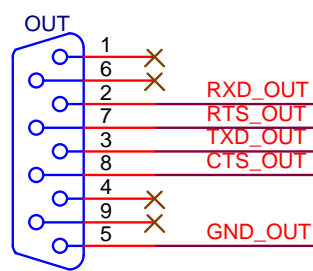
**NOTE:** RXD and TXD are permanent setting.

For [type 1](#): Set the JP1 jumper to positions 2 and 3.

Set the JP2 jumper to positions 2 and 3.



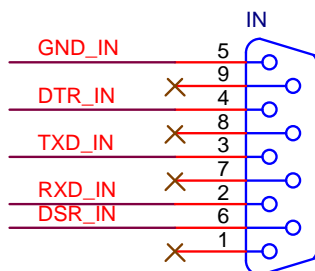
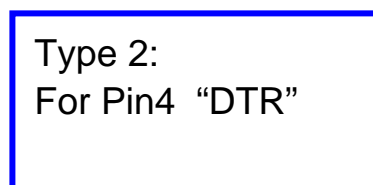
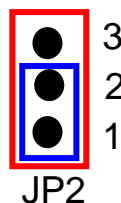
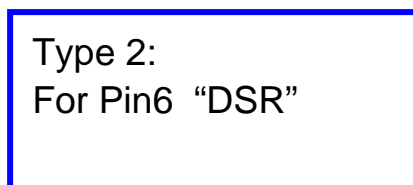
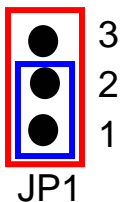
DB9\_Female



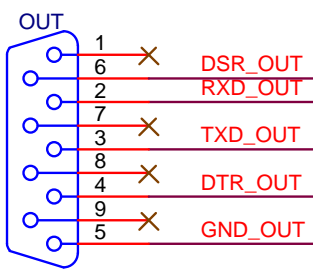
DB9\_Male

For [type 2](#): Set the JP1 jumper to positions 1 and 2.

Set the JP2 jumper to positions 1 and 2.



DB9\_Female



DB9\_Male