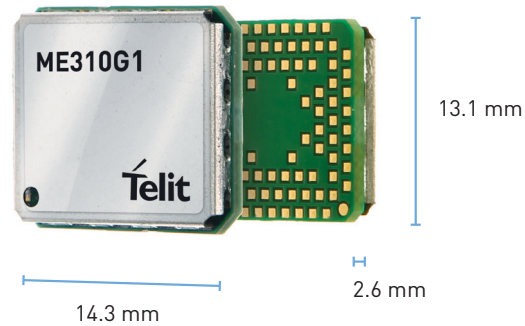


PRELIMINARY

# ME310G1

LTE Cat M1/NB2 Embedded



## Product Description

Enabling a new generation of massive low-cost IoT device deployments numbering in the hundreds of thousands or millions, the ME310G1 is the Category M1/NB2 evolution of the brand new Telit xE310 product family. Exceeding market demands for optimized power consumption and enhanced quality of coverage, Cat M1/NB2 devices are specifically tailored for low data throughput IoT applications. The ME310G1 creates brand-new IoT-enabled business models by addressing connectivity and battery life concerns for the growing number of OEMs, integrators and device designers looking to dramatically increase the number of data points they can collect from their operations and customers via IoT devices. IoT is now possible at a scale and cost point that makes many previously unviable deployments ROI positive.

Compliant with 3GPP Release 14, the ME310G1 LTE UE CatM1/NB2 module enables increased power saving for IoT applications using Power Saving Mode (PSM) and extended Discontinuous Reception (eDRX), allowing devices to wake up periodically, while delivering only the smallest amounts of data necessary before returning to sleep mode. Enhanced coverage, enabled by maximum coupling loss (MCL) of up to +15dB/+20dB, provides superior in-building penetration compared to earlier cellular LTE standards. LTE CatM1/NB2 devices are optimized in cost, size and power consumption compared to higher UE categories. 3GPP Release 14 further improves these features by adding techniques to increase the data rate for LTE-M and NB-IoT. These advantages make the ME310G1 ideal for enabling quick implementation of LTE technology where low cost and low power consumption are more relevant than high speed.

The ME310G1 enables enterprises to deploy new small footprint designs across many application areas including asset tracking, health-care monitoring, smart metering, portable devices, industrial sensors, home automation, and many others benefitting from low-power and low data rate capabilities.

## Key Benefits

- Small size and low power consumption
- Optimized for ease-of-design, high yield and low-cost manufacturing
- Compliant to 3GPP Release 14 Cat M1/NB2, tailored for IoT devices
- Ideal solution for medical devices, fitness trackers, industrial sensors, smart meters, and other mass-production, mass-deployment applications.
- Module sizes ranging from 300 down to below 200 mm<sup>2</sup> on a fixed 94-pad LGA footprint enable a "design once, use anywhere" IoT device strategy.

## Family Concept

The xE310 flexible perimeter footprint family includes pin-to-pin compatible 2G (GE310-GNSS) and CatM1/NB2 (ME310G1) modules, enabling integrators to design a single PCB layout and deploy any combination of 2G and 4G technologies.

Telit's miniature xE310 family delivers high business and technical value for OEMs, integrators and IoT device designers interested in low power, low cost, small footprint devices to take digital transformation initiatives to the next level across their organization.

The 94-pad LGA footprint delivers a comprehensive set of features with a surplus of reserve pads to 'futureproof' the end-device with additions like Bluetooth connectivity and GNSS. The flexible perimeter space allows modules in the family to go in sizes from around 300mm<sup>2</sup> to below 200mm<sup>2</sup>. The xE310 is designed to allow for single as well as multi technology products such as combination cellular+GNSS and other solutions in fixed and mobile applications for smart utilities, home and commercial automation, telematics, POS, and smart cities

AVAILABLE

WORLDWIDE

## Variants

	ME310G1-W1	ME310G1-WW
Market	Worldwide	Worldwide
4G bands	B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B27, B28, B66, B85	B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B27, B28, B66, B85
2G bands	-	B2, B3, B5, B8
Output power	LTE: 20 dBm (Power Class 5)	LTE: 23 dBm (Power Class 3) GSM/GPRS 33 dBm (Power Class 4)

## Product Features

- LTE UE Category M1(1.4 MHz) / NB2 (200 KHz)
- 3GPP release 14 compliant
- Half Duplex FDD
- Single Rx, single antenna
- 3GPP Rel. 12 Power Saving Mode (PSM)
- 3GPP Rel. 13 Extended Discontinuous Reception (eDRX)
- 3GPP Rel. 13 Extended coverage
- Control via AT commands according to 3GPP TS27.005, 27.007 and customized Telit AT commands
- SIM application Tool Kit 3GPP TS 51.01
- VoLTE (planned)
- SMS over NAS
- IPv4/IPv6 stack with TCP and UDP protocol
- TLS / DTLS
- Optional embedded GNSS (GPS, GLONASS, Beidou, Galileo)
- OMA Lightweight M2M (LWM2M)
- Over-the-Air firmware update

## Data

### LTE Category M1 (Rel.14)

- Uplink up to 1Mbps
- Downlink up to 365 Kbps

### LTE Category NB2 (Rel.14)

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

### EGPRS

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

## Environmental

- Extended temperature range -40°C to +85°C

## Interfaces

- Dimensions: 13.1 x 14.3 x 2.6mm (ME310G1-W1)
- 6 I/O ports
- 1.8V SIM Interface
- USB 2.0 HS
- UART
- SPI
- I2C

## Approvals

- FCC/IC (planned)
- RED (planned)
- GCF (planned)
- PTCRB (planned)
- AT&T (planned)
- Verizon (planned)

## Electrical & Sensitivity

- Output power - 20/23 dBm (power class 5/3)
- Supply voltage - Nominal: 3.8 VDC

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