Siretta

Enabling Industrial IoT

SL500-LTE1 (EU)

Low Power 4G / LTE Category 1 Intelligent Industrial Modem

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.
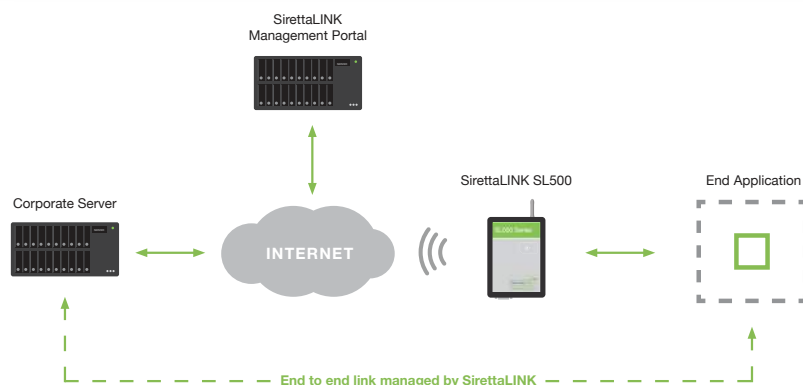
The SL500-LTE1 (EU) modem uses an embedded STM32F405 ARM® Cortex® M4 core processor to implement advanced functionality. This runs an application that connects the SL500-LTE1 (EU) modem to the SirettaLINK Management Portal using an encrypted link, where it downloads the configuration profile for connecting 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

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