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Serial Communication Interface Unit
Operation and Installation Instructions

1. Overview

The Serial Communications Interface Unit (SCIU) provides a convenient method of connecting the serial RS422 from the BTD-1 to a PC using the computer's USB port. The RS422 connection of the SCIU is electrically isolated from the USB port to protect the computer against damage by electrical spikes and surges on the serial communication lines. An isolated 5V power output derived from the USB port is provided to power low power devices (e.g. Radio Module).

Industry standard software drivers are used by the SCIU allowing plug and play operation in most cases. The drivers allow the SCIU to appear as a virtual comms port in Windows operating systems.

2. Installation

The SCIU can be connected to the BTD-1 through a standard BTD-1 Data cable. The configuration kit packages a 2m data cable by default, with other cable lengths available on request.

A separate USB cable is supplied for connection from the SCIU to a workstation.

If utilising a radio module, the SCIU can be connected to the Receiver Module directly using a BTD-1 Data cable. Power is supplied through the USB port.

The pinout for the M12 connector is as follows:

M12 Pin	Description
1	5V
2	0V
3	RX+
4	RX-
5	TX+
6	TX-
7	NC
8	0V

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3. Software Drivers

When using a Windows operating system computer that is connected to the internet the correct drivers should be automatically installed.

If required, SCIU software drivers for Windows, Linux and Mac OS X operating systems can be downloaded from the following website: https://www.ftdichip.com/Drivers/VCP.htm

4. Indicators

There are two communication link indicators and one power indicator on the sides of the SCIU enclosure.

The communications link TX and RX indicators will illuminate when data is transmitted and received. Unless there is constant data the indicators may be difficult to see in bright conditions.

The power indicator illuminates when the SCIU is connected to a USB port and the operating system has established a connection to the SCIU.

5. Specifications

Power:
- USB port powered

Serial Port:
- RS422 4 wire connection
- Baud rate from 300 to 115,200

USB Port:
- USB 2.0 Full speed compatible
- Type B connector
- 1m Type A to Type B cable supplied

Isolation:
- Transient 2.75 kV
- Working 250 Vac

Environmental:
- Operating temperature 0°C to +50°C
- IP rating: IP50 Indoor use only

Serial Port Connection:
- M12 8-Way

5 Volt Supply:
- Isolated from USB port
- 5 V +/- 0.4 V
- Maximum current 400 mA

Certification:
- CE Marked
- RoHS Compliant

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