

ME910G1 Series

LTE Cat M1/NB2



Product Description

Enabling a new generation of massive low-cost IoT device deployment numbering in the hundreds of thousands or millions, the ME910G1 is the Category M1/NB2 (Cat M1/ NB2) evolution of the flagship Telit xE910 product family. Cat M1/NB2 devices are specifically tailored for low-data throughput IoT applications, exceeding market demands for optimized power consumption and enhanced quality of coverage. This model further enriches the widely deployed Telit xE910 family of 28 x 28 mm LGA modules.

Compliant with 3GPP Release 14 (Rel. 14), the ME910G1 LTE UE Cat M1/NB2 module enables increased power saving for IoT applications using Power Saving Mode (PSM) and extended Discontinuous Reception (eDRX). These features allow devices to wakeup periodically and deliver only small amounts of data necessary before returning to sleep mode. Enhanced coverage, enabled by maximum coupling loss (MCL) of up to +15 dB/+20 dB, provides superior in-building penetration compared to earlier cellular LTE standards. LTE Cat M1/NB2 devices are optimized in cost, size and power consumption compared to higher UE categories. 3GPP Rel. 14 further improves these features by adding techniques to increase the data rate for LTE-M and NB-IoT. These advantages make the ME910G1 ideal for enabling the quick implementation of LTE technology in which low cost and low power are more relevant than high speed.

The ME910G1 series enables original equipment manufacturers (OEMs) and enterprises to create regional variants easily for applications such as smart meters, security and surveillance, point of sales, health monitoring, fleet management, asset tracking and wearable devices. The ME910G1 series is offered with global frequency bands configuration for global deployment. It supports dual-mode Cat M1/NB2 (NB-IoT) capability and 2G fallback. The ME910G1 series is highly recommended for new designs and is ideal as a migration path for existing GPRS or CDMA devices. Both updated and brand-new models benefit from a significant extension in lifecycle with LTE Cat M1/NB2.

Key Benefits

- Design once and deploy globally with the xE910 form factor family
- An ideal solution for global IoT applications such as smart metering, security and surveillance, point of sales, health monitoring, fleet management, asset tracking and wearables
- Compliant to 3GPP Rel. 14 Cat M1/NB2, tailored for IoT devices

OneEdge™ Features

Telit offers ME910G1 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:

- **Lightweight M2M protocol** enables comprehensive device management, FOTA updates and application enablement of low-power devices with the goal of more robust and secure connections.
- **Telit IoT AppZone** can run code and applications directly inside the Telit module.
- **Telit's Connection Manager** 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 ME910G1 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.

AVAILABLE FOR

Worldwide



ONEEDGE™

ME910G1 Series

Variants

	ME910G1-W1	ME910G1-WW	ME910G1-WWV	ME910G1-W3
Market	Worldwide	Worldwide	Worldwide	Worldwide
LTE-M/NB-IoT	Dual Mode LTE-M/NB-IoT	Dual Mode LTE-M/NB-IoT	Dual Mode LTE-M/NB-IoT	LTE-M only
4G Bands	B1, B2, B3, B4, B5, B8, B8_US**, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B71, B85	B1, B2, B3, B4, B5, B8, B8_US**, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B71, B85	B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B27, B28, B66, B71, B85	B1, B2, B3, B4, B5, B8, B8_US, B12, B13, B14, B18, B19, B20, B25, B26, B27, B28, B66, B85
2G Bands	-	B2, B3, B5, B8	B2, B3, B5, B8	-
Output Power	LTE: 21 dBm (Power Class 5)	LTE: 23 dBm (Power Class 3) GSM/ GPRS: 33 dBm (Power Class 4)	LTE: 23 dBm (Power Class 3) GSM/ GPRS: 33 dBm (Power Class 4)	LTE: 23 dBm (Power Class 3)
Approvals	FCC/IC, RED, UKCA, GCF, PTCRB, AT&T, FirstNet, Verizon, Sprint, T-Mobile US, Deutsche Telekom, Rogers	FCC/IC, RED, UKCA, GCF, PTCRB, ANATEL, RCM, JATE/TELEC, KC, CCC, SRRC, NCC, IMDA, AT&T, FirstNet, Verizon, Sprint, T-Mobile US, TELSTRA, SKT, NTT DOCOMO, KDDI, Deutsche Telekom, Rogers	FCC/IC, RED, UKCA, GCF, PTCRB, AT&T, FirstNet	FCC/IC, GCF, RED, UKCA, PTCRB, AT&T FirstNet, Verizon
Voice	No	No	Yes VoLTE and 2G Voice	No

*In process

** Available only on dedicated ordering code

Product Features

- LTE UE Cat M1 (1.4 MHz)/NB2 (200 KHz)
- 3GPP Rel. 14 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 Telit AT commands
- SIM application tool kit 3GPP 51.01
- VoLTE
- SMS over NAS
- IPv4/IPv6 stack with TCP and UDP protocol
- TLS 1.3 / DTLS
- Embedded GNSS (GPS, GLONASS, Beidou, Galileo)
- OMA Lightweight M2M (LwM2M)
- Firmware Over-the-Air Update (FOTA) using delta upgrade techniques

Hardware and Electrical Specifications

- Dimensions: 28.2 x 28.2 x 2.4 mm
- 10 I/O ports maximum including multifunctional I/Os
- 1.8 V SIM Interface
- USB 2.0 HS
- UART
- SPI
- I2C
- Extended temperature range: -40 °C to +85 °C
- Supply voltage:
 - Nominal: 3.8 V dc
 - Operating Voltage Range: 3.2–4.2 V
 - Extended Voltage Range: 2.6–4.5 V

Data

LTE Cat M1 (Rel 14)

- Uplink up to 1 Mbps
- Downlink up to 588 Kbps

LTE Cat NB2 (Rel 14)

- Uplink up to 160 Kbps
- Downlink up to 120 Kbps

EGPRS (2G Fallback Variants)

- Uplink up to 210 Kbps
- Downlink up to 264 Kbps

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