S-Node-L
Quick Start Guide

1. Connecting & Configuring the S-NODE-L

The ICT International S-Node is configured (i.e. identified and authenticated) over USB serial console using a terminal or terminal emulator. It is compatible with Windows 10, Mac OS and Linux. One terminal emulator we recommend is Putty, which can be downloaded from https://www.putty.org/. Connecting a S-Node to a computer via the Micro USB port will provide a serial port for configuration.

Recommended settings are as follows:

- □ Baud Rate: 115200 baud
- □ Parity: None
- □ Bits: 8 | Stop Bits: 1
- □ Flow Control: Disabled.

To retrieve or reprogram in new LoRaWAN keys (DEV EUI, APP EUI & APP KEY), refer to the S-NODE Manual Section 3.2.1 'LoRaWAN EUIs – lora eui' and 3.2.2 'LoRaWAN Application/Join Key – lora key app'. This device has been initially programmed with a

DEV EUI:

This device is configured to an upload schedule of:

To customise or change this setting see the S-NODE Manual Section 3.4.3 'Period between Reports - report period'.

Please see ICT International's YouTube video on connecting to your device at **https://youtu.be/PNkfcJCnCXU** and on registering an application to the TTN 'The Things Network' at **https://youtu.be/dJ5gdZMBDK0**.

To locate the decoder for your S-NODE-L, find the relevant ICT International SNiP web page and download the file.

2. Attaching The Antenna

Before attaching the Antenna, remove the risk of inducing an static electric discharge to the Node by carefully grounding the SMA (M) pin of the Antenna to the outer brass rim of the SMA (F) connector on the Node.


3. Connecting Sensors & External Power

For all four SDI-12 Sensor ports, the left sockets are labelled +12 (Excitation Power), the middle sockets are SIG (SDI-12 Signal) and the right sockets are labelled GND (Ground). Match each wire core to their correct respective sockets accordingly.

The input for external power is located at the top, on the right of the board, labelled SOLAR. This input is polarised, please ensure that positive (+) is inserted in the (+) terminal and negative (-) in the (-) terminal. The S-Node has an on-board solar charge controller and can be directly connected to a 12V or 24V solar panel. Alternatively, a 12V to 24V mains DC power supply can be connected for indoor use. Please ensure that the S-Node's internal battery is plugged in when using solar power.
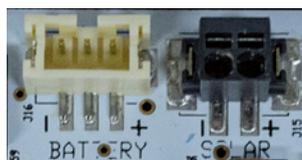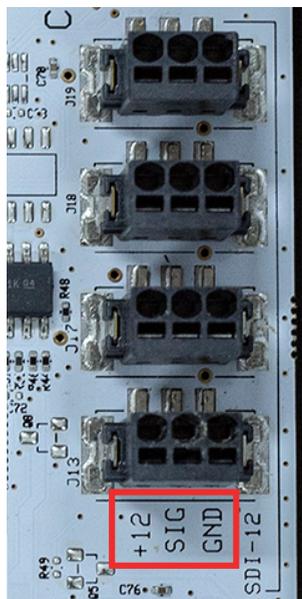
4. Insert, Connect, Re-Insert Power & Sensor Wires
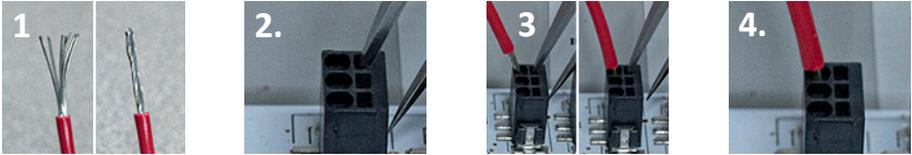
1. Prepare the wire: Strip the outer insulation to expose the wire. Lightly twist if stranded. Ensure exposed wire has maximum length of 7mm.

2. Use a pair of tweezers or suitable flathead screwdriver to push into the square hole beside the desired socket to temporarily release the spring clamp.

3. Hold the tweezers down and insert the prepared wire. Push the wire in, down all the way and remove the tweezers.

4. The wire should be clamped in. After removing tweezers, ensure wire is secured correctly with a simple tug test. The wire can be removed or repositioned by a simple reversal of these steps.

5. LED Status of S-NODE-L

- ☐ **LIGHT BLUE**: Joining Network
- ☐ **DARK BLUE**: Network Joined / Taking measurement
- ☐ **ORANGE**: Transmitting sensor data
- ☐ **PURPLE**: Measurement Complete
- ☐ **GREEN**: USB Idle
- ☐ **RED**: Failed to Join Network