ME910C1 Series

Product Description
The ME910C1 is the Category M1/NB1 evolution of the Telit LE910 Series of LTE modules. Specified in the approved Release 13 of the 3GPP standard, 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 is an LTE UE Category M1/NB1 device with maximum downlink and uplink data rate of 1Mbps. This next generation of products supports the new features specified by 3GPP to boost IoT applications, such as the Power Saving Mode (PSM) and the extended Discontinuous Reception (eDRX), which allow the devices to wake up periodically to deliver only very small amounts of data to the network and then go back to sleep for most of the time, thus allowing longer battery operation. Enhanced coverage, with up to +15dB/+20dB in maximum coupling loss (MCL) compared to the other cellular technologies, is also one of the key benefits of this new LTE flavour. LTE Cat M1/NB1 devices are therefore optimized in cost, size and power consumption compared to higher UE categories. These advantages make the ME910C1 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 ME910C1 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, industrial sensors, healthcare monitors, home automation, asset tracker and many more low data rate IoT devices. The ME910C1 is offered in different band configurations for deployment in North America [Verizon and AT&T 4G networks], and in EMEA, the latter with dual mode Cat M1/NB1 (NB-IoT) capability. It is highly recommended for new designs, but also in particular as a migration path for existing GPRS or CDMA devices, both new and updated designs benefit from a significant extension in lifecycle with LTE Cat M1/NB1.

Key Benefits
- Design once and deploy globally, thanks to the xE910 form factor family
- Perfect platform for regional IoT applications such as smart metering, security & surveillance, point of sales, health monitoring, fleet management, asset tracking and wearable devices
- LTE UE Category M1/NB1 compliant to the latest 3GPP Release 13 enhanced Machine-Type Communication (eMTC) and Narrow Band IoT (NB-IoT), specifically designed for IoT use cases, offering minimum power consumption and extended coverage

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 2.2mm 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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**Product Features**
- LTE UE Category M1/NB1
- 3GPP release 13 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 AT commands
- SIM application Tool Kit 3GPP TS 51.01
- SMS
- IPv4/IPv6 stack with TCP and UDP protocol
- OMA Lightweight M2M (LWM2M)
- Over-the-Air firmware update (for future release)
- Telit Application Development Environment: AppZone C (for future release)
- SSL
- Optional embedded GNSS (GPS, GLONASS, Beidou, Galileo)

**Data**
- **LTE Category M1**
  - Uplink up to 375 kbps
  - Downlink up to 300 kbps
- **LTE Category NB1**
  - Uplink up to 20 kbps (single-tone), 250 kbps (multi-tone)
  - Downlink up to 250 kbps

**Physical & Environmental**
- Dimensions: 28.2 x 28.2 x 2.2 mm
- 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 / 3 V SIM interface

**Electrical**
- Supply voltage
  - Nominal: 3.8 VDC
  - Range: 3.4 - 4.2 VDC

**Frequencies**

<table>
<thead>
<tr>
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<th>ME910C1-NV</th>
<th>ME910C1-NA</th>
<th>ME910C1-E1</th>
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</thead>
<tbody>
<tr>
<td>Market</td>
<td>North America (Verizon)</td>
<td>North America (AT&amp;T)</td>
<td>Europe</td>
</tr>
<tr>
<td>M1/NB1 support</td>
<td>M1</td>
<td>M1</td>
<td>Dual mode M1 &amp; NB1</td>
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<tr>
<td>Frequencies</td>
<td>B4(AWS1700), B13(700)</td>
<td>B2(1900), B4(AWS1700), B13(700)</td>
<td>B3(1800), B8(900), B20(800)</td>
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<tr>
<td>Approvals</td>
<td>FCC, GCF, Verizon</td>
<td>FCC, PTCRB, AT&amp;T</td>
<td>RED, GCF</td>
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Telit Communications S.p.A.
Via Stazione di Prosecco, 5/B
I-34010 Sgonico (Trieste), Italy
Phone +39 040 4192 200
Fax +39 040 4192 383
E-Mail EMEA@telit.com

Telit Wireless Solutions Inc.
3331 RDU Center Drive, Suite 135
Morrisville, NC 27560, USA
Phone +1 888 846 9773 or +1 919 439 7977
Fax +1 888 846 9774 or +1 919 840 0337
E-Mail NORTHAMERICA@telit.com

Telit Wireless Solutions Inc.
Rua Paes Leme, 524, Conj. 126
05424-101, Pinheiros
São Paulo-SP-Brazil
Phone +55 11 3031 5051
Fax +55 11 3031 5051
E-Mail LATINAMERICA@telit.com

Telit Wireless Solutions Co., Ltd.
8th Fl., Shinhyung Securities Bld.
6, Gukjegeumyung-ro8-gil, Yeongdeungpo-gu
Seoul, 150-884, Korea
Phone +82 2 368 4600
Fax +82 2 368 4606
E-Mail APAC@telit.com

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