SirettaLINK Management Portal

Management Portal for use with SL500 Modem Series

User Manual

Rev 1.2

SirettaLINK

SirettaLINK Management Portal

User Manual

Table of Contents

Registered in England No. 08405712
VAT Registration No. GB163 04 0349

Download Latest Edition

Siretta Ltd
Basingstoke Road
Spencers Wood
Reading
Berkshire RG7 1PW

sales +44(0)118 976 9000
email sales@siretta.com
web www.siretta-link.com

Introduction

This user manual will cover the setup and use of SirettaLINK Management Portal: https://www.siretta-link.com/management-portal/

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

This manual will explain how to use the SirettaLINK Management Portal and how to create and use a serial data connection over a cellular network.

To use the SirettaLINK Management Portal, you will need a modem from the Siretta SL500 Modem Series. It is not possible to use the SirettaLINK Management Portal with any modem.

This manual starts with the assumption that you have followed the instructions in the SirettaLINK Start-up Guide (download here) and have connected an SL500 modem to the SirettaLINK Management Portal.

For technical information on the SL500 modem, please download the 'SL500 Series - Hardware Manual'.

About Siretta

Siretta is a wireless communications company located in Reading, United Kingdom manufacturing & supplying industrial IoT products since the early 2000s.

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 150 MHz to 6 GHz. These encompass modems, routers and antennas for:

» Cellular technologies: GSM/GPRS/3G/UMTS/4G/LTE & 5G NR, plus LTE CAT 1, LTE CAT M & LTE CAT NBIoT

» 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.

Understanding SirettaLINK

SirettaLINK is a modern approach to the deployment and management of modems. The approach eliminates knowledge and use of AT commands for setup and maintenance and replaces it with an easy-to-use web interface.

The old-style approach is to program a modem with AT commands to configure it. Once deployed, it is up to the application attached to the modem locally to send further AT commands to check the data link and control the modem as necessary. Unless the user implements an application in the connected equipment to do so, remote monitoring of the link and its performance is not possible.

The SirettaLINK approach is much more straightforward. The APN details are programmed into the SL500 with a simple PC configuration tool to get the device connected to the network, and all subsequent configuration is done via the web portal. Not only this, all monitoring and control is done within the device. There is no application required in the connected equipment. Therefore the device can be connected to any serial port for remote access via the cellular network.

To make deployment easy, configuration is defined in profiles. A profile contains all the high level configuration required. This profile can then be applied to the device to configure it. The device itself takes care of how this occurs and how it monitors and maintains connection at all times. Any errors that it incurs are dealt with and reported to the portal. A profile can be updated, changed and applied at anytime, anywhere.

SirettaLINK offers three operational modes:

» Client Mode
Device is the client and opens a data connection to the server when it has data to send. It will not require a fixed IP address to do this so any data enabled SIM will work

» Server Mode
Device is a server. This means that it is always listening for incoming data connections and must therefore have a fixed public IP address. This requires a fixed IP address SIM.

» Client Maintain
Hybrid between Client and Server Mode that Siretta expects many customers to adopt. This is just like client mode and therefore can be used with any SIM. But in this mode the connection is held open at all times, which allows the server to send data at any time to the client, which it would not normally be allowed to do as the client will not have a public IP address.

Portal Charging

You may connect and use up to 5 devices with SirettaLINK Management Portal before you are required to pay for using the service.

If you wish to use 6 or more devices with the SirettaLINK Management Portal, there is a monthly charge for this. This allows customers to develop an application based around SirettaLINK, but only be charged for its use when they move to production volumes.

You will be charged the following rates for devices registered on the SirettLINK Management Portal once you have exceeded the minimum billing amount.

Table 1. Device tariff

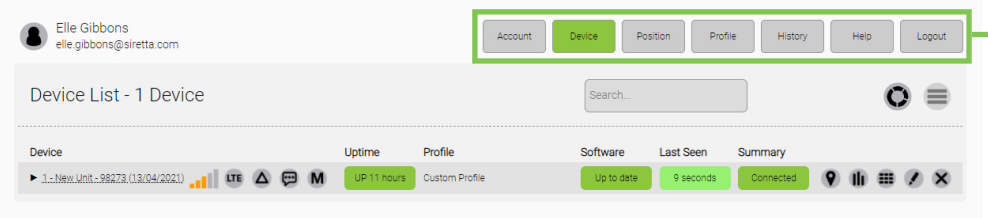
Registered Devices	Tariff
Less than 500 devices	£0.45 per device, per month
500 to 1000 devices	£0.42 per device, per month
Over 1000 devices	£0.38 per device, per month

Portal Navigation

Navigation tabs along the top of the page allow access to the different features of the SirettaLINK management portal. The currently selected tab is highlighted in green.

Here the view is of the 'Device' tab, showing the single device that has already been added to the account:

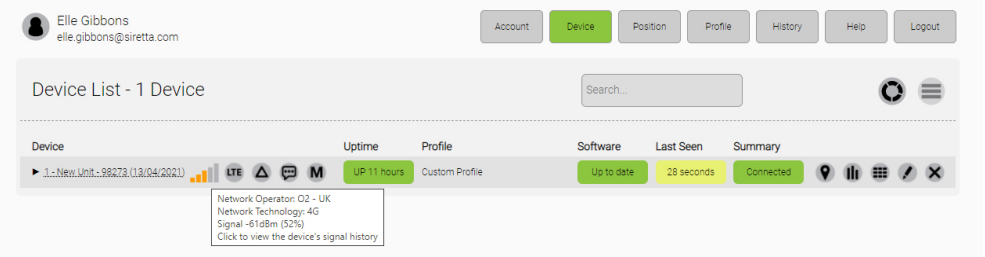
Figure 1. Portal navigation



On the 'Device' tab, the device added (New Unit – 98273 has been underlined with a dotted line. This underlining will be found in several places on the SirettaLINK Management Portal and indicates that hovering your mouse over that text will display a popup box containing more detailed information.

You can hover over most buttons and data in tables to find out more detailed information about that function.

Figure 2. Further information when hovering over underlined text/buttons/data tables



NOTE: The SirettaLINK Management Portals web pages may look slightly different when viewed in different browsers; window sizes and resolutions.

The portal is subject to change to improve its features and ease of use, this may result in some pages looking different to those shown in this manual.

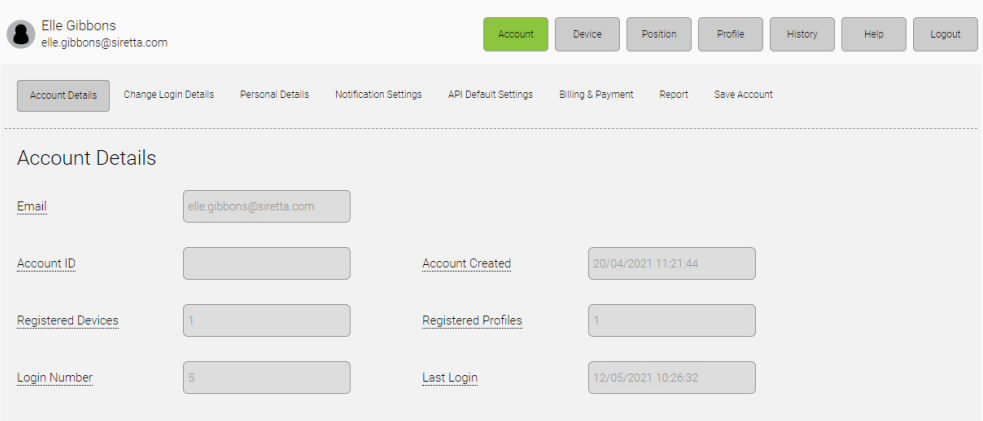
Account

Information and settings that are used at the account level. Some of this information was created when the account was registered. Here you will find settings to configure email alerts, API settings, and payment information.

Account Details

Overview of your account and its usage.

Figure 3. Account details



Email: Current registered email address used to login and access the SirettaLINK Management Portal. Please provide a valid email address which can be used to receive email notifications from the portal.

Account ID: System generated number associated with the account. This number can be checked against new devices added to the portal using the activation code.

Account Created: Date and time the account was created.

Registered Devices: Number of registered devices on the account.

Registered Profiles: Number of registered profiles on the account.

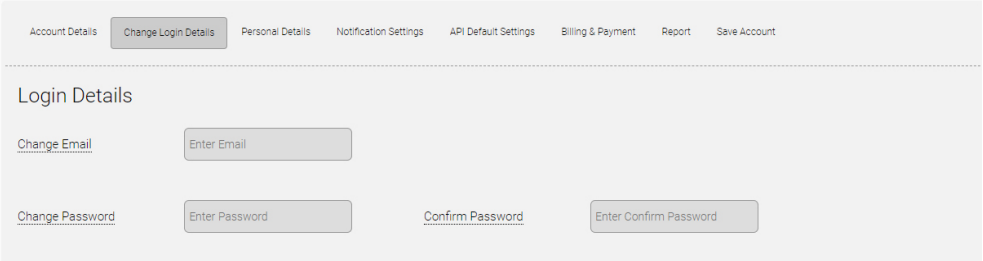
Login Number: Number of times the user has logged into the portal.

Last Login: Last time the user logged into the portal.

Change Login Details

Change email address and/or password associated with the account.

Figure 4. Change login details



Change Email: Enter the new email address here. Please provide a valid email address which can be used to receive email notifications from the portal.

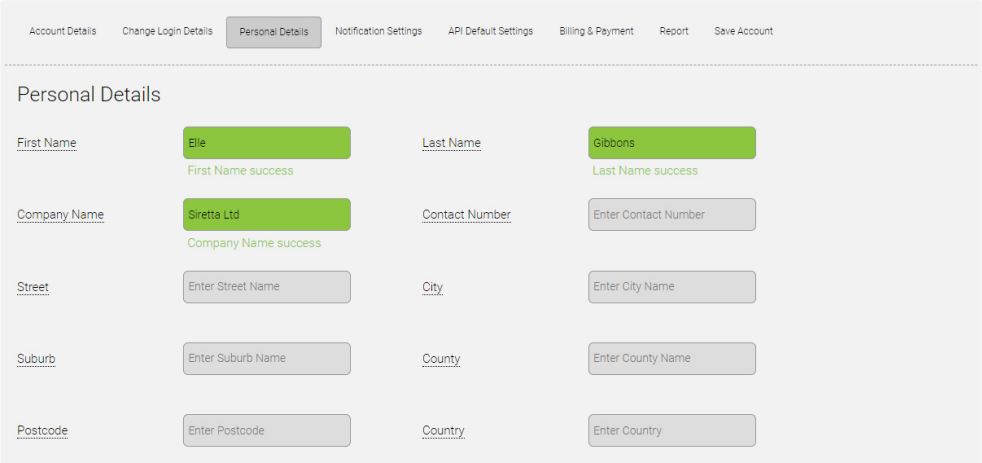
Change Password: Enter the new password here. Your password must contain numbers, lower and uppercase letters and be at least 8 characters.

Confirm Password: Enter your new password here to confirm it.

Personal Details

Enter your personal details here. Some of these fields will have been filled when your account was created but can be changed here. The address is optional initially, but once billing is set up these details are needed for invoicing.

Figure 5. Personal details



First Name: First name of the account owner.

Last Name: Last name/surname of the account owner.

Company Name: Registered users company name. If you do not work for a company, it is suggested you use ‘Sole Trader’ or ‘Private Individual’.

Contact Number: Contact number of the account owner.

Street: Building number and street name of the account owner.

City: Account owners city.

Suburb: Account owners suburb (if applicable).

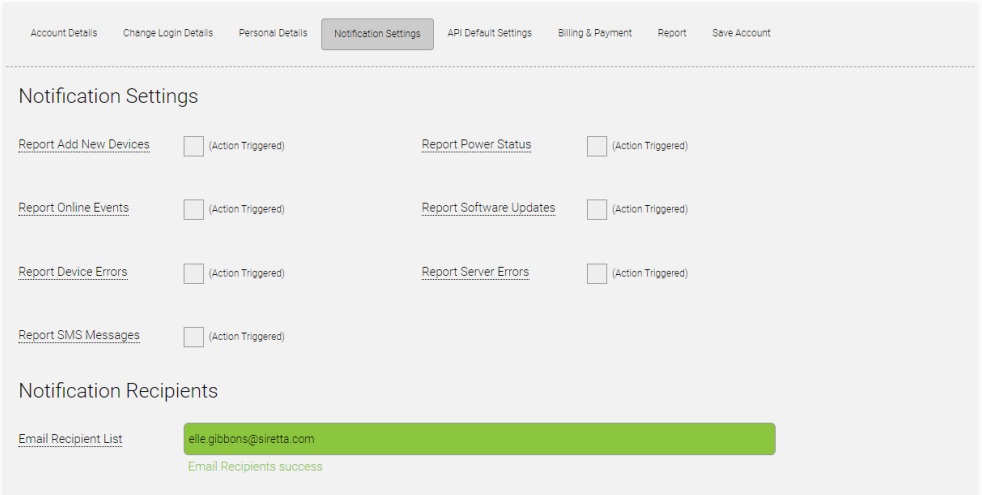
County: Account owners county/region/province/state (as applicable for the country)

Postcode: Account owners postcode/zip code.

Country: Account owners country.

Notification Settings

Figure 6. Notification settings



Notification Settings

Email alerts for various functions can be enabled here. Select the box against the events that alerts are required. Each email gives the devices name, IMEI number, the event and a timestamp.

Report Add New Devices: Reports that a new device has been connected.

Report Power Status: Reports when a device is powered up and synchronised to the SirettaLINK Management Portal.

Some configuration changes made to the device may require a device reboot to apply the changes. This will trigger a power up report when enabled.

Report Online Events: Reports that device is online.

Report Software Updates: Reports that a software update is available.

Report Device Errors: Reports error state when a device attached to the SirettaLINK Management Portal encounters an error.

Report Server Errors: Reports error state when the server associated with the device profile encounters an error.

Report SMS Messages: Reports incoming SMS messages to the device.

Notification Recipients

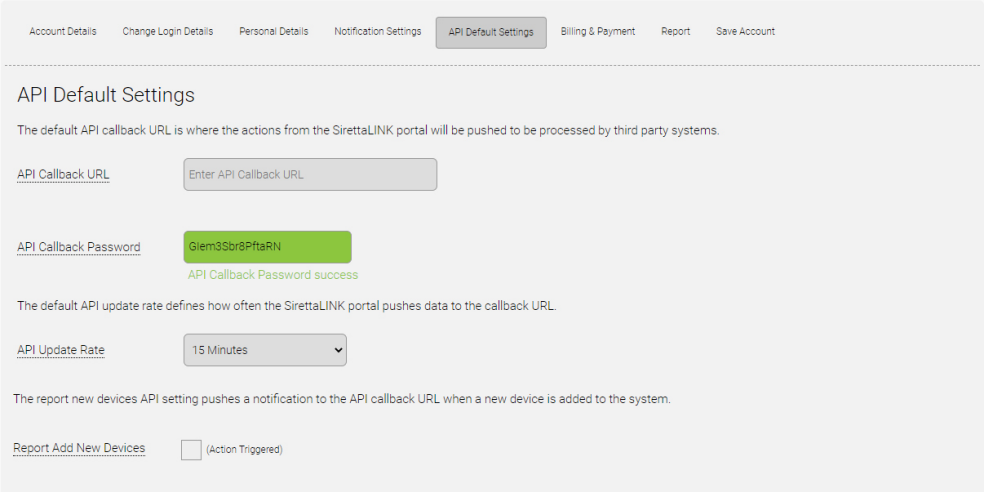
Set recipients to receive notifications.

Email Recipient List: Enter one or more email addresses separated by a comma. Do not enter a space between the comma and email address. The maximum number of characters that may be entered in this field is 500.

API Default Settings

The API settings are defined here. This works in conjunction with the API section of the device profile where the parameters that will be pushed to the API are set.

Figure 7. API default settings



API Callback URL: API events will be reported to this URL. The device on this URL must be capable of receiving http (port 80) or https (port 443) traffic from the SirettaLINK Management Portal. Please ensure that your firewall allows port 80/443 traffic from www.siretta-link.com.

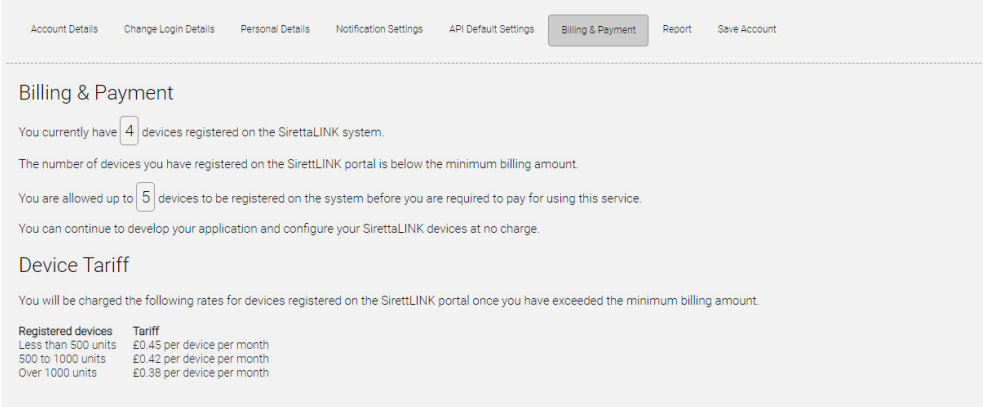
API Callback Password: A suggested password will be automatically generated and assigned ready for use. You can use your own password if you prefer.

API Update Rate: Set the default rate for push notifications to be sent to the 'Callback URL' (these are not triggered events).

Report Add New Devices: Reports to the 'Callback URL' that a new device has been connected.

Billing & Payment

Figure 8. Billing & payment



Overview of how many devices have been connected to the portal, and how many that must be paid for.

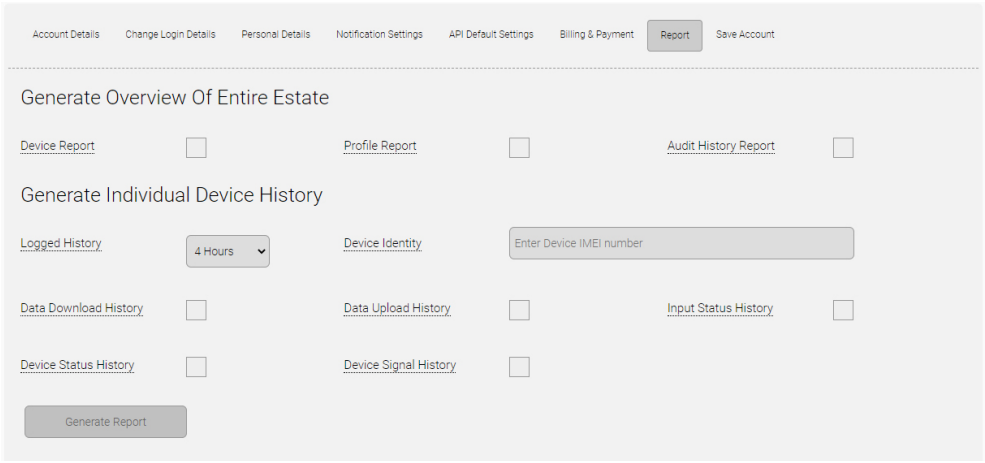
Currently these are invoiced to the company name and address of the account holder using a system that is not integrated with the SirettaLINK Management Portal.

Device Tariff

Available tariffs for your devices.

Report

Figure 9. Generate reports



Generate Overview of Estate

Generates Microsoft Excel reports that document various aspects of the SirettaLINK Management Portal. Select the reports required and click the 'Generate Report' button. This will create an Excel file called 'SirettaLINK_Estate_Overview_<date>' that contains the reports requested. Each report is created as its own worksheet in the spreadsheet, if multiple reports are generated there will be corresponding named tabs for these worksheets in the spreadsheet.

Device Report: Generates report for every device associated with the account, provides basic data such as the profile used, location, network information and connection status.

Profile Report: Profile definitions for your entire estate.

History Report: Details all changes that have been made to the account, including devices, errors and SMS log history.

Generate Individual Device History

Reports history of a single device to be downloaded. Enter the devices IMEI number and history duration to get an Excel report of the selected parameters.

Logged History: Duration of report history to be generated.

IMEI: IMEI number of the device the report is being generated for.

Data Download History: Include data download history in the report.

Data Upload History: Include data upload history in the report.

Input Status History: Include input status history in the report.

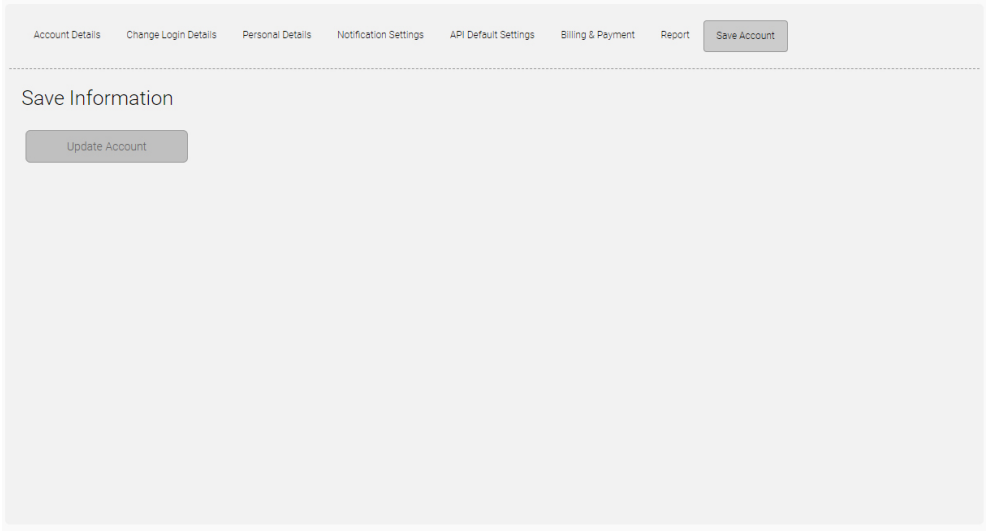
Device Status History: Include device status history in the report.

Device Signal History: Include device signal history in the report.

Save Account

Once changes have been made to the account settings, press “Update Account” to save them.

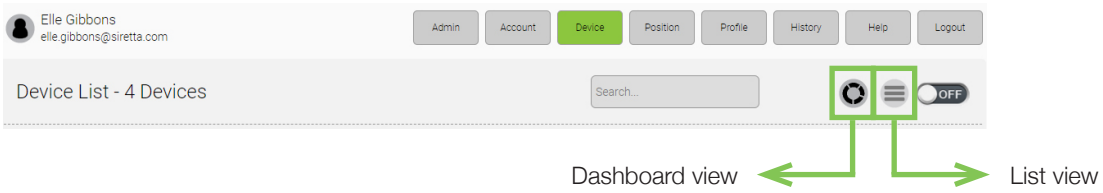
Figure 10. Save information



Device

Your device list can be displayed in 2 ways; Dashboard View or List View. Views can be switched between by using the icons at the top of the page. You can search for a device using the search box (the search facility will search the device names and the IMEI number) and display devices matching the search term in list form.

Figure 11. Toggle between Dashboard and List View

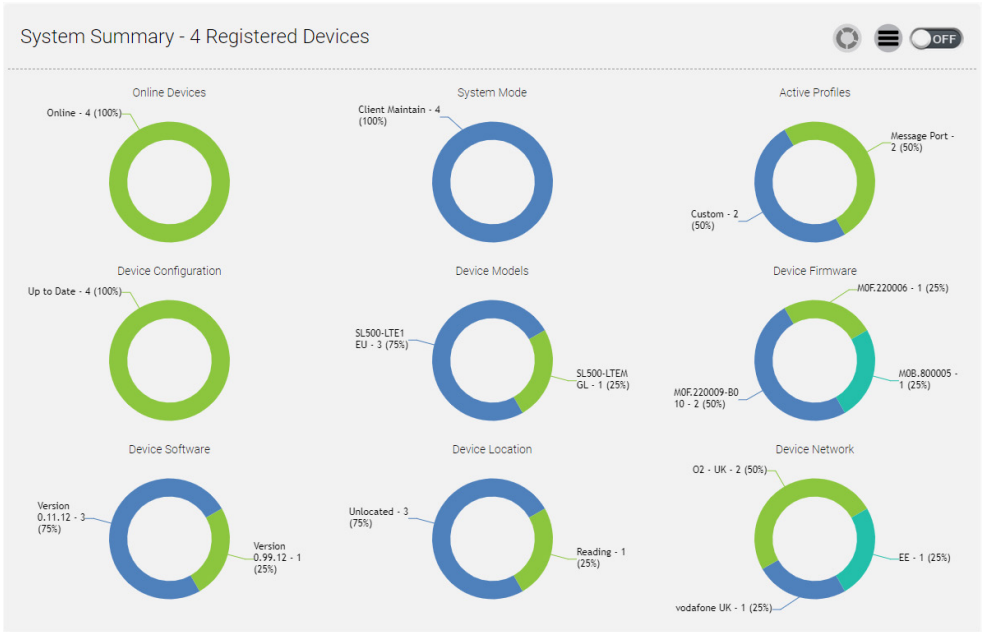


Dashboard View

The dashboard displays an overview of the estate of devices attached to the account.

All of the segments of the circular views can be clicked and will take you to a filtered device list view showing just the SirettaLINK devices matching the filter.

Figure 12. Dashboard view

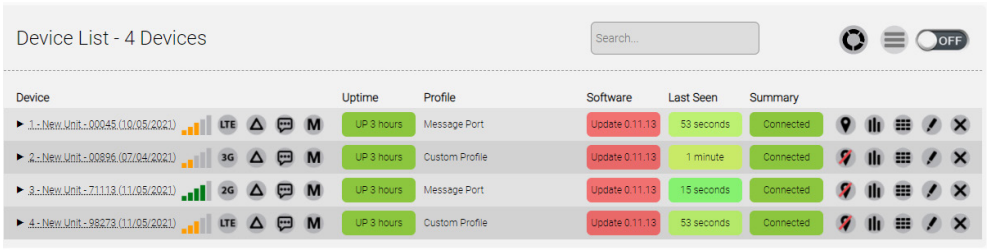


List View

Summary list of all devices attached to the SirettaLINK Management Portal account.

Hovering the mouse over any information field about the unit will display a popup giving more detail and what action will occur by clicking on it. For example, if you hover over the signal strength bar you will get more information about the network operator being used, the network technology and the signal strength.

Figure 13. List view



Device: Device name. This defaults to a system generated name of “New Unit – <last 5 digits of IMEI number> (date added)”. This can be changed to a different name. When a firmware update is in progress the lettering will turn red.

Signal: Signal strength indicator.

Cell Technology: Indicates technology the device is connected to.

Error Log: Access the error logs from the device.

SMS History: Access SMS log history from the device.

Mode: Mode of the connection. The default setting is Client Maintain (the ‘M’ symbol shown), which means the device is acting as the client (therefore does not need a fixed IP address) and is maintaining an “always on” link with the server. Other possible modes of operation are Client Mode (‘C’) and Server Mode (‘S’). In Server Mode, the SIM used in the device must have a fixed IP address. In Client Mode, the connection is opened only when the link is required.

Uptime: Duration that the device has been connected to the SirettaLINK Management Portal. This could also show as ‘Online Pending’ where the configuration has just been changed using the portal and the portal is expecting the device to connect to the server and download the new configuration settings, or ‘Offline pending’ where the device appears to be disconnected from the network (or powered down).

Profile: Name of the profile used in the device. A newly added device will display as 'New Connection Profile'. Profiles describe all aspects of a device's configuration and allow for rapid cloning of settings for new devices.

Software: This will display as 'Up to date' if the device is running the latest software. If the software is not current, the latest version available is displayed against a pink background.

Last Seen: Duration since device was last in contact with the SirettaLINK Management Portal. The system default update rate is 90 seconds which means that the last seen time should not exceed 90 seconds, however, when devices are having connection difficulties or have been powered off this time will be higher.

Summary: Connection status of the customers application server. This could be 'Connected' or 'Disconnected'. It could also display 'Waiting' which occurs when the device is trying to connect to the customers application server or is idle in server mode and is waiting for an incoming socket connection.

Device Location: Last known location of the device. This value is not automatically generated. Click this field to go through to the position tab where position will be calculated based on the cell that the device is connected to. Initially there will be a red bar through the symbol indicating that a position has not been determined.

Device History: Access to historical device status, signal strength and traffic logs and graphs. Up to 7 days history is available.

Device Summary: Access to full device summary detailing how the device is connected and configured, data usage and connection information.

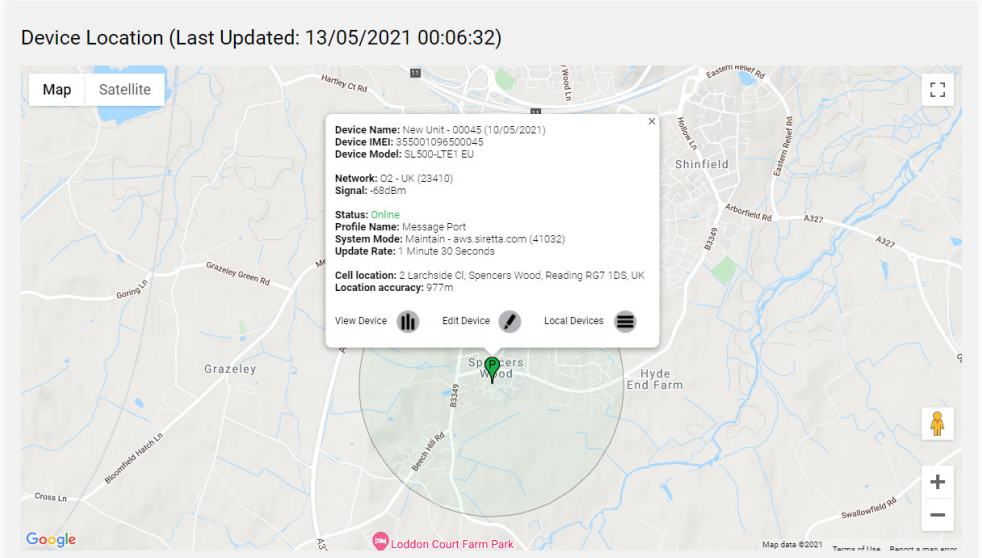
Device Settings: Edits configuration options and allows them to be changed.

Delete Device: Deletes the device from the SirettaLINK Management Portal.

Device Location

Device location will geolocate the position of device you are viewing. This is shown on a Google Maps™ map that offers all the usual pan/zoom etc features that you would expect from Google Maps.

Figure 14. Device location

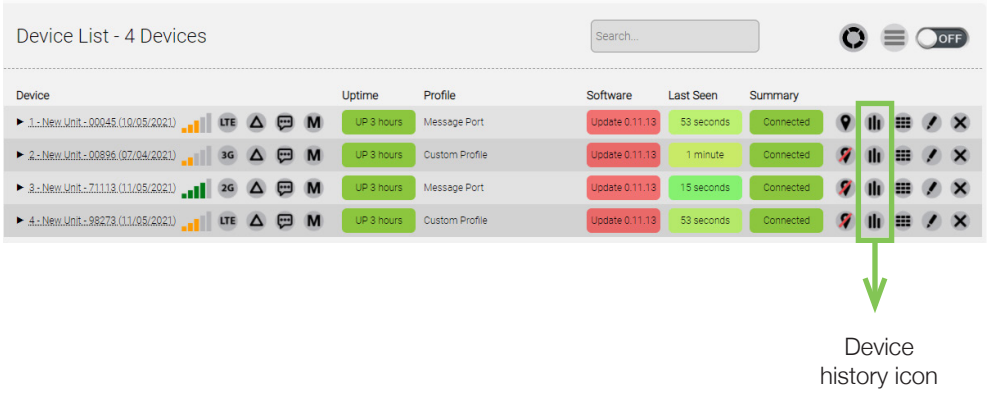


Device History

To access device history, click the ‘Device History’ icon as shown below.

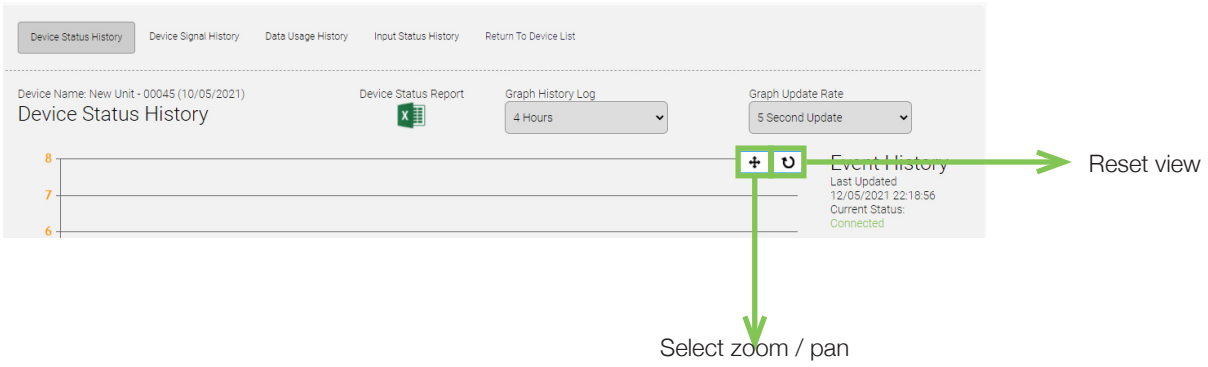
Each history graph allows you to decide the length of the history viewed from 30 minutes to 7 days. The reported data shown graphically can be downloaded as an Excel report by clicking on the Excel icon.

Figure 15. Device history



The history graph updates in real time at the rate set in the ‘Graph Update rate’ field. Some of the history graphs show data that is updated at the update rate set in the ‘Profile’ (such as signal strength and data upload/download history) while event based history graphs can be updated as soon as an event occurs. If the update rate is set to paused, it is possible to hold the left mouse button down and sweep over a range of data to zoom in on that data. The zoomed view is shown when the left mouse button is released. The zoomed view can be dragged left and right. Hovering the mouse over any data point on the graph will always pop up a box showing more detail of that event.

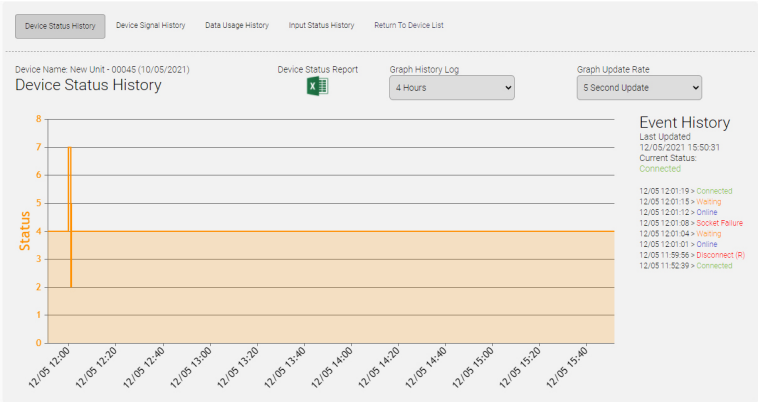
Figure 16. Zoomed view



Device Status History

This graph shows the device connection status. This should show a flat line at status level 4, meaning the device has been connected throughout the duration of the history report. It is normal to see the occasional circumstances where the unit is not online, but these will be very brief (typically minutes) while the software in the device recognises the situation and connects back to the network.

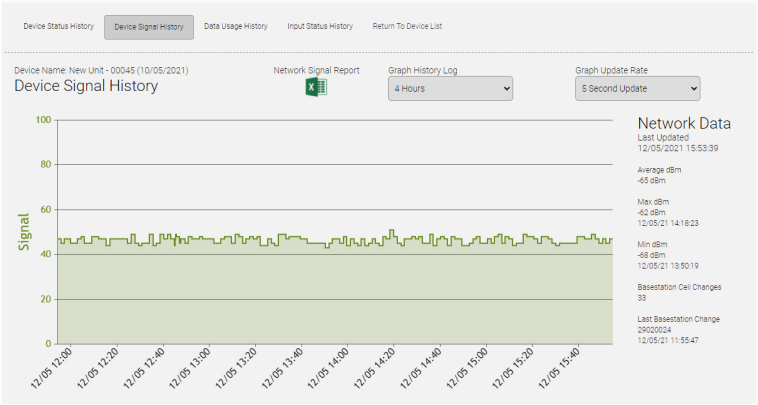
Figure 17. Device status history



Device Signal History

This graph shows the received signal strength. Hovering the mouse over any data point will show information such as the IP address and network connected to at that time. The sample history shown below is that of a stationary device. The signal strength can change over time. Weather conditions can affect the signal strength, and the networks themselves can dynamically change the power at which the attached cell is transmitting. The step response near the centre of the graph is when the device changed the cell to which it is connected.

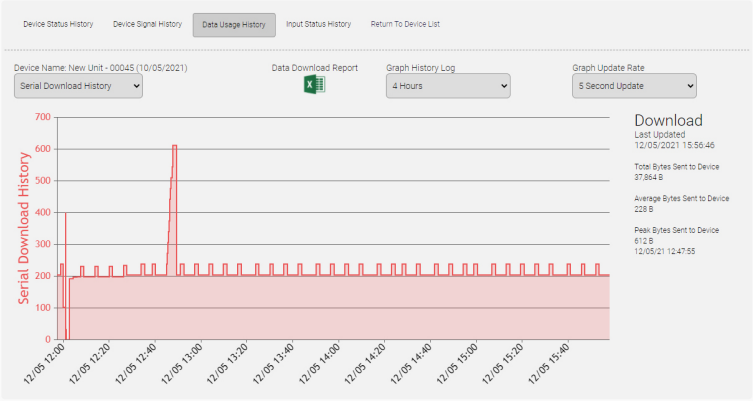
Figure 18. Device signal history



Data Usage History

This provides access to 6 reports via a drop-down menu: Serial Port upload and download history, Portal upload and download history, and total TCP data upload and download. The summary column on the right shows the total amount of data seen in the reports time period, and the average and peak data seen at every reported update rate to the portal (the update rate configured in the profile).

Figure 19. Device usage history



Serial port reports are for the data sent and received between the serial port and the cellular network. This data rate is controlled by the application to which the modem is connected.

Portal reports are for the data sent between the modem and the SirettaLINK Management Portal. This is configuration updates, keep alive data, software updates, etc. This data rate can be minimised if required by selecting a long update interval in the profile.

TCP data is the combined totals of the serial port and portal data and represents the total data usage of the device. This is useful to decide an appropriate tariff from the cellular network operator.

NOTE: The sum of the serial and portal data count will always be smaller than the total TCP totals. The TCP total includes additional bytes of data that are used for TCP/IP packet encapsulation. All data travelling over the IP network must be encapsulated into packets, which have added data bytes for addressing etc. This overhead is 60 bytes per packet. Sending small packets of data will reduce latency but increase the total number of bytes of network generated because of the packet overhead.

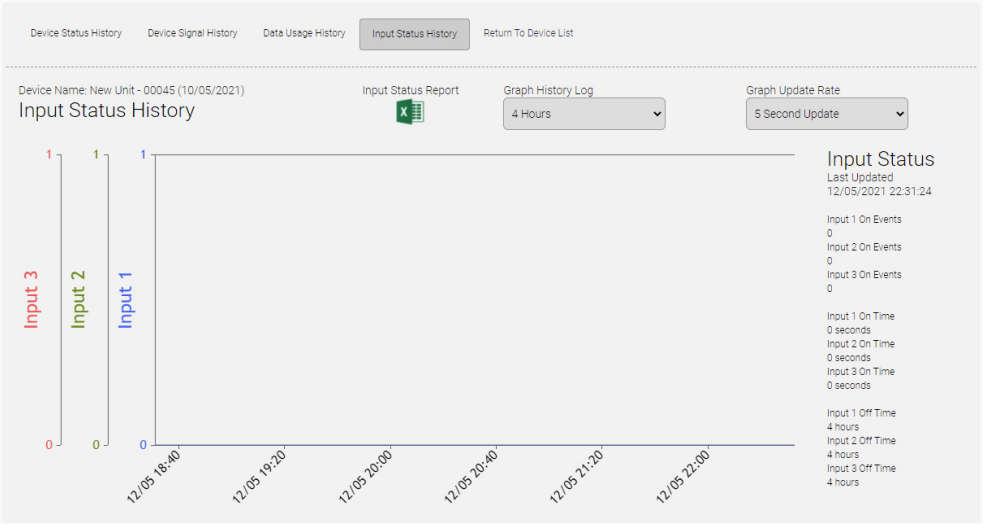
The reported TCP data is the bytes of data seen by the modem, not the bytes seen by the cellular network. Not accounted in the reported numbers is TCP/IP retransmissions. There will always be some errors in sending data, but TCP/IP handles this and will automatically retransmit any packets that get corrupted. So that from a user point of view the communication link is error free. Poor signal strength and poor weather conditions will result in more retransmissions.

It is important to understand that packet encapsulation and packet retransmissions will result in additional cellular traffic over and above that reported by the application. Cellular networks will charge for the data that they transport, which includes packet overhead and retransmissions.

Input Status History

This report shows all the changes of state of the inputs.

Figure 20. Input Status History



Return to Device List

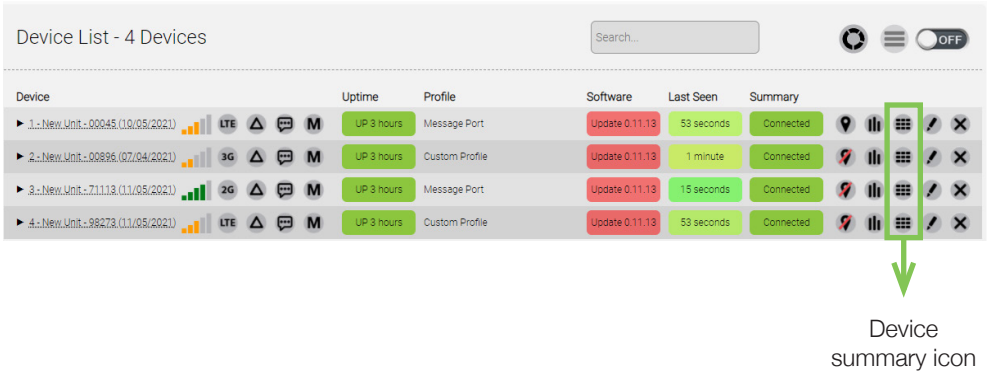
Returns back to ‘Devices’ tab.

Device Summary

To access device summary, click the ‘Device Summary’ icon as shown below.

These are useful to understand the setup and operation of the connected device.

Figure 21. Device summary

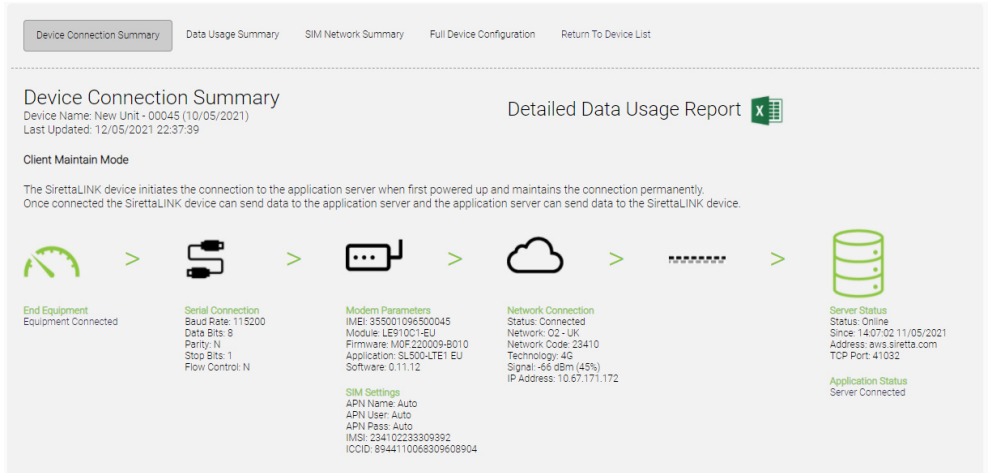


Device Connection Summary

Displays all the elements in the communication link between the serial port of the connected device and associated server. The view is colour coded, elements that are working correctly are shown in green, those with a problem are shown in red.

A summary of the configuration of each part of the link is shown beneath the icon representing the appropriate element. The SirettaLINK Management Portal determines if the application server is working by ‘pinging’ it, so it is important to allow ‘pings’ to the IP address if you want the server to be monitored.

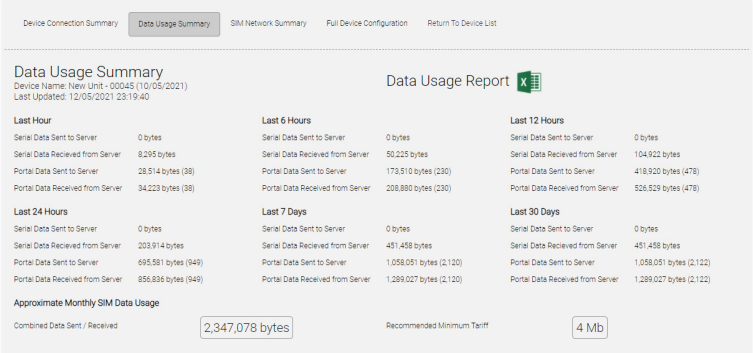
Figure 22. Device connection summary



Data Usage Summary

Details the data usage seen by the device over several time intervals. This enables estimation of future data usage and selection of an appropriate network tariff.

Figure 23. Data usage summary

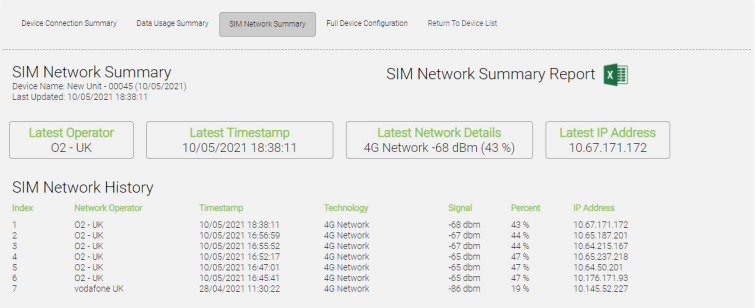


SIM Network Summary

Current network operator and IP address being used by the device, together with a history of previously assigned IP addresses.

If the modem is not using a fixed IP address SIM, the IP address is likely to change if the modem becomes disconnected from the cellular network. Additionally, if not using a fixed IP address SIM, the modem will not be assigned a public IP address. Its IP address will be that assigned to the cell that it is connected to, and it is the cell that will have the public IP address.

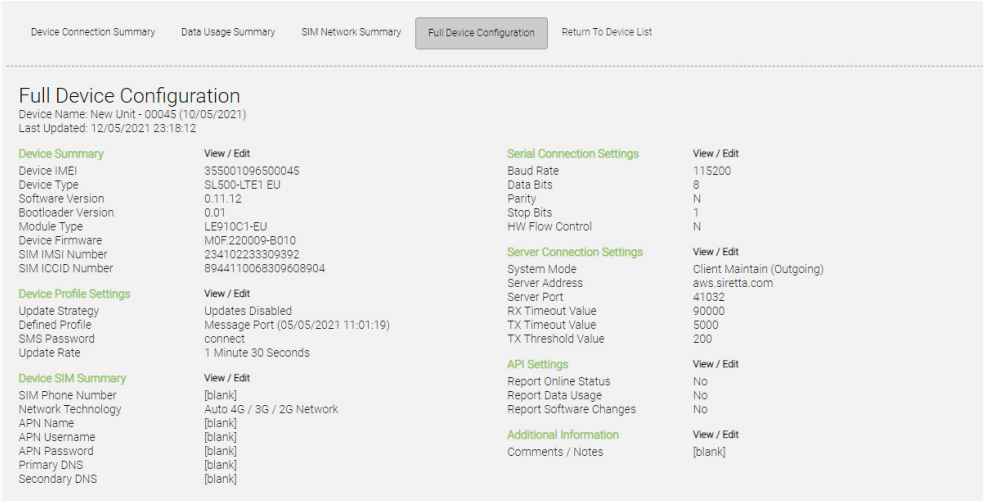
Figure 24. SIM network summary



Full Device Configuration

Summary of the current configuration of the device.

Figure 25. Full device configuration



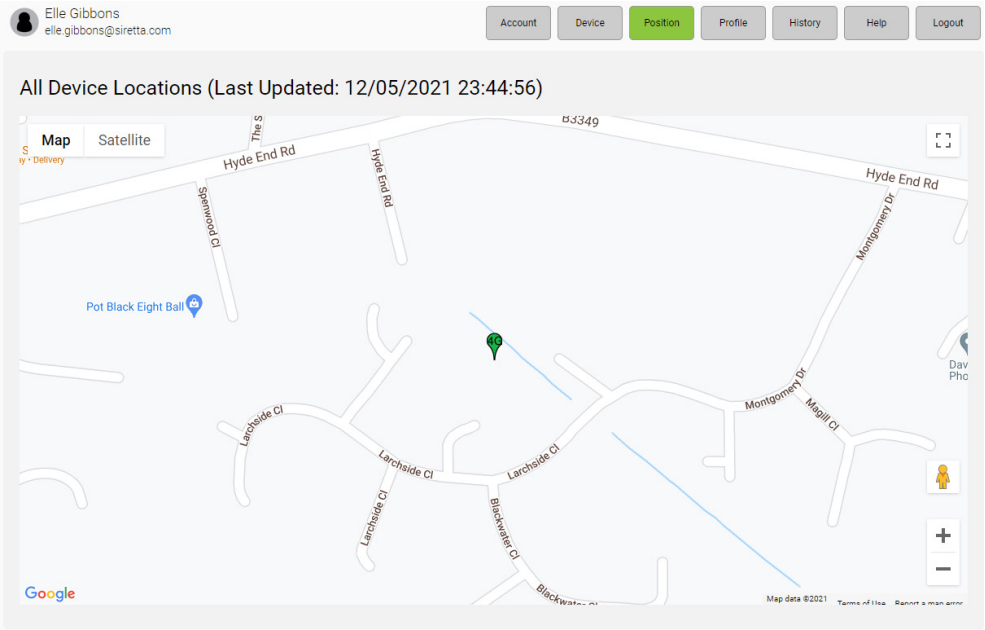
Return to Device List

Returns back to ‘Devices’ tab.

Position

Navigating to the ‘Position’ button will geolocate the position of all the devices registered to the account. This is displayed on Google Maps™.

Figure 26. Device position



It is the position of the cell tower the device is connected to that is geolocated and shown on the map.

Each pin on the map represents the cell to which one or more devices are attached.

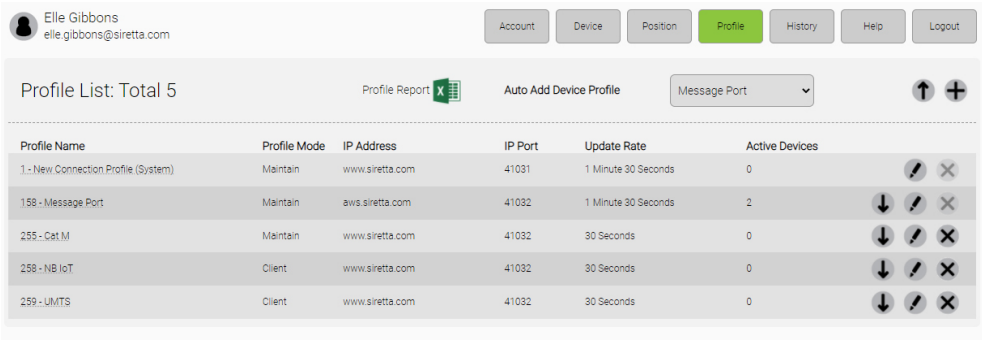
Clicking on a pin brings up additional information about the unit attached to that cell and some site navigation options.

Profiles

Once the device has been connected to the SirettaLINK Management Portal, its configuration is controlled by a ‘Profile’. A profile is a list of configuration settings that defines how the device works. It details the settings of the application server to which the device will connect (IP address, port number) as well as parameters such as timeouts, serial port speed and update rates. A profile can be assigned to any number of devices – it does not need to be unique to a device.

It is possible to create as many profiles as you want, and you can apply a profile to a device with a click of a button. This enables devices to be managed quickly and remotely. Profiles are accessed from the ‘Profile’ tab.

Figure 27. Profile list



With new accounts, the default system profile called ‘New Connection Profile (System)’ will be displayed as there will be no user profiles created.

The default profile connects the device to a Siretta server running the test application that may be used to prove a communication link has been established. The default system profile is not able to be edited or deleted, so it will always be possible to use it to test that a device is working correctly.

Profile Management

Profiles can be added, edited, saved locally, imported and deleted.

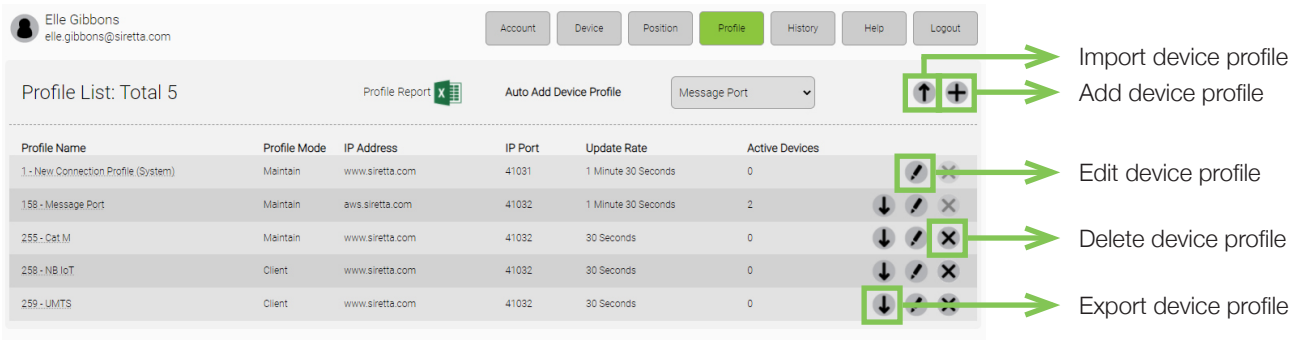
The default system profile may not be removed, neither can any profile that is assigned to a device. In this case the ‘Delete’ button will not be available.

New profiles may be created directly by clicking the ‘Add Device Profile’ icon to add a device profile, or indirectly by clicking the edit symbol to edit a profile and save a copy.

Device profiles may be exported and imported. When exported, the profile includes the encrypted Account ID. The profile may also be used by the configuration tool (please refer to SirettaLINK - Start-up Guide) as a quick and convenient way to program the APN details and Account ID into a new device.

When a profile is imported into a different SirettaLINK Management Portal account, the Account ID will not be imported.

Figure 28. Profile list



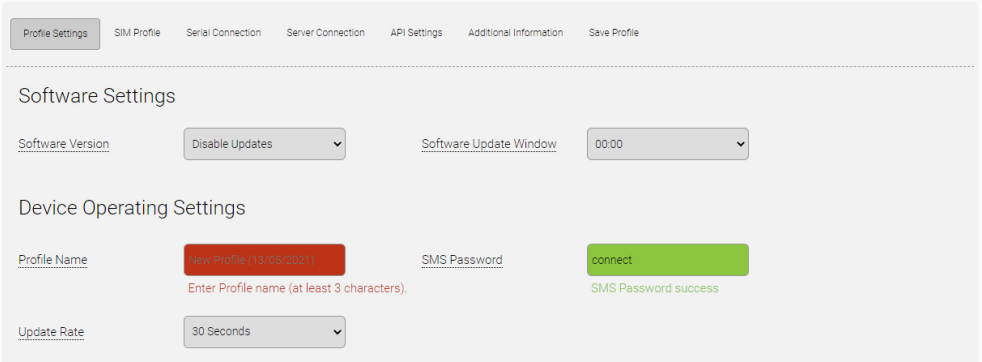
Add New Profile

Configuration process for adding a new profile. To add a new profile, select the ‘Add Device Profile’ icon.

Profile Settings

This section allows you to set the settings for your profile.

Figure 29. Profile settings



Software Settings

Software Version: Manually specify the version of software to run on your device. The default setting is to use the latest version when it becomes available.

Software Update Window: Manually specify the time a software update will occur.

Device Operating Settings

Profile Name: Friendly name for your defined profile to identify from other profiles.

SMS Password: Password used to validate SMS command messages sent to the device to change settings remotely. This field will default to ‘connect’.

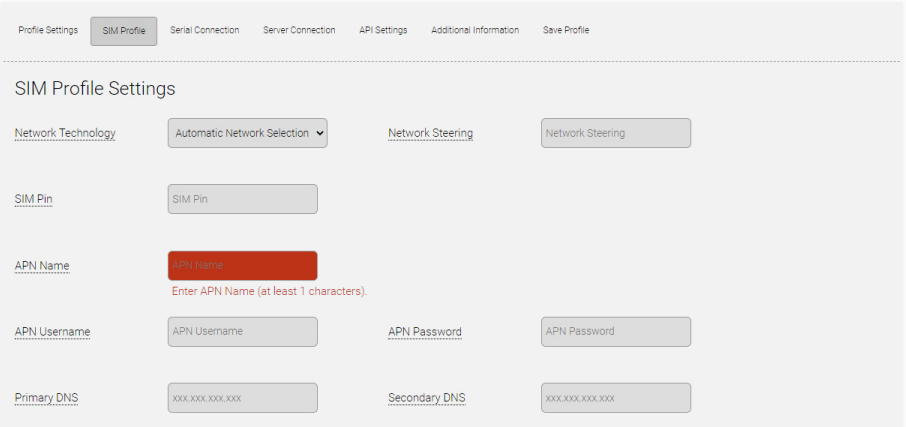
Update Rate: Defines how often the device connects to the SirettaLINK server and posts information about its online status and connectivity.

SIM Profile

The ‘SIM Profile’ settings define the preferred network technology to be used, and the details of the APN settings to be used provided by the SIM card provider.

It is important to note that the system default profile uses the APN settings that were entered with the configuration tool when the device was connected to the SirettaLINK Management Portal. Creating a profile will push the APN settings entered in the profile to the device. To protect against errors, the device will attempt to connect with the new settings three times. If it fails, it will fall back to the last known working settings.

Figure 30. SIM profile



Network Technology: Controls the network technology that the device attaches to. The default (and recommended) setting is ‘Automatic Network’ where the device will determine what cell to connect to.

Network Steering: Enter the PLMN of the network that you would prefer your device to connect to. This field should be left blank to allow the device to connect to the SIMs preferred network.

SIM Pin: PIN number required by SIM card.

APN Name: This setting is provided by your SIM card supplier. Entering this is mandatory. All modems require a valid APN name to gain Internet connectivity.

APN Username: This setting is provided by your SIM card supplier. Entering this is mandatory. All modems require a valid APN name to gain Internet connectivity.

APN Password: This setting is provided by your SIM card supplier. Entering this is mandatory. All modems require a valid APN name to gain Internet connectivity.

Primary DNS: This is provisioned by the cellular network when you connect, so this field can be left blank. If your SIM card supplier provided a Primary DNS IP address you can enter it here.

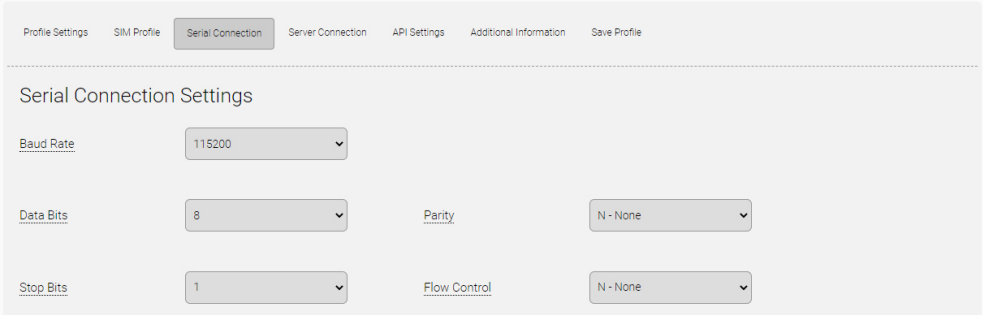
Secondary DNS: This is provisioned by the cellular network when you connect, so this field can be left blank. If your SIM card supplier provided a Secondary DNS IP address you can enter it here.

Serial Connection

The 'Serial Connection Settings' define the characteristics of the serial port of the device. Usually, the serial port that the device is connected to will define the settings.

It is worth noting that the serial connection to the modem could be faster than the cellular link due to factors beyond the users control. Therefore it is recommended that hardware flow control be enabled if the system supports it.

Figure 31. Serial connection settings



Baud Rate: This sets the baud rate of the RS232 connection. Select the desired setting (between 2400 and 230400 baud) to match the connecting equipment.

Data Bits: Defines if 7- or 8-bit data is sent over the serial connection. For binary files, 8-bit data should be used. This setting must match the connecting equipment.

NOTE: If using 7-bit data, parity (odd or even) must be enabled.

Parity: Chose between no parity, odd parity or even parity. This must match the connecting equipment.

Stop Bits: Choose between 1 and 2 stop bits to match the connecting equipment.

Flow Control: Chose between 'None' and 'Hardware Flow Control'. Hardware flow control means the use of the CTS and RTS lines in the serial connection, this must match the connected equipment. If it is possible to configure the system to use hardware flow control, it is recommended to do so.

Server Connection Settings

The server connection settings define the IP address and port that the device is connecting to, which side of the connection is the client and which is the server, and data transfer thresholds.

The device may be used either as a client or server. When the device is a client, any type of SIM may be used. When the device is a server, a fixed IP address SIM must be used as it requires an IP address that is recachable from the Internet.

With most cellular networks, the IP address assigned to the device will be a private address assigned by the cell to which it is attached. The public IP address will be of the cell (the device gateway) and not of the device.

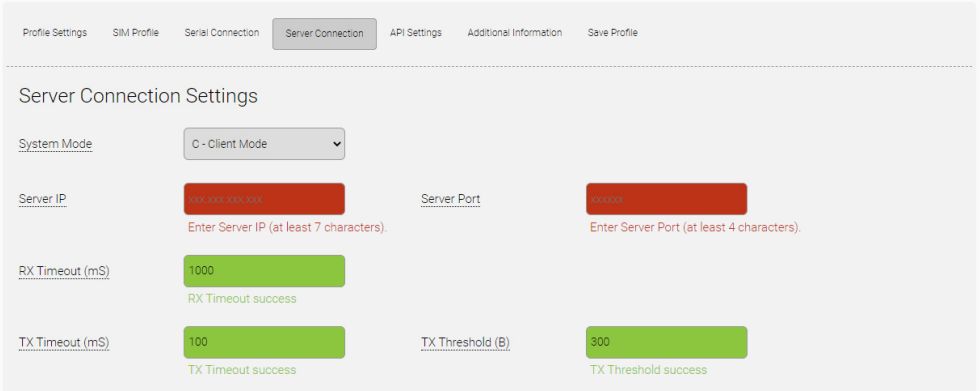
In Client Mode and Client Maintain Mode, the device connects to the user specified port and IP address. It makes a bidirectional data connection through the cellular network between this server and the local RS232 port. The difference between Client and Client Maintain is that in Client Mode the connection is established only when the client needs to transfer data, while in Client Maintain Mode the connection is always open once established.

With an always open connection (Client Maintain), this means that the connection is always available for the server to transfer data to the client. In Client Mode, the server would have to wait until the client made a connection to send data to the client.

In server mode, the device acts as the server listening on a user defined port address. In this mode, a simple firewall can be implemented that allows for the whitelisting of an IP address range.

It is recommended that the server be allowed to respond to 'pings' so that the SirettaLINK Management Portal can test that the server being connected to is online. Server availability is reported in the device connection summary by using a ping.

Figure 32. Server connection settings



System Mode: Defines mode of operation. Choose between Client Mode, Client Maintain Mode and Server Mode. Dependant on the choice made, the configuration page will change to show settings relevant to the chosen mode.

Server IP: Client Mode and Client Maintain Mode only. The IP address of the server that the device is dialing into. DNS lookup is done on this field if a URL is entered.

Server Port: Client Mode and Client Maintain Mode only. The port of the server that the device is dialing into. Enter a port number between 1024 and 65535.

Local Port: Server Mode only. This is the port the device will accept an incoming connection from a remote server. Enter a port number between 1 and 65535.

Firewall IP: Server Mode only. Allows you to specify an IP address from which to accept incoming socket connections.

Firewall Subnet: Server Mode only. Allows you to specify an IP address range using a subnet mask from which to accept incoming socket connections.

Rx Timeout (mS): Client Mode and Server Mode only. Socket timeout activity timer. If there is no data exchange (in either direction) during the period, the connection is closed at the end of the timeout value set (in mS). Valid settings are between 1000 and 3,600,000 Seconds (= 1 Second to 1 hour).

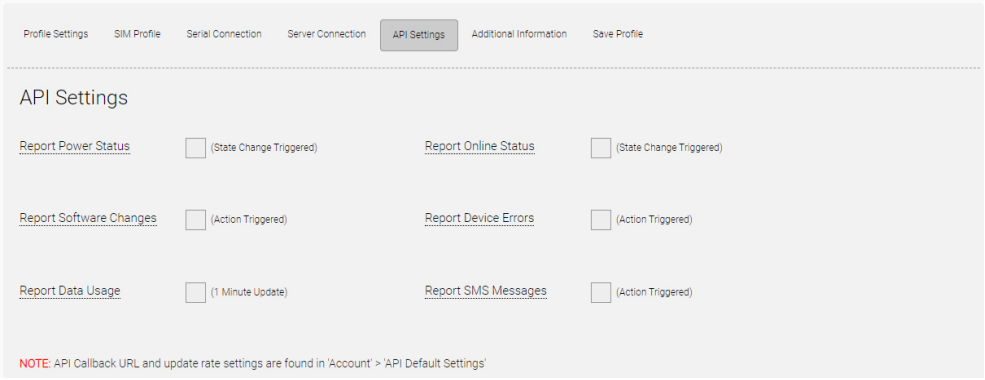
TX Timeout (mS): Defines how long the buffer waits to send data to the socket. The data buffer will be sent when it meets the buffer size threshold or the TX Timeout Value is reached, whichever comes first. Valid settings are between 100 and 5000 (= 100 mS to 5 Seconds).

TX Threshold (B): This setting is the size in bytes of a buffer in the device that buffers the data between the serial port and the cellular network. It is used in conjunction with the TX Timeout Value. This can be any value between 1 and 1200 bytes. As soon as the threshold number of bytes are received into the buffer, the buffer contents are transferred to the cellular network.

API Settings

The settings defined here are used in conjunction with settings found in the 'Account' tab. API settings in the profile here define how individual device modems interact with the callback URL. A suggested PHP script which contains more information about the API works can be found in the 'Help > API Callback' section of the SirettaLINK Management Portal.

Figure 33. API settings



Report Power Status: Reports to the API whenever the device is powered on.

Report Online Status: Reports to the API whenever the device comes online. This indicates that the device has Internet access where previously it didn't.

Report Software Changes: Report to the API when a new software revision is installed on the device. This new software could have been applied locally, or it could have been done via the SirettaLINK Management Portal.

Report Device Errors: Reports any errors indicated by a device to the API. These errors can be found on the 'History > Error' tab.

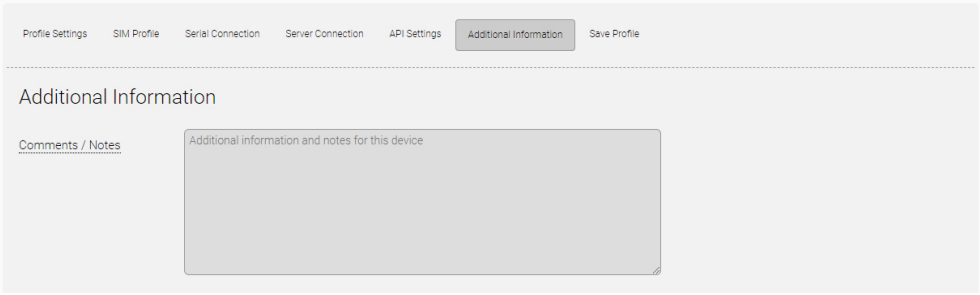
Report Data Usage: Report to the API the amount of data sent and received by the device every hour.

Report SMS Messages: Report any incoming SMS messages to the API.

Additional Information

This is a field for user comments about the profile. This is a free text field.

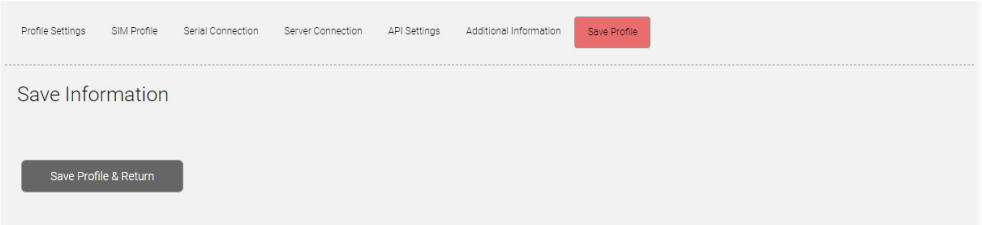
Figure 34. Additional information



Save Profile

Save profile updates.

Figure 35. Additional information

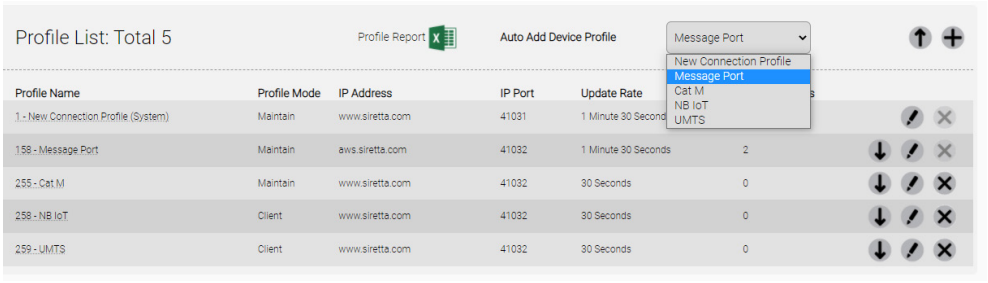


Save Profile & Return: If any profile changes have been made, pressing this saves the changes made and returns to the profiles list. Any devices using the profile will be updated the next time that they contact the SirettaLINK Management Portal. Depending on the nature of the change made to the profile, this could require the device to reboot which would cause temporary loss of connectivity.

Default Profile

The first device added to the SirettaLINK Management Portal will have been assigned the ‘New Connection Profile’. When using this profile, the APN details used are set locally when configuring the device with the SirettaLINK Management Portal. When adding further devices to the portal, it is probable that the desired profile intended to be used has already been created. In this case, it is possible to change the default assignment in the profile list by using the drop-down menu as shown below.

Figure 36. Default profile

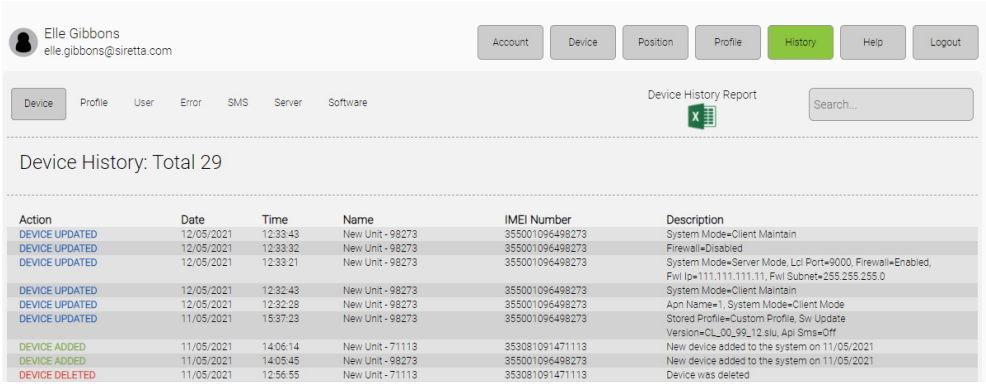


When changing the default profile, a pop-up box will ask you to confirm the change. Click ‘OK’ to apply the change.

History

History is a record kept by the SirettaLINK Management Portal of the changes, events and errors incurred by all the devices in the estate. All events are server timestamped.

Figure 37. History



The ‘History’ tab is broken down into 7 sections:

Device: Log of all devices added to and removed to the estate, and any configuration changes made to them.

Profile: Log of all profile creations, deletions, imports, exports and changes.

User: Log of all changes made to the user’s account.

Error: Log of all errors recorded by the connected devices.

SMS: Log of all SMS text messages received by connected devices.

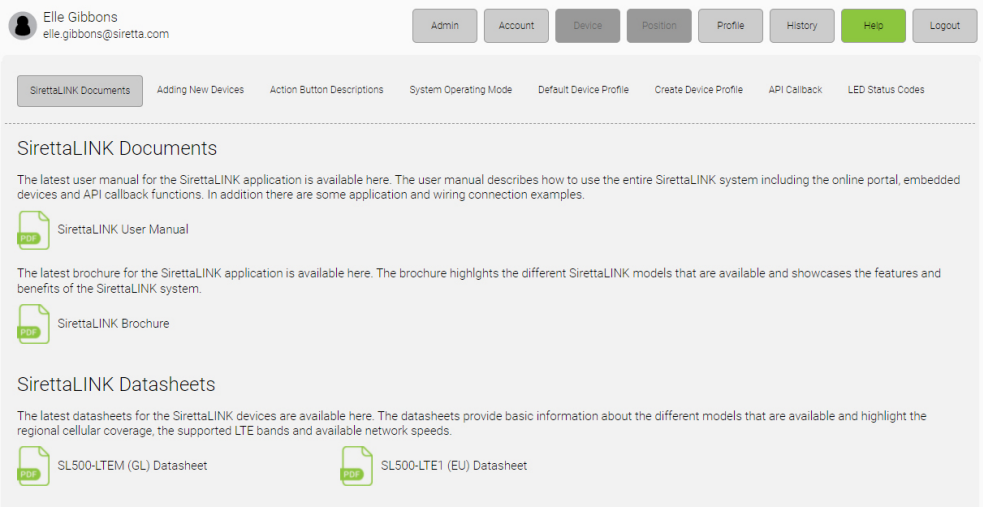
Server: Log of all the application server online and offline events.

Software: Log of all software updates initiated and completed.

Help

This is an online help area for the portal. Manuals, datasheet and the configuration tool may be downloaded here, together with the latest API callback PHP scripts.

Figure 38. Help



The ‘Help’ tab is broken down into 8 sections:

SirettaLINK Documents: Links to the current user manuals and datasheets.

Adding New Devices: The configuration tool can be found here. You can also view the activation code used with the tool to pair a device with the SirettaLINK Management Portal.

Action Button Descriptions: Overview about the navigation buttons used in the SirettaLINK Management Portal.

System Operating Mode: Explanation of the differences between Client Connect, Client Maintain and Server Listen modes of operation.

Default Device Profile: Explanation about what the default device profile does.

Create Device Profile: Explanation about creating and using device profiles.

API Callback: Explanation of how the API device callback works, and API Callback PHP script for integration into a system using the API.

LED Status Codes: Explanation about the different flashing rates of the LEDs.

Copyright Information

Copyright Declaration

Trademarks

Windows and Microsoft are registered trademarks of Microsoft Corporation. Siretta Ltd is an independent business and is neither affiliated with, nor authorized, sponsored, or approved by, Microsoft Corporation.

All other trademarks are the property of their respective owners.

Registered in England No. 08405712
VAT Registration No. GB163 04 0349

Download Latest Edition

Siretta Ltd
Basingstoke Road
Spencers Wood
Reading
Berkshire RG7 1PW

sales +44(0)118 976 9000
email sales@siretta.com
web www.siretta-link.com

Disclaimer

The information contained in this document is proprietary to Siretta. Siretta has made every effort to ensure that the accuracy of the information contained within this document is accurate. Siretta does not make any warranty as to the information contained within this document and does not accept any liability for any injury, loss or damage of any kind incurred by the use of this information.

Siretta does not take responsibility for any application developed using the modem characterized in this document and notes that any application of this modem must comply with the safety standards of the applicable country and comply with the relevant wiring rules. Siretta reserves the right to make modifications, additions and deletions to this document due to typographical errors, inaccurate information, or improvements to equipment at any time and without notice. Such changes will be incorporated into new editions of this document.

Definitions

X

Term	Definition
2G	2nd Generation Mobile Telecommunications
3G	3rd Generation Mobile Telecommunications
4G	4th Generation Mobile Telecommunications
5G	5th Generation Mobile Telecommunications
API	Application Programming Interface
AT	Attention
Cat 1	LTE Category 1 Network
Cat 4	LTE Category 4 Network
Cat M	LTE Category M Network
Cat NB IoT	LTE Narrow Band Internet of Things Network
CSD	Circuit Switched Data
CTS	Clear To Send
DC	Direct Current
DCD	Data Carrier Detect
DSR	Data Set Ready
DTR	Data Terminal Ready
EGPRS	Enchanced Data rates for GSM Evolution
ESD	Electrostatic Discharge
GND	Ground
GSM	Global System for Mobile Communications
GUI	Graphical User Interface
IoT	Internet of Things
LED	Light Emitting Diode
LTE	Long Term Evolution
PCS	Personal Communication Services
RI	Ring Indicator
RS232	Recommended Standard 232
RTS	Request to Send
RX	Receive Signal
RXD	Receive Signal
SIM	Subscriber Identity Module
SMA	Sub Miniature Version A
SMS	Short Message Service
TXD	Transmit Signal
UMTS	Universal Mobile Telecommunications System (Same as 3G)
USB	Universal Serial Bus

SirettaLINK

by

Siretta

Enabling Industrial IoT

sales +44 (0)118 976 9000
email sales@siretta.com

www.siretta.com

Siretta Ltd
Basingstoke Road
Spencers Wood
Reading
Berkshire
RG7 1PW
United Kingdom

Company No. 08405712
VAT Registration No. GB163 04 0349

Rev 1.2 - October 2022