



S-Node-L  
Quick Start Guide

# 1. Connecting & Configuring the S-NODE

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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](https://www.putty.org/), 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.

**For all communications and sensor specific configuration commands, and base decoders refer to the S-NODE manual on the [product page online](#).** Manuals are provided for both LoRaWAN (-L1) and CAT-M1/NB-IoT (-C) node board variants.

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>.

## 2. Attaching The Antenna

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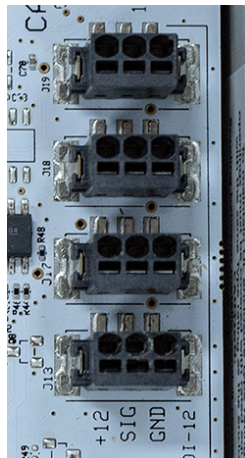
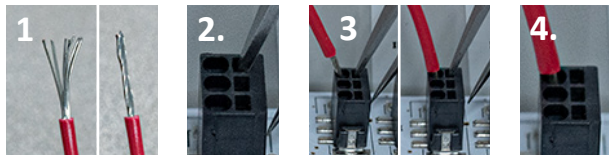
Before attaching the Antenna, remove the risk of inducing an static electric discharge to the Node by carefully grounding the SMA (M) pin of the Antenna to the outer brass rim of the SMA (F) connector on the Node.



### 3. Connecting Sensors

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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).



1. Strip the outer insulation to expose the wire to 7mm max. Lightly twist.
2. Use 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 wire. Push the wire in, down all the way and remove the tweezers so the wire is clamped in.
4. Ensure wire is secured correctly with a simple tug test. The wire can be removed or repositioned by a simple reversal of these steps.

### 4. Connecting Power

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To commence measurement and communication operations you need to power the node:

1. Ensure the internal battery is plugged in.
2. Turn the power switch to the “ON” position.



After the node is powered via the internal battery an external DC power source can be connected. If de-powering, ensure that the DC power source has been removed, and turn the power switch off to the “1” position.

## 5. Connect External DC Power

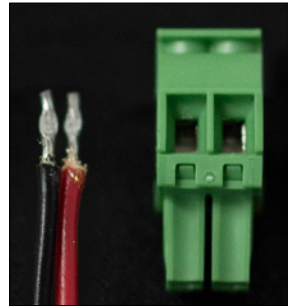
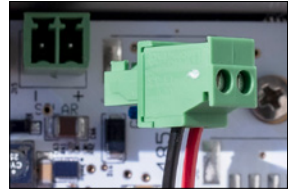
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### 5.1 External DC Power (Solar)

Please ensure that the S-Node's internal battery is plugged in and the device power is turned on before connecting the solar or external power.

This input is polarised, please ensure that positive (+) is inserted in the (+) terminal and negative (-) in the (-) terminal. It's advised to use a multi-meter to test the polarity before connecting.

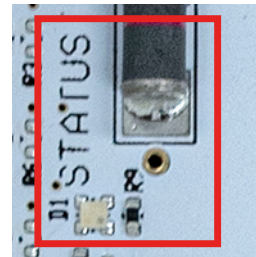
The S-NODE has an on-board solar charge controller and can be directly connected to a 12V or 24V solar panel. Alternatively, a 12V to 24V mains DC power supply can be connected for indoor use.



## 5. LED Status of S-NODE-L

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- 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





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