

TX82

LTE Cat. M1/NB1/NB2/2G



Product Description

The Telit Cinterion® TX82 IoT Module is the ultimate MTC solution delivering global LTE-M and NB-IoT (NB1 and NB2) connectivity with 2G fallback from a single SKU. Offered in the compact “Things” footprint, it is specially engineered for small, battery-operated LPWA cellular devices such as mobile payment terminals, connected sensors, track and trace solutions, metering applications, and monitoring solutions for smart homes, cities and agriculture.

Key features

The highly efficient TX82 delivers global LPWAN connectivity from a single device leveraging mature Rel. 14 second generation Cat. M1/NB1/NB2 and optional 2G for regions where 2G is preferred. The module's unique architecture allows the flexibility to run applications with a host processor or on the module itself leveraging powerful embedded processing, which optimizes the size and cost of your solution. A unique antenna design enables optimal tuning across all LTE and 2G bands which is especially useful for the low (700MHz) and very low bands (600 MHz).

TX82 supports optimized 3GPP power modes including PSM and eDRx revolutionizing design possibilities for battery-operated cellular devices. State of the art security features include trusted identities pre-integrated into the root of the module during manufacturing plus secure key storage and certificate handling to protect the device and data and enable trustful enrollment in cloud platforms. An optional eSIM simplifies manufacturing and logistics by providing remote provisioning for any MNO network in the field with flexible and dynamic subscription updates. All this combined with integrated GNSS support (GPS/ Galileo/ GLONASS) provides a steady stream of timing and location information for precision positioning data anywhere in the world for small tracking devices. What's more, the TX82 is supported by the Telit Cinterion® IoT Suite, an optional service platform that manages the connectivity, lifecycle and security of IoT solutions ensuring continuity and long life.

Things footprint revolutionizes small, battery-operated industrial IoT

The tiny 20.9 x 15.3 x 2.28 mm Things footprint is revolutionizing possibilities for exceptionally small, battery-operated cellular IoT devices. The footprint design features an optimized, pad position and pitch to prevents PCB warpage while taking full advantage of affordable PCB technology. In addition, the position of antennas and ground maximizes RF performance.

AVAILABLE FOR

Worldwide

Telit Cinterion IoT Embedded Processing

The Telit Cinterion TX82 device features an integrated processor with Real-Time Operating System (RTOS) enabling hostless architecture offered with an SDK to build and run your entire application on the small feature-packed module.



Optional eSIM simplifies and secures IoT connectivity

An embedded SIM strengthens security, authenticates devices, encrypts data and supports secure remote cellular connectivity provisioning. It works seamlessly with subscription management solution to manage connectivity for the lifecycle of devices. All this simplifies integration, manufacturing and logistics and lowers TCO.

Connectivity Solutions

NExT™ powered by Telit Cinterion is a cloud native core network. Telit Cinterion is a full tier 1 MVNO, enabling new and enhanced turnkey connectivity solutions and device management services. With this IoT network, you can deploy powerful, intelligent Global roaming with multi-IMSI and localization capabilities (eUICC) on more than 600 mobile carriers in 200+ countries in 2G/3G/4G/CAT-M/ NB-IoT & 5G. The NExTPro management tool provides full visibility, monitoring & analytics.

In addition, Telit Cinterion offers Connectivity Activation, a remote SIM provisioning service that leverages latest eSIM technology to simplify and optimize connectivity provisioning and M(V)NO selection. Connectivity Activation digitalizes SIM provisioning and makes the IoT journey seamless and efficient for your devices, from the factory to the last day of operation.

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Product Features

- 3GPP Rel.14 Compliant Protocol
- LTE Cat. M1/NB1/NB2/2G
- Compatible with Telit Cinterion® Things footprint
- FDD-LTE Bands: 1, 2, 3, 4, 5, 8, 12, 13, 18, 19, 20, 25, 26, 27, 28, 66, 71, 85
- Data only
- LTE Cat.M1
DL: max. 300 kbps, UL: max. 1.1 Mbps
- LTE Cat.NB1
DL: max. 27 kbps, UL: max. 63 kbps
- LTE Cat.NB2
DL: max. 124 kbps, UL: max. 158 kbps
- LTE Power Class 5 (20 dBm)
- eDRX (0.8mA 81.92s eDRx and PSM 4.5µA)
- Embedded IPv4 and IPv6 TCP/IP stack access via AT command, provides: TCP/UDP Client, UDP Endpoint, TCP Listener, HTTP client, FTP client, MQTT client, NTP service, CoAP Client
- Secure Connection with TLS 1.3 / DTLS 1.2
- Secure boot
- Integrated GNSS support (GPS/BeiDou/Galileo/GLONASS)
- 2 high-speed serial interface
- UICC and U/SIM card interface 1.8V (embedded SIM option)
- SPI, I2C, PWM signal line, GPIO's
- ADC interface
- NExT™ connectivity with external SIM
- Connectivity Activation remote SIM provisioning service
- Compliant with GSMA SGP.22 Remote SIM Provisioning (RSP) standard
- Validated against Telit Cinterion NExT SGP.22 eSIMs

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