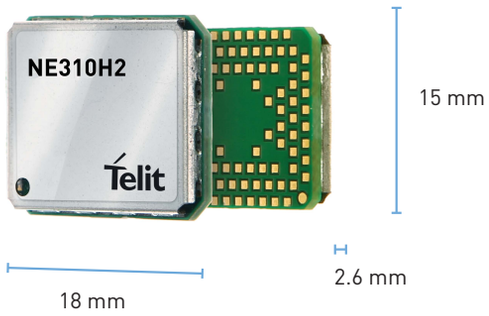
NE310H2

PRELIMINARY

LTE Cat NB2 Embedded



Product Description

Enabling a new generation of massive low-cost IoT device deployments numbering in the hundreds of thousands or millions, the NE310H2 is the NB-IoT only evolution of the brand new Telit xE310 product family. Exceeding market demands for optimized power consumption and enhanced quality of coverage, NB-IoT devices are specifically tailored for low data throughput IoT applications. The NE310H2 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.

NE310H2-W1 LTE UE Cat 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 NB-IoT. These advantages make the NE310H2 ideal for enabling quick implementation of LTE technology where low cost and low power consumption are more relevant than high speed.

The NE310H2 is also backward compatible with 3GPP Release 13 and LTE UE Cat NB1 standard.

The NE310H2 enables enterprises to deploy new small footprint designs across many application areas including utility metering, home and commercial security, devices with limited in-region mobility such as POS and logistics terminals, 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 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 mm2 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 300mm2 to below 200mm2. 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

NE310H2

Variants

	NE310H2-W1
Market	Worldwide
Bands	B1, B2, B3, B4, B5, B8, B12, B13, B17, B18, B19, B20, B26, B28, B66, B71, B85
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Output power	LTE: 23 dBm (Power Class 3)

Product Features

- LTE UE Category 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
- 3GPP Rel.13 Release Assistance feature
- Control via AT commands according to 3GPP TS27.005, 27.007
- SMS over NB-IoT
- IPv4/IPv6 stack with TCP and UDP protocol
- TLS / DTLS
- OMA Lightweight M2M (LWM2M)
- Over-the-Air firmware update

Data

LTE Category NB2 (Rel.14)

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

Environmental

- Extended temperature range

Interfaces

- Dimensions: 15 x 18 x 2.6 mm
- 6 I/O ports
- 1.8V SIM Interface
- USB 1.1 (debug only)
- 3 x UARTs
- SPI
- I2C

Approvals

- RED (planned)
- GCF (planned)
- Others (under evaluation)

Electrical & Sensitivity

- Output power
  - 23 dBm (power class 3)
- Supply voltage
  - Nominal: 3.3 VDC