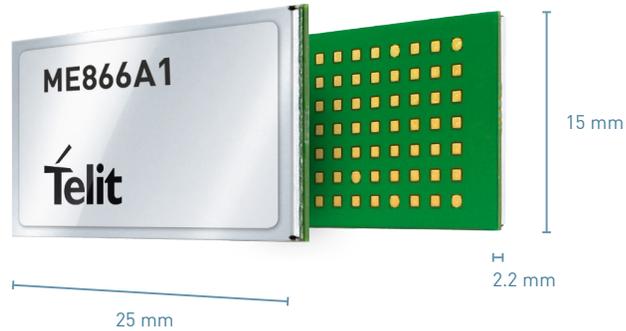


## ME866A1 Series

LTE Cat M1 Embedded



### Product Description

The ME866A1 is the Category M1 evolution of the Telit LE866 Series of LTE modules. Specified in the approved Release 13 of the 3GPP standard, Cat. M1 devices are specifically tailored for IoT applications, offering optimized power consumption and enhanced coverage. In addition, with its ultra compact 15 x 25 mm LGA footprint, the ME866A1 is designed for size sensitive applications.

The LE866 is an LTE UE Category M1 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 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 devices are therefore optimized in cost, size and power consumption compared to higher UE categories. These advantages make the ME866A1 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 ME866A1 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 ME866A1 is offered in two different band configurations for deployment in Verizon Wireless, AT&T and T-Mobile 4G networks; Additional regional variants will follow. 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 life cycle with LTE Cat M1.

### Key Benefits

- Design once and deploy globally, thanks to the xE866 form factor family
- Very small LGA package is ideally suited for low profile integrated solutions, limited real estate application boards, reducing cost in high-volume applications, as well as saving space and weight in portable devices
- 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 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 xE866 nested family includes pin-to-pin compatible 2G, 3G and 4G modules – the GE866, UE866 and LE866 respectively – making it another pillar of the concept “design once and deploy globally”. It enables integrators to develop a single PCB layout for 2G, 3G and 4G Cat. 1 and Cat. M1 technologies.

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## ME866A1 Series

### Product Features

#### Supported bands:

- ME866A1-NV (North America Verizon, 4G-only)
  - Dual band LTE B4/B13
- ME866A1-NA (North America AT&T, 4G-only)
  - Tri band LTE B2/B4/B12
- Single Rx
- LTE UE Category M1
- 3GPP release 13 compliant
- 3GPP Rel. 12 Power Saving Mode (PSM)
- 3GPP Rel. 13 Extended Discontinuous Reception (eDRX)
- 3GPP Rel. 13 Extended coverage
- 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
- SMS
- IPv4/IPv6 stack with TCP and UDP protocol
- SSL

### Data

#### LTE Category M1

- Uplink up to 1 Mbps
- Downlink up to 1 Mbps

### Physical & Environmental

- Small dimensions 15 x 25 x 2.2 mm
- Extended temperature range: -40 to +85 °C

### Interfaces

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

### Approvals

- FCC
- GCF (ME866A1-NV)
- Verizon (ME866A1-NV)
- PTCRB (ME866A1-NA)
- AT&T (ME866A1-NA)

### Electrical

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



### Join the Telit Technical Forum

For a quicker and more rewarding integration experience join the Telit Technical Forum. There you can browse the first open forum covering all IoT topics, get direct support by region (EMEA, North America, Latin America, APAC), take part in this quickly growing IoT community and exchange experiences.