

senseLynx Pro SL04

All-in-One Embedded IoT Module

EDGE/GPRS/LTE Cat M/NB-IoT - WiFi - BLE 4.2 - LoRa

Quectel BG96 NB-IoT Cat M1, NB1 and EDGE / GPRS & LTE

99 Channel GNSS Receiver:
External Patch Antenna + LNA
On-Board Patch Antenna

Semtech SX1276 433 / 868 Mhz LoRa Module

Espressif ESP32-WROOM-32D
Bluetooth Low Energy and 802.11 b/g/n Wi-Fi

Sensors Available:

LIS3DH Ultra Low-Power 3-axes Accelerometer
LIS3MDL Ultra Low-Power 3-axes Magnetometer
OPT3001 for Measuring the Intensity of Visible Light
HDC1080 Ultra Low-Power Humidity and Temperature Sensor

High Performance ARM Cortex-M4 MCU
Ultra Low Power Consumption
Deep Sleep Mode (Typical 20 μ A with RTC Wakeup)

PPP Connection and Full TCP/IP Stack Embedded in Cortex M4 CPU

High Speed USB Data Connection with PC

On-Board Li-Ion/Po Battery Charger

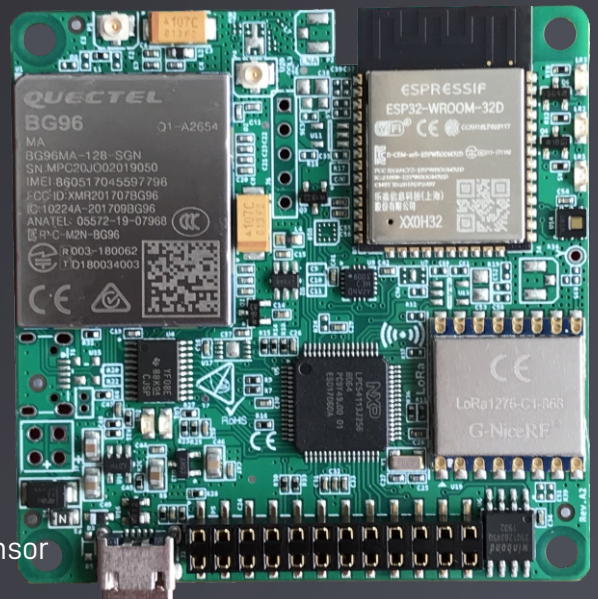
128 Mbit High Speed Serial Flash Memory

Micro SIM Card Connector
Optional On-Board Embedded Chip SIM

USB 2.0 Device (HID, MSC, VCOM support)

2x12 Pin Header for I/O Expansion
I2C, UART, GPIO, ADC Interfaces

SDK Pack for Developers & Integrators



senseLynx.Pro SL04 is all-in-one embedded module supporting GSM/LTE Cat-M NB-IoT, WiFi connection with Bluetooth LE 4.2 and LoRa radio to build up an end-to-end IoT solution.

senseLynx.Pro also includes a vast array of sensors; accelerometer, ambient light, magnetometer and temperature and humidity.

The NB-IoT connectivity is provided by the Quectel BG96 module. The combination of WiFi + BLE, LoRa Node, LTE Cat-M and NB-IoT provides flexible low power consumption development along with a myriad of application options ranged from telemetry to indoor / outdoor live tracking and environment sensing.

senseLynx.Pro supports rich set of internet protocols, industry-standard interfaces, sensors (e.g. USB/UART/I2C etc.) and lots of functionalities (e.g. USB PC Modem for Windows 7/8/8.1/10, Linux and Android) allow the module to serve a wide range of IoT applications such as wireless telemetry, smart metering, asset tracking and more.

Key Applications:

- Telematics & Telemetry
- Asset Tracking
- Remote Data Monitoring
- GPS Tracking & Location Reporting
- Real-time Environmental Monitoring
- USB Modem for Embedded PC & Computers
- Smart Energy & City & Agriculture Applications
- LoRa Private Network Gateway Implementation

Specifications

| | | | |
|------------------|--|---------------------------------|---|
| CPU | ARM Cortex M4 32-Bit | Input & Output Interfaces | 2.54 mm Expansion Connector Digital I/O, Analog inputs, 2xUART, I2C, SPI |
| Memory | 128 MBit Flash for External Storage 256 KB CPU Flash with 190 KB SRAM | Power Supply | 3.5V ~ 5V |
| GSM Module | Quectel Bg96 Multi-Band LTE Cat M1/Cat NB1/EGPRS | Power Consumption | 132 µWatt @3.3V 40 µA Deep Sleep Current while 3D G-Sensor Shock + RTC + External GPIO can wake up CPU |
| Antenna Outputs | U.FL Connector for GSM / GPS Antenna PCB Antenna for WiFi & Bluetooth U.FL connector / PCB Pad for LoRa Radio | Battery Charger | 500 mA Li-Ion / Li-Po |
| WiFi & Bluetooth | ESP32-WROOM-32D | SIM | Micro SIM |
| LoRa Radio | Semtech SX1276 433 / 868 Mhz RF Module | Dimensions | 60x60 mm |
| Navigation | GPS, GLONASS, BeiDou/Compass, Galileo and QZSS | Operating & Storage Temperature | -40°C to +85°C -40°C to +85°C |
| | | Optional Features | Embedded SIM Chip Modem USB Data Link SDK Kit |