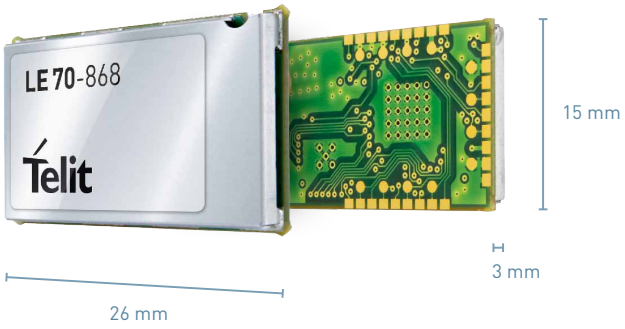
LE70-868

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 27 dBm. 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 10 km 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

- Budget link of 144 dB
- Extra-wide area coverage (10 km range)
- LE70-868 is compatible over the air with LE50-868 on 3G sub band

Family Concept

The Telit portfolio of short range wireless modules is comprised of a wide range of innovative solutions ranging from ready-to-use wireless radio modems to OEM modules and RF design services.

Operating in the license-free ISM frequency bands of 169, 433, 868, 915 MHz, and 2.4 GHz, they are available in both standard air-interface protocols such as wireless M-Bus and ZigBee as well as proprietary low-power, low data rate technologies.

Telit pre-certified short range modules share small dimensions, form factor, and are pin2pin compatible with oneanother, which enables re-use of your design with different modules and air interface technologies as needed to meet your business and environmental requirements. Telit also offers a full set of tools to shorten and streamline your design effort.

Combine your **Short Range** module with

Cellular modules

GNSS modules

www.telit.com

ENABLING THE IoT
IS WHAT WE DO.

LE70-868

Product Features

- Range: Up to 10.000 m
- 128 kB Flash, 8 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: 500 mW, from 869.4 to 869.65 MHz)
  (INDIA: 1W, from 865 to 867 MHz)
- Modulation: GFSK
- Number of channels: 2
  - EU: 11
  - INDIA: 10 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 module is available
  with DIP adapter and SMA connector

Data

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

Environmental

- LGA mount technology, 30 pads, RF pads
  for antenna
- 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: 15 to 27 dBm
- Power Supply: 2.3 to 3.6 V
- Board Consumption at 500 mW:
  - Rx: 25 mA
  - Tx: 335 mA
  - Std-by consumption:
    - external wake-up (interrupt): 1µA
    - cyclic wake-up
      (internal timer running): 2 µA
- Sensitivity (PER ‹ 0,8): -117 dBm

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