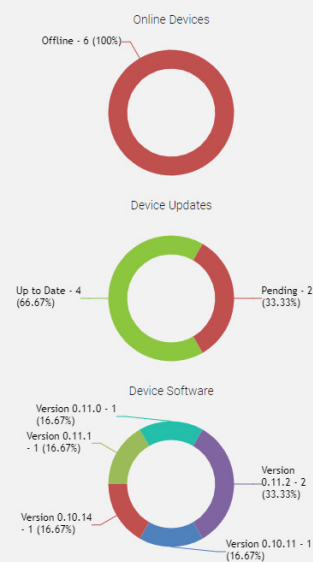




System Summary



SirettaLINK

LTE Cat 1 / 3G (UMTS) / 2G (GSM)

LTE-M / NB-IoT / 2G (GSM)

Modem Series for use with SirettaLINK
Management Portal

Start-up Guide

Rev 2.0



SirettaLINK Start-up Guide

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SirettaLINK Start-up Guide

Introduction

This user guide will cover the setup and connection of Siretta's SL500 modem to the SirettaLINK Management Portal.

No prior knowledge of the operating principles of the cellular mobile network or AT command-based modems is required.

Before Beginning

1. Ensure data enabled SIM card is prepared and ready. See '[SIM Selection](#)'.
2. [Download and install the latest version of Tera Term.](#)

What's in the box?

The Starter Kit comes included with:

- » SMA Male Cellular Antenna
- » RJ12 Power Connector Cable
- » DB9 RS232 to USB Serial Interface Cable 1.0 m
- » USB Type A to Mini B Cable 0.5 m
- » Multi-region Mains PSU
- » Boot Switch Pin Tool



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SIM Selection

To use the SL500 modem, a data enabled SIM card is required. Siretta recommend using a contract SIM as these are typically pre-activated, and no user interaction is required to prepare for first use.

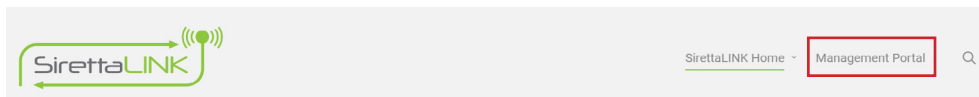
Pay As You Go (PAYG) SIMs can be more complex since they require activation before use. This can be performed using a mobile phone, before transferring to the SL500 modem.

It is recommended NOT to deploy an SL500 device in the field with a PAYG SIM. If the SIM card runs out of credit, the device would need restarting after adding credit. For that reason, a contract SIM is preferable or alternatively, a PAYG SIM with automatic top-up enabled.

SirettaLINK Management Portal

Management of the SL500 modem is done via the [SirettaLINK Management Portal](#).

Once at the SirettaLINK website, select 'Management Portal' to be directed to the log in page.





SirettaLINK Start-up Guide

Account Login

If an account is already held, enter login credentials to sign in, then, proceed to '[Obtaining the Configuration Tool](#).' Otherwise, register an account by following the instructions provided under '[Account Registration](#)' log in page.

Account Login

Email
daniel.lewis@siretta.com

Password

+ Login
Register
Recover Password

Important Note: Siretta employs a unified login system across its websites:

- » <https://portal.siretta.com/>
- » <https://www.siretta-link.com/>
- » <https://www.cloud-survey.co.uk/>

An account created on any of these websites will also work across the other websites and portals, utilising the same login credentials.



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Account Registration

Complete all fields to register an account.

Please take care to enter a valid email address. Chosen password must be at least 8 characters, including at least 1 upper and lowercase letter, and 1 number. Symbols such as '#' may also be used.

The screenshot shows the Siretta registration form. At the top, the Siretta logo is displayed with the tagline 'Enabling Industrial IoT'. Below this, the title 'Registration to Siretta' is centered. The form consists of several input fields arranged in a grid. The first row contains 'Title' (with a dropdown menu showing 'Mr'), 'Forename', and 'Surname'. The second row contains 'Email Address', 'Contact Number', and 'Company Name'. The third row contains 'Job Title', 'Department', and 'Company Address'. The fourth row contains 'Password' and 'Confirm Password'. Below these fields are two checkboxes: 'I have read and agreed to the terms of the Siretta Privacy Policy' and 'I would like you to share my data with Authorized Distribution Partners (optional)'. At the bottom, there are two buttons: 'Register' and 'Back'.



SirettaLINK Start-up Guide

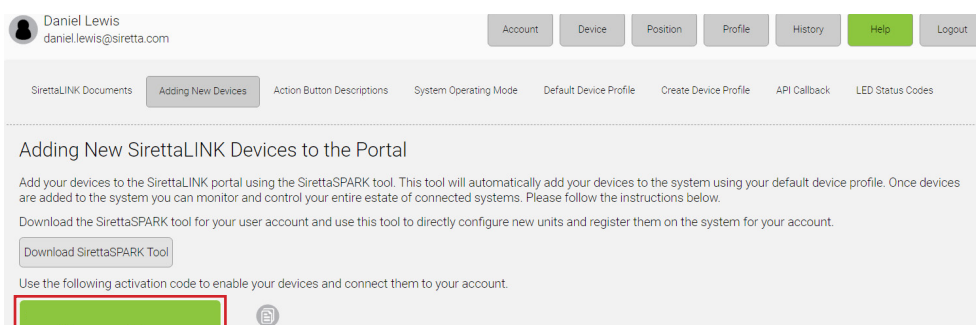
Modem Configuration

Obtaining SirettaSPARK

Once logged into the SirettaLINK Management Portal, navigate to 'Help > Adding New Devices'. From here download the SirettaSPARK configuration tool required to link the SL500 to the portal.

To download the configuration tool, select the 'Download SirettaSPARK Tool' button. SirettaSPARK is designed for use on any PC running Microsoft Windows 10 or Windows 11.

Note: Users will need the Account Key as shown below, when configuring SirettaSPARK. This text is unique to the user logged into the portal. It may be copied to the clipboard using the button to the right of the activation code.



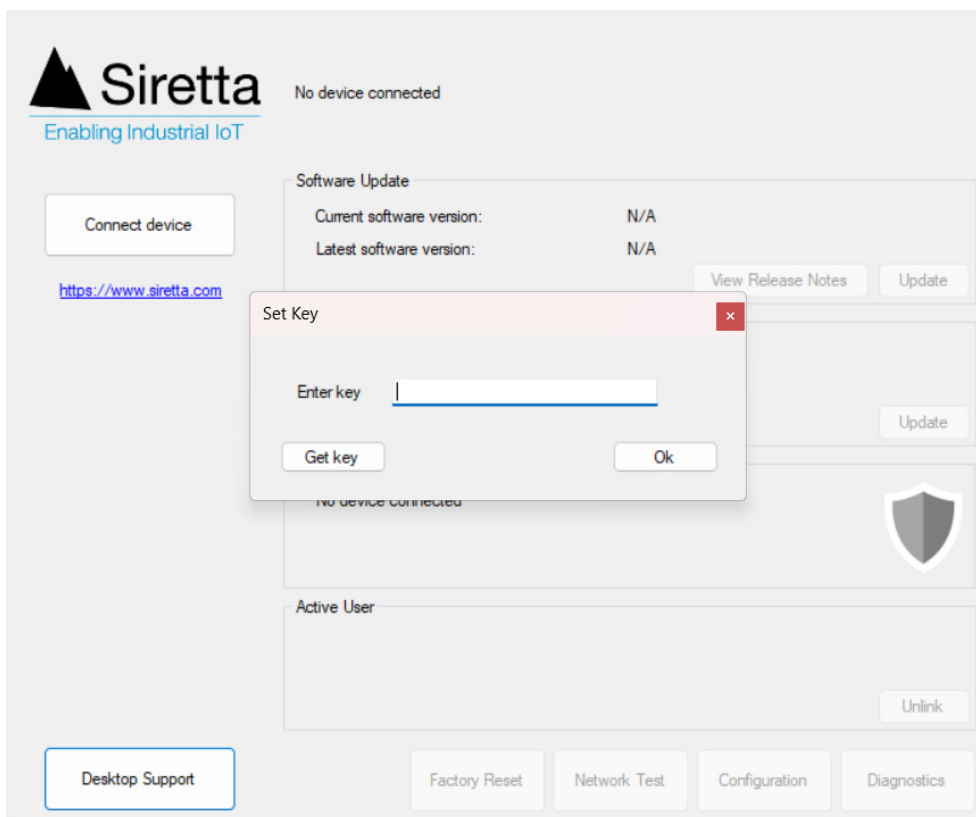


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The downloaded file, SirettaSPARK.exe, is an executable file. No installation is required. Consequently, it will not appear in Windows Apps & features and if no longer required it can be deleted.

Once downloaded, double click the SirettaSPARK application icon.

When run for the first time, the 'Set Key' pop-up window will also appear:



When this happens, **enter the key** found at 'Help > Adding New Devices'

Paste the key from the clipboard into the pop up box within SirettaSPARK and select 'OK' confirm. A pop up box will appear with the message 'Key accepted. Activated user:<account name>'.

Confirm that the account name matches.

Activation of the SirettaSPARK tool is now complete.



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Connecting

1. Insert a SIM card into the SL500 modem. This should be pushed all the way in until an audible click is heard. Siretta recommend using the corner of a credit card as this is unlikely to cause damage to the SIM.
2. Connect a suitable antenna to the SL500 modem. The antenna included in the starter kit is a general-purpose antenna suitable for a range of applications.
3. Connect the PC to the SL500's RS232 port using the provided USB-to-Serial cable. Windows should detect and install the appropriate USB to serial driver.
4. Locate the configuration function boot switch on the underside of the SL500 and push the 'Boot Switch Pin Tool' through the hole until an audible click is heard and then apply power to the SL500.
5. Release the switch when the green and blue LEDs on the side start flashing alternately, indicating that the SL500 has powered up in configuration mode.



Configuration switch

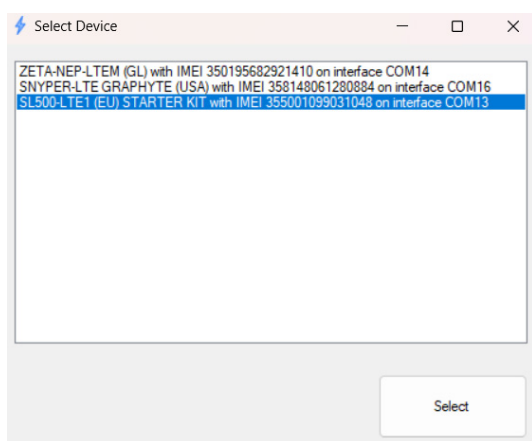


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With the device now in configuration mode, press 'Connect Device' within the application window.

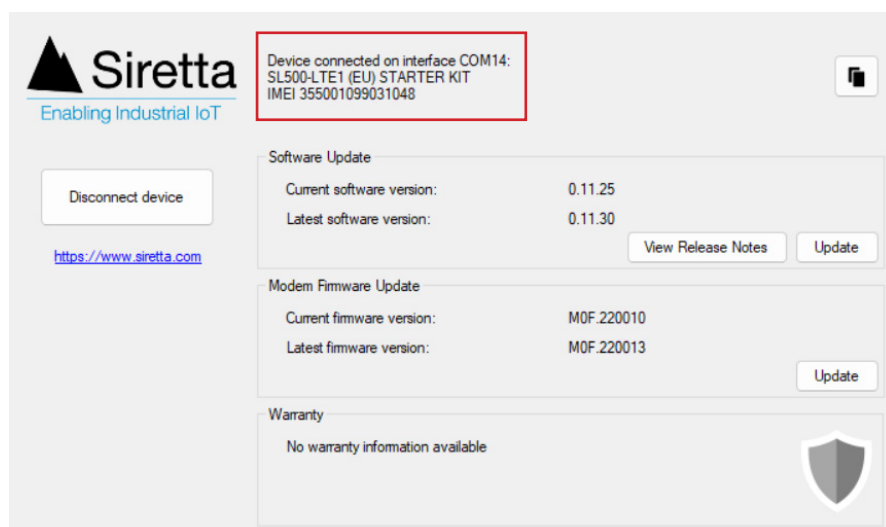
Important Note: To be detected by SirettaSPARK via serial connection, the SL500 MUST be in configuration mode and connected via the RS232 cable, NOT the USB cable.

If multiple products are connected to the computer, the system will detect all of them. In such a scenario, a list will be produced, allowing users to select the specific product to connect.



Upon connection, a status summary page will be displayed. This summary will include information about the connected device. .

Positioned near the top of the application window is the product part number, its associated COM port and the corresponding IMEI number.





SirettaLINK Start-up Guide

Software and Firmware Update

Having connected the SL500, SirettaSPARK will prompt the user to update to the latest software and firmware versions if the SL500 is not already running the latest versions.

In cases where both software and firmware updates are available, it is recommended to begin with the software update. This is because the software update may include enhancements that optimize the firmware update process.

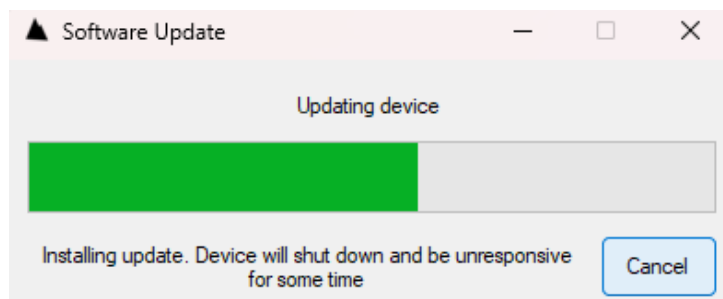
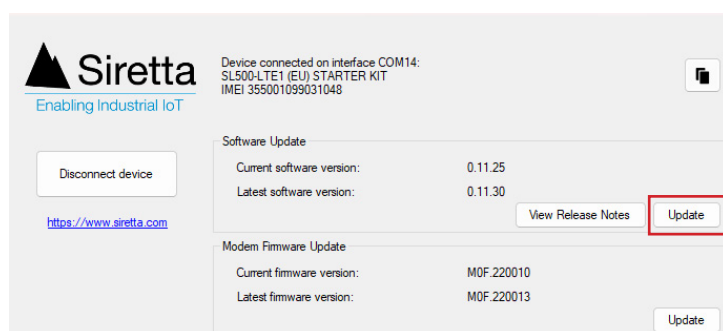
Important Note: In order to update modem firmware using SirettaSPARK it is also necessary to have Telit USB drivers installed on the PC. Please [download](#) the latest drivers.

Additionally, Antivirus software may block the installation of Telit USB drivers. If this issue arises, users should consider temporarily disabling any antivirus software and attempting the installation once more.

Software

Press the software 'Update' button to install the latest software version onto the product, this is likely to take several minutes. A pop-up window will appear displaying progress.

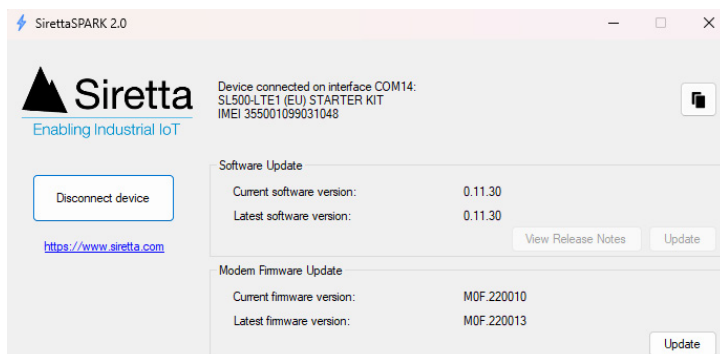
Important Note: While updating software or firmware, please ensure that the process is un-interrupted in any way (cable disconnect, power failure/removal, etc). An interrupted update may cause the device to fail to boot or operate correctly.





SirettaLINK Start-up Guide

Once the software update is complete the 'Update' button will be greyed out, reflecting that the current and latest versions now match.

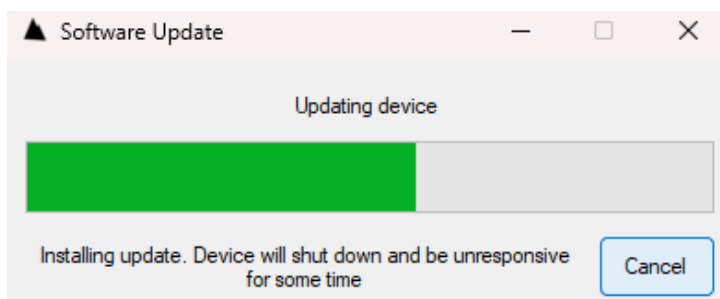
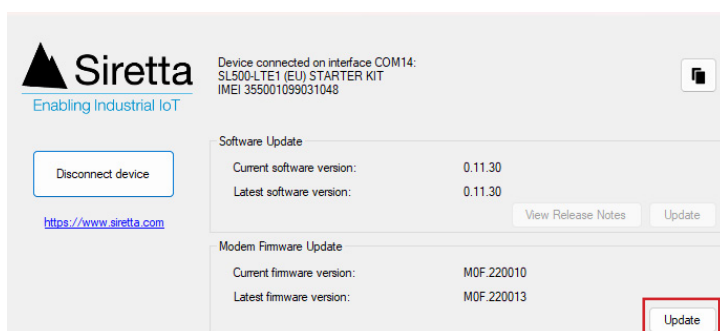


Firmware

The firmware update process is similar to the software update. To begin, disconnect the RS232 cable from the device and insert the USB mini B cable.

Important Note: Firmware updates can only be performed via USB connection. Furthermore, it **essential** the device remains in configuration mode throughout this process to avoid the risk of bricking the modem.

Press the firmware 'Update' button to install the latest version. A pop-up window will appear displaying progress.





SirettaLINK Start-up Guide

A DOS window will open, displaying the progress details. Do NOT close this window. The process may take several minutes to complete.

```
C:\Users\Daniel Lewis\AppData\Local\Temp\1672917873_LE910C1-EU_M_25.21.223-P0F.224000_TFI_FH.exe
=====
TFI console (V1.21)
=====
Update started at Mon Sep 18 10:19:26 2023

File name: C:\Users\Daniel Lewis\AppData\Local\Temp\1672917873_LE910C1-EU_M_25.21.223-P0F.224000_TFI_FH.exe
Product: LE910C1-EU
Version: 25.21.223_CUST_140_1_perf

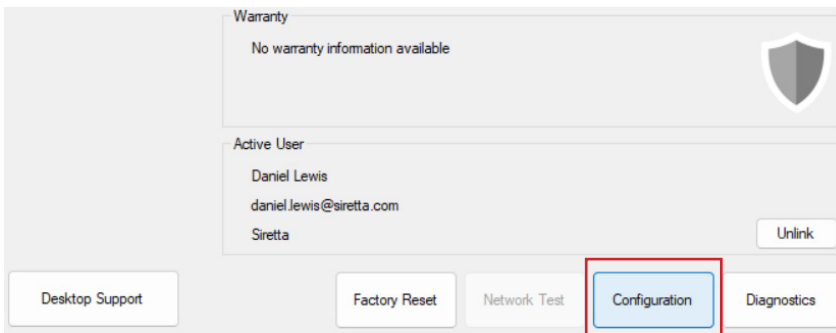
Fixed port: COM3

Checking file hash...
```

Once the firmware update is complete the 'Update' button will be greyed out, reflecting that the current and latest versions now match.

Initial SL500 Configuration

Pressing the 'Configuration' button opens the configuration window. A pop-up window will appear prompting the user to link their account to the device.





SirettaLINK Start-up Guide

Use this section to add your device to your account and configure your network settings to get online

Device Owner

No account linked [Link to account](#)

Device Network Settings

APN

APN username

APN password

SIM PIN

Network steering netcode

Cellular technology

Import Device Settings

Notice

Device not linked to account. Link now?

[Yes](#) [No](#)

Pressing 'Yes' will confirm the account has been linked to the device, and as a result, the 'Link to account' button becomes greyed out to reflect this change.

Device Owner

Linked to your account [Link to account](#)



SirettaLINK Start-up Guide

The 'Device Network Settings' field is required to get the SL500 modem online and enable connection to the SirettaLINK Management Portal. Enter the APN and any other settings as specified and provided by the SIM card supplier.

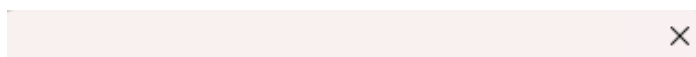
SL500 Configuration parameters

| Parameter | Explanation |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Account ID | SirettaLINK portal account to which the SL500 is linked. |
| APN | APN provided by the SIM card supplier (always required.) |
| APN username | APN username provided by the SIM card supplier (SIM card dependant – not always required.) |
| APN password | APN password provided by the SIM card supplier (SIM card dependant – not always required.) |
| SIM PIN | SIM PIN provided by the SIM card supplier (SIM card dependant – not usually required.) |
| Network steering netcode | Enter the PLMN of the network to be exclusively connected to. Typically left blank. Useful for roaming SIMs capable of connecting to multiple networks and can improve registration speed upon power-up. |
| Cellular technology | Specify the network technology to which the SL500 should connect. Typically set to 'Automatic'. May need to be specified if the SIM card only works on certain technologies. |

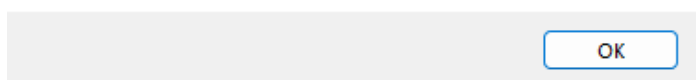


SirettaLINK Start-up Guide

Once the settings have been saved, closing out of the configuration window prompts the user to power cycle the SL500 to exit configuration mode.



Device is fully configured. Power cycle device to exit configuration mode



After power cycling, take note of the three LEDs on the side of the SL500, as they provide indicators for different elements of the system, and can be used to identify connection status with the SirettaLINK Management Portal. The LED indications are as follows:

| Parameter | Explanation |
|--------------|-------------------------------------------------|
| Red | Cellular network connection status |
| Green | SirettaLINK Management Portal connection status |
| Blue | Client application server connection status |

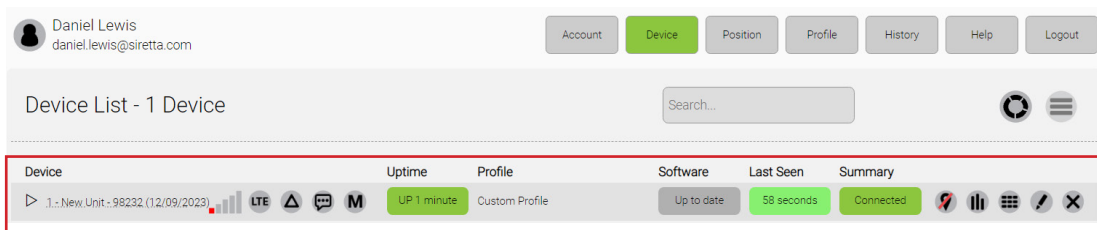
A connected and synchronized SL500 will have the green and blue LEDs on continuously, and the red LED flashing at 1 Hz. It may take several minutes from power up to reach this state depending on network conditions and signal strength. See 'Help > LED Status Codes' on the [SirettaLINK Management Portal](#) for a comprehensive breakdown of the status codes.



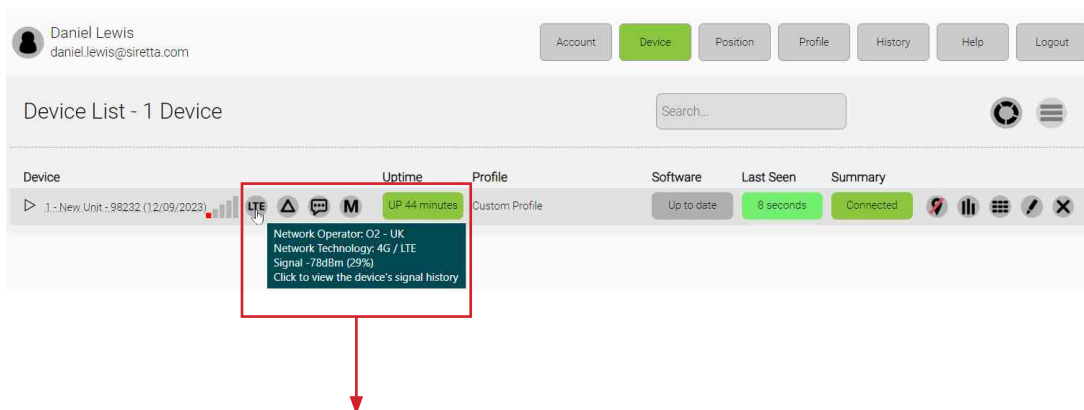
SirettaLINK Start-up Guide

SirettaLINK Portal Device View

When the SL500 connects to the Management Portal the newly added SL500 will appear within the 'Device' tab. Here, an overview of the connected device is presented.



Hovering the mouse over any of the icons will present a pop-up displaying more information, also, details on what actions will occur upon clicking the icon.



A comprehensive guide on using the SirettaLINK Management Portal can be found at the [SirettaLINK Management Portal](#) under 'Help > SirettaLINK Documents'.

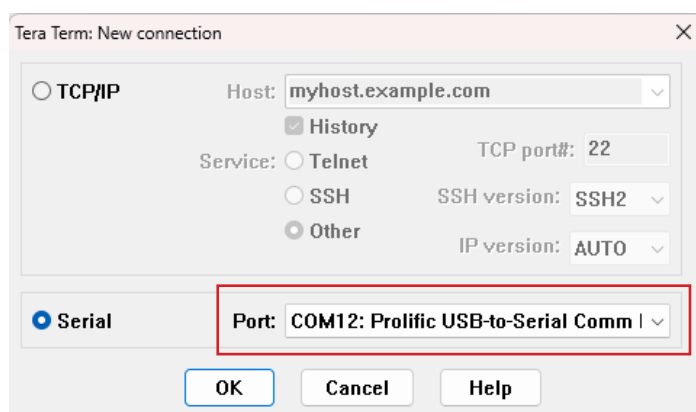


SirettaLINK Start-up Guide

Confirming Connection To End Application

To test that connection has been established, Siretta recommends the use of Tera Term as a terminal emulator for PC. This is a free, open-source program. Once installed please follow these steps:

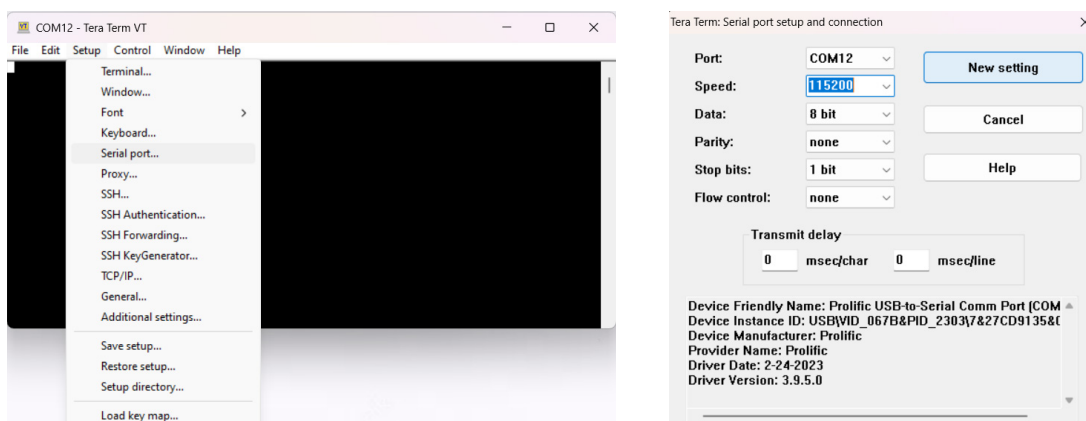
1. Connect a PC to the SL500 via serial connection.
2. Open the Tera Term software.
3. Tick the 'Serial' check box and select the COM port associated with the device as identified by SirettaSPARK, then press 'OK.'



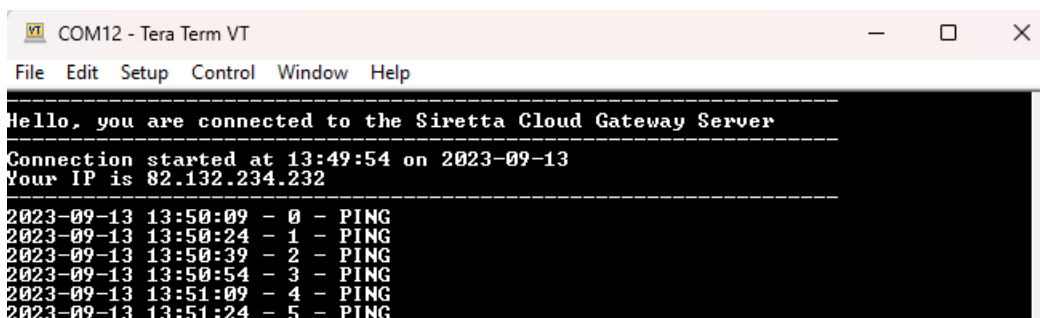


SirettaLINK Start-up Guide

- The terminal window will appear. Press 'Setup > Serial Port' and set the speed to 115200. Select 'New setting' to confirm changes.



- Messages from the server should begin to appear within the terminal window every 15 seconds. Power cycle the SL500 (while keeping Tera Term open, and connected) and see how the server recognises the reconnection and responds with the welcome message.



Having reached this point, the user would've successfully configured the SL500 and proved connectivity to the portal and end application.



SirettaLINK Start-up Guide

Additional Information

For further technical detail on the SL500 modems and the SirettaLINK Management Portal, see the following links for comprehensive user manuals.

[SL500 Series Hardware Manual](#)

[SirettaLINK Management Portal User Manual](#)



SirettaLINK Start-up Guide

Copyright Information

Copyright Declaration

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SirettaLINK Start-up Guide

About Siretta

Siretta is a wireless communications company located in Reading, United Kingdom manufacturing & supplying industrial IoT products since 1998.

Siretta's product portfolio is made up of:

- » Antennas, plus their associated Cable Assemblies & Adapters,
- » Cellular Network Analysers
- » Industrial Modems
- » Industrial Routers
- » Associated Cloud Management

Siretta supplies products directly and via a worldwide network of distributors, into numerous markets and applications across the globe.

Siretta's distribution partners range from industrial IoT specialists through to global catalogue organisations.

Whether "off the shelf" or custom solutions are required, Siretta has a wide portfolio of products to fit many types of application.

Siretta's extensive knowledge and experience in the wireless market allows support of a wide range of customer applications, focusing on frequencies between 400 MHz to 6 GHz. These encompass modems, routers and antennas for:

- » Cellular technologies: GSM / UMTS / LTE (including Cat M & NB) / 5G NR and other cellular technologies as they emerge.
- » Global positioning: GPS/GNSS
- » WLAN/Wi-Fi

Whilst providing the above products for the industrial cellular market, Siretta also has a number of antennas to cover applications for:

- » Bluetooth, Zigbee, ISM band, LoRa and Sigfox

With a heavy emphasis on design, Siretta has a team of dedicated Engineers and Product Managers, who specialise in wireless applications.

Siretta continually makes significant investment in R&D endeavouring to provide customers with market leading, future-proofed, wireless solutions. Siretta works closely with many technology partners to stay at the forefront of industrial IOT.



by



Enabling Industrial IoT

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