# Siretta

## Enabling Industrial IoT

# SL500-LTE1 (EU)

## Low Power 4G / LTE Category 1 Intelligent Industrial Modem

SL500 Series

SIM

SirettaLINK
www.siretta-link.com

## General Description

The SL500-LTE1 (EU) modem is a low power LTE Cat 1 modem that is used to create a data connection over the LTE cellular network to link a remote application with a server.

The SL500 solution provides an intelligent serial gateway, moving away from the traditional approach of setup and management using AT commands which require a high skill level to implement correctly. Instead, setup and management are all achieved using the modern cloud-based SirettaLINK management portal (www.siretta-link.com). This makes deployment and remote management a simple task, saving development costs and accelerating time to market.
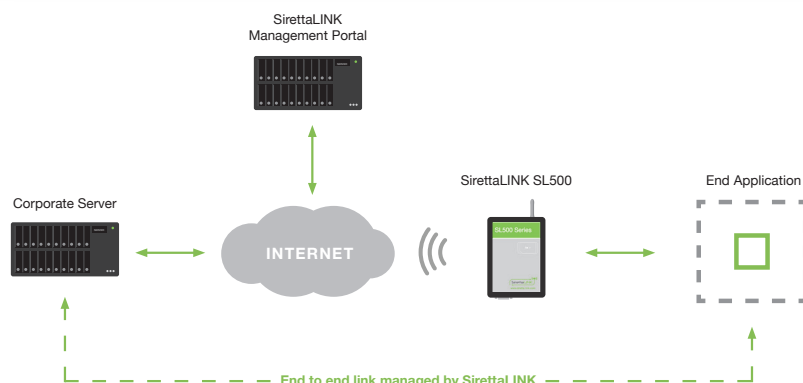
The SL500-LTE1 (EU) modem uses an embedded STM32F405 ARM® Cortex® M4 core processor to implement advanced functionality. This runs an application that connects the SL500-LTE1 (EU) modem to the SirettaLINK Management Portal using an encrypted link, where it downloads the configuration profile for connecting to the customers specified resource, and posts operational data.

## Features

| | | | | | | |
|---|---|---|---|---|---|---|
| 2G GSM | 3G UMTS | 4G LTE | LTE Cat 1 | GPRS Enabled | EU Coverage | SLEEP Mode |
| RS232 Serial | TCP Gateway | TCP Client | TCP Server | APN Updates | AUTO Setup | USER Profiles | Cloud Manage |
| DATA Encryption | CODE Embedded | FOTA Updates | IP Services | SIM Detect | WIN Linux/MAC | 5-42V Industrial | TEMP -40 to +85 |

## Featured Applications

» Car Parking Payment
» Retail Kiosks
» Security / Fire Alarm Systems
» Gaming Machines
» Healthcare
» Elevator Systems
» Payment Systems
» Energy / Water Utilities
» Fridge / Freezer Monitoring
» Temperature Audit Trail

SirettaLINK
Management Portal

Corporate Server

INTERNET

SirettaLINK SL500

SL500 Series

End Application

End to end link managed by SirettaLINK

Rev 1.2

## General Features

- » 6 Bands: 4G / LTE:
  B1(2100), B3(1800), B7(2600), B8(900), B20(800), B28A(700) MHz
- » 3 Bands: 3G / UMTS
  B1(2100), B3(1800), B8(900) MHz
- » 2 Bands: 2G / GSM | GPRS:
  B3(1800), B8(900)
- » LTE FDD Category 1
- » 3GPP release 9 compliant

## Interfaces

- » 1 x RS232 serial port interface (9-wire)
- » 1 x RJ12 power connection (5 - 42V)
  Nominal supply 12V
- » 1 x SMA female cellular antenna connector
- » 1 x SIM card reader (push-push) 3V, 1.8V
- » 3 x external LED status indicators (Red, Green, Blue)

## Environmental

- » Dimensions: 93mm x 67mm x 28mm
- » Weight: 90 grams
- » Extended Temperature Range: -40 to +85 deg C

## Approvals and Compliance

- » CE

## Modes of Operation

- » Client connect mode
- » Client maintain mode
- » Server listen mode

## Data

- » LTE Category 1
  230.4 kbps upload, 230.4 kbps download*

*Actual rates limited by RS232 I/F and network conditions

## Sensitivity

Typical sensitivity levels are as follows:

- » 106 dBm @ 2G
- » 111 dBm @ 3G
- » -101 dBm @ 4G FDD (BW=5 MHz)

### Output power

Typical values for Max output level are as follow:

- » 2G (GSM):
  LB: Class 4(2W, 33dBm)
  Class E2(0.5W,27dBm@EDGE)
  HB: Class 1(1W, 30Bm)
  Class E2(0.4W, 26dBm@EDGE)
- » 3G (WCDMA):
  Class 3(0.25W, 24dBm)
- » TD-SCDMA:
  Class 3(0.13W, 21dBm)
- » 4G (FDD & TDD):
  Class 3(0.2W, 23dBm@1RB)

## SL500 Application

- » Auto configures device parameters for connected network
- » Advanced techniques to maintain network connection
- » Manages network connectivity to ensure continuous reliable operation
- » Profile settings automatically received from the SirettaLINK Management Portal
- » Periodically pushes operational data of the SL500 system to the SirettaLINK Management Portal
- » Available at www.siretta-link.com

## Management Portal

- » Manage entire estate of devices in one central location
- » Perform large scale software updates automatically
- » Real time status reporting and data usage information
- » Ability to export detailed information in XLS reports

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