Telit

NL865H2

PRELIMINARY

LTE Cat NB2   Embedded

NL865H2

Telit

24.4 mm

24.4 mm

2.3 mm
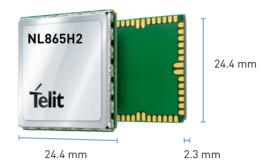
Product Description

The NL865H2 is the LTE Category NB2 (also known as NB-IoT) evolution in the widely deployed Telit xL865 product family. Specified in the Release 14 of the 3GPP standard, LTE Cat NB2 is specifically tailored for low data throughput IoT applications, offering optimized power consumption and enhanced coverage. In addition, with its square 24.4 x 24.4 mm VQFN footprint, the NL865H2 is designed for size sensitive applications. NB-IoT devices are specifically tailored for low data throughput IoT applications. The NL865H2 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 NL865H2 LTE UE Cat NB2 module is optimized in cost, size and power consumption compared to higher UE categories. 3GPP Release 14 further improves these features and also adds techniques to increase the data rate for NB-IoT. These advantages make the NL865H2 ideal for enabling quick implementation of LTE technology where low cost and low power consumption are more relevant than high speed. The NL865H2 is also backward compatible with 3GPP Release 13 and LTE UE Cat NB1 standard.

Key Benefits

- Design once and deploy globally, thanks to the xL865 form factor family
- Compact VQFN 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 NB2 compliant to the latest 3GPP Release 14

AVAILABLE

WORLDWIDE

NL865H2

Variants

	NL865H2-W1
Market	Worldwide
Bands	B1, B2, B3, B4, B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66, B71, B85
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: 24.4 x 24.4 x 2.3mm
- 8 I/O ports
- 1.8V SIM Interface
- USB 1.1 (debug only)
- 2 x UARTs
- I2C

Approvals

- RED
- GCF and others (planning)

Electrical & Sensitivity

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