

ME910C1 Series

LTE Cat M1/NB1



Product Description

The ME910C1 is the LTE UE Category M1/NB1 evolution of the Telit LE910 series of LTE modules. Specified in the 3GPP Release 13 (Rel 13), Cat M1/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 ME910C1 has a maximum downlink and uplink data rate in the range of 300 kbps. This next generation of products supports the new features specified by 3GPP to boost IoT applications, such as Power Saving Mode (PSM) and extended Discontinuous Reception (eDRX). These features allow the devices to wake up periodically to deliver small amounts of data to the network and go back to sleep, enabling prolonged battery operation.

A primary benefit this new LTE device offers is enhanced coverage with up to +15 dB/+20 dB in maximum coupling loss (MCL) compared to the other cellular technologies. LTE Cat M1/NB1 devices are optimized in cost, size and power consumption compared to higher UE categories. These advantages make the ME910C1 the perfect platform to enable quick implementation of LTE technology in IoT M2M in which low cost and low power are more relevant than high speed.

Telit offers the ME910C1 in different band configurations for the regional deployment and common variants for global coverage. The ME910C1 helps increase the addressable market for LTE technology to include a broad range of new applications and use cases best served with the lower maximum data rate, ultralow power, reduced complexity and cost. Example use cases include smart meters, industrial sensors, healthcare monitors, home automation, asset tracker and many more low-data-rate IoT devices. This module series supports dual-mode Cat M1/NB1 (NB-IoT) capabilities and 2G fallback. ME910C1 is highly recommended for new designs. Both new and updated models benefit from a significant extension in life cycle with LTE Cat M1/NB1, particularly as a migration path for existing GPRS or CDMA devices.

Key Benefits

- Design once and deploy globally, thanks to the xE910 form factor family
- The perfect platform for regional IoT applications, such as smart metering, security and surveillance, point of sales, health monitoring, fleet management, asset tracking and wearable devices
- LTE UE Cat M1/NB1 compliant to the latest 3GPP Rel. 13 enhanced machine-type communication (eMTC) and Narrowband IoT (NB-IoT), specially designed for IoT use cases requiring minimum power consumption and extended coverage

AVAILABLE FOR

- EMEA
- North America
- APAC
- Japan
- Australia



ONEEDGE™

OneEdge™ Features

Telit offers ME910C1 with OneEdge, a software suite integrated with deployment and management tools to address the complexity expected with the exponential growth in the number of IoT devices. The following key components are included:

- **LightweightM2Mprotocol** enables comprehensive device management, FOTA updates and application enablement of low-power devices with the goal of more robust and secure connections.
- **TelitIoTAppZone** can run code and applications directly inside the Telit module.
- **Telit'sConnectionManager** automates operations for connection to cellular networks.
- **Location** services provide the position of devices even in the absence of a GNSS connection.

Family Concept

The ME910C1 is a member of Telit's flagship xE910 module family delivering 4G radio access technology in the 28.2 x 28.2 x 2.2 mm 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 standard form factor as well as electrical and programming interfaces that allow developers to implement a "design once, use anywhere" strategy.

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Variants

	ME910C1-NA	ME910C1-E1	ME910C1-E2	ME910C1-AU	ME910C1-WW	ME910C1-P1
Market	North America Single SKU	Europe	Europe	Australia	Worldwide Single SKU	Worldwide
M1/NB1 Support	M1	Dual mode M1 & NB1	Dual mode M1 & NB1 + 2G	Dual mode M1 & NB1	Dual mode M1 & NB1 + 2G	Dual mode M1 & NB1
4G Bands (MHz)	B2 (1900) B4 (AWS 1700) B12 (700) B13 (700)	B3 (1800) B8 (900) B20 (800)	B3 (1800) B8 (900) B20 (800)	B3 (1800) B5 (850) B8 (900) B28 (700)	B1 (2100), B2 (1900), B3 (1800), B4 (AWS 1700), B5 (850), B8 (900), B12 (700), B13 (700), B18 (800), B19 (800), B20 (800), B26 (850), B28 (700)	
2G Bands (MHz)			B2 (1900) B3 (1800) B5 (850) B8 (900)		B2 (1900) B3 (1800) B5 (850) B8 (900)	
Approvals	FCC, GCF, PTCRB, AT&T, Verizon, Ifotel, US Cellular	RED, GCF, IMDA, TIM, Deutsche Telekom	RED, GCF, IMDA, Telefonica, Vodafone, Deutsche Telekom	RCM, Telstra, GCF	PTCRB, GCF, RED, FCC/IC, RCM, Jate, Telec, CCC, AT&T, Verizon, NTT DoCoMo, Deutsche Telekom, Anatel, Telstra, Ifotel, Rogers, Telus, US Cellular	PTCRB, GCF, RED, FCC/IC

*In process

Product Features

- LTE UE Cat M1/NB1
- 3GPP Rel. 13 compliant
- Half-duplex FDD
- Single Rx, single antenna
- 3GPP Rel 12 PSM
- 3GPP Rel. 13 eDRX
- 3GPP Rel. 13 extended coverage
- Control via AT commands according to 3GPP TS 27.005, 27.007 and customized AT commands
- SIM application tool kit 3GPP TS 51.01
- SMS
- IPv4/IPv6 stack with TCP and UDP protocol
- OMA Lightweight M2M (LwM2M)
- Firmware Over-the-Air update
- Telit application development environment: AppZone C
- SSL
- Optional embedded GNSS (GPS, GLONASS, Beidou, Galileo)

Hardware and Electrical Specifications

- Dimensions: 28.2 x 28.2 x 2.2 mm
- 10 I/O ports maximum including multifunctional I/Os
- 1.8 V SIM Interface
- USB 2.0 HS
- UART
- SPI
- I2C
- Operating & Extended temperature range: -40 °C to +85 °C
- Supply voltage:
 - Nominal: 3.8 V dc
 - Operating Voltage Range: 3.2–4.2 V

Data

LTE Cat M1

- Uplink up to 375 kbps
- Downlink up to 300 kbps

LTE Cat NB1

- Uplink up to 62.5 kbps
- Downlink up to 21 kbps

EGPRS (2G Fallback Variants)

- Uplink up to 236 kbps
- Downlink up to 296 kbps

AppZone

- Software and application development
- AppZone application resources
 - Programming language: C
 - IDE: Eclipse based
 - File System: > 4MB
 - App RAM: > 1MB

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