

●● **LE70-868**

LICENCE-FREE SYSTEM
for Frequencies <1 GHz

Embedded



Product Description

The Telit LE70-868 operates in the 868 MHz ISM license free frequency bands with Tx power up to 1/2 W. It is ideally suited for replacing communication over cables such as RS485 links (Profibus, Modbus) and half-duplex RS232 links (transparent mode), with wireless technology for use in one or two-way data links for up to 10Km in range.

LE modules organize in a "Star Network" topology over a Telit proprietary protocol. They can also be used to create communications networks in a star topology and for long-chain communication with the new smart repeater function.

- Pre-certified RF modules, LGA xE Form Factor, TTL RS232 interface
- Excellent RX sensitivity
- Hayes mode or 'AT' mode for configuration
- Listen Before Talk (LBT) for collision avoidance
- Cyclic wake up: wakes up periodically and listens to the radio link
- AES128 data encryption available
- Repeater mode (bridge function)
- Download Over The Air (DOTA)
- Industrial temperature range

Key Benefits

- xE Form Factor
- Extra-wide area coverage (10Km range)
- LE70-868 is compatible over the air with LE50-868 in G3 868MHz sub band.

Family Concept

The Telit LE family comprises multi-band, multi-channel radio modules operating on an advanced proprietary embedded stack that is easy to integrate and use in point-to-point or star network topologies.

They operate in the 868 MHz bands and feature low power standby mode, efficient wake up on radio and link budget of 142 dB.

These certified, LGA modules provide TTL RS232 interface, integrated digital and analog I/O. The family is pin-to-pin compatible with Telit ZE Family (ZigBee PRO stack), NE Family (Mesh low power) and ME Family (Wireless M-Bus).

Combine your Short Range module with

- Cellular modules
- GNSS modules



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ONE SHOP. NOW, INNOVATE!**



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Product features

- Range: Up to 10.000 m
- up to 128 kB Flash, 4 kB RAM, 2 kB EEPROM
- 32.768 kHz real time clock (RTC), 4 timers
- Configurable output power
- 9 I/O ports max available

Networking

- Frequency: 863 - 870 MHz (EU: 500mW allowed from 869.4 to 869.65 MHz)
- Modulation: GFSK
- Number of channels: 10+1
- Point to point, star network
- ACK
- Addressed Mode
- Repeater Mode: bridge function (line propagation on the long distances)
- Listen Before Talk
- Telemetry
- Analog RSSI
- Cyclic wake up
- Remote CTS/RTS control
- Hayes Mode
- I/O Copy
- Download Over-the-Air
- AES encryption

Optional Features

- LE70-868 modules are available:
 - (a) as compact LGA module with RF pads for antenna
 - (b) with DIP adapter and SMA connector for antenna

Data

- Serial Data Rate: Up to 115.2 Kbps
- Radio Data Rate: from 4.8 kbps to 57.6 kbps

Environmental

- Rectangular 26 x 15 mm, height 3 mm
- Weight 1.7 g
- Temperature: -40°C to +85°C

Interfaces

- Serial Interface: RS232 TTL (Tx, Rx, Cts, RTS)

Electrical & Sensitivity

- Output Power: Up to 27 dBm
- Power Supply: 2.0 to 3.6 V
- Board Consumption at 500 mW:
 - Rx: 25mA
 - Tx: 330mA
- Std-by consumption:
 - external wake-up (interrupt) 1µA
 - cyclic wake-up (internal timer running) 3 µA
- Sensitivity (PER<0,8): -117 dBm



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