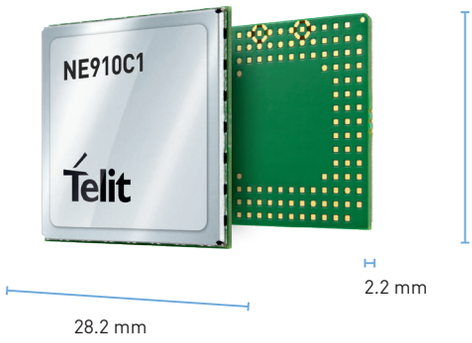
NE910C1 Series

PRELIMINARY

LTE Cat NB1 Embedded



NB-IoT

Product Description

The NE910C1 is the LTE UE Category NB1 evolution of the Telit LE910 Series of LTE modules. Specified in the approved Release 13 of the 3GPP standard, Cat NB1 devices are specifically tailored for IoT applications, offering optimized power consumption and enhanced coverage. This model further enriches the widely deployed Telit xE910 family of 28 x 28 mm LGA modules.

The NE910C1 delivers maximum downlink and uplink data rates of 250kbps. This next generation of products supports the new features specified by 3GPP to boost IoT applications, The modules support power saving mode and extended discontinuous reception (eDRX), which together allow the module to wake up periodically, exchange small amounts of data with the network and return to sleep, providing for years of battery life. LTE Cat NB1 devices contain a host of features that deliver cost-effective, compact designs, and ultra-low power consumption compared to higher UE categories. These advantages make the NE910C1 the perfect platform to enable a quick implementation of LTE technology in IoT/M2M where low cost and low power are more relevant than high speed.

The NE910C1 helps increase the addressable market for LTE technology to include a broad range of new applications and use cases best served with lower maximum data rate, ultra-low power, reduced complexity and cost. Some examples are smart meters, smart parking, smart agriculture, waste collection, industrial sensors, healthcare monitors, home automation, and many more low data rate IoT devices. The NE910C1 is offered in a band configuration for deployment in the European NB-IoT networks, either in in-band, guard-band or standalone mode; additional regional variants will follow. It is highly recommended for new designs, but also in particular as a migration path for existing GPRS devices, both new and updated designs benefit from a significant extension in lifecycle with LTE Cat NB1.

Key Benefits

- Design once and deploy globally with the swappable xE910 form factor family
- Perfect platform for regional IoT applications such as smart metering, security & surveillance, point of sale, health monitoring, fleet management, asset tracking and wearable devices
- LTE UE Category NB1 compliant to the latest 3GPP Release 13 enhanced Machine-Type Communication (eMTC), specifically designed for IoT use cases, offering minimum power consumption and extended coverage

Family Concept

The NE910C1 is a member of Telit's flagship xE910 module family delivering 4G radio access technology in the 28.2 x 28.2 x 2.2mm family form factor. The Telit xE910 Unified Form Factor Family is comprised of 2G, 3G, and 4G that are 3GPP and 3GPP2 products sharing a common form factor as well as electrical and programming interfaces which allows developers to implement a "design once, use anywhere" strategy.

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NE910C1 Series

Product Features

Supported bands:

- NE910C1-E1
  - Band LTE B20, B8
- Half Duplex FDD
- Single Rx
- LTE UE Category NB1
- 3GPP release 13 compliant
- 3GPP Rel. 12 Power Saving Mode (PSM)
- 3GPP Rel. 13 Extended Discontinuous Reception (eDRX)
- OMA Lightweight M2M (LWM2M)
- Control via AT commands according to 3GPP TS27.005, 27.007 and customized AT commands
- Serial port multiplexer 3GPP TS27.010
- SIM application Tool Kit 3GPP TS 51.01
- Embedded Internet Protocols
- Optional embedded GNSS

Data

LTE Category NB1

- Uplink up to 20 kbps (single-tone)
- Downlink up to 250 kpbs

Physical Environmental

- Dimensions 28.2 x 28.2 x 2.2mm
- Extended temperature range: -40 to +85°C

Interfaces

- 10 I/O ports maximum including multifunctional I/Os
- USB 2.0 HS
- UART
- SPI
- I2C
- 1.8 V SIM interface

Approvals (in process)

- RED
- GCF

Electrical & Sensitivity

- Supply voltage
  - Nominal: 3.8 VDC

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