NE 70-868

LICENCE-FREE SYSTEM
for Frequencies <1 GHz
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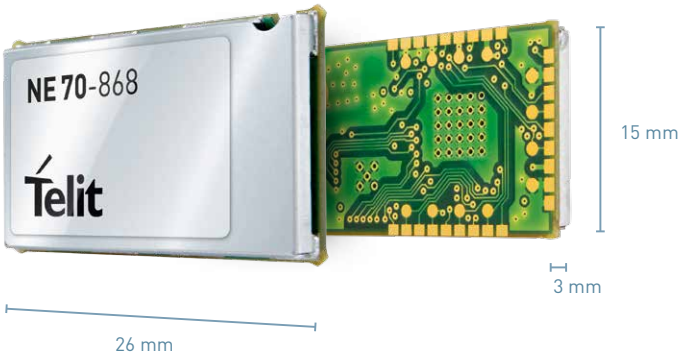

Product Description

Telit NE modules are based on the mesh network concept in the license-free 868 MHz ISM bands. With adjustable output power from 5 mW to 500 mW, NE70-868 modules can reach a range of up to 5000 m in LOS.

Advanced proprietary embedded "Low Power Mesh" stack allows efficient power management on both end nodes and routers, Network latency is defined in the system requirements by setting different synchronous network periods, data rates or message formats, connecting up to 100 end nodes per router in a cluster tree architecture that enables scalability.

The "Low Power Mesh" stack is designed for battery powered sensor networks that can be built automatically and easy to integrate, thus reducing development time and cost for applications in building automation, metering (water, gas, electric), irrigation, tracking, lightning and access control.

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're 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 one-another, 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

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Key Benefits

- Best in class characteristics in sensitivity, standby current, TX consumption, range and size
- The NE70-868 is over the air compatible with low power version NE50-868
- Low Power capabilities also valuable for routers and gateways
- No significant limitation in numbers of units and hops in the network
- Auto build and Auto repair functions
- Telit unique Download Over The Air (DOTA) feature

NE70-868

Product Features

- Range: Up to 5000 m (Ext antenna)
- Output Power: 7 to 27 dBm
- Serial Data Rate: 19.2 Kbps
- Radio Data Rate: 38.4 Kbps
- Sensitivity (PER ‹ 0.8): -110 dBm
- Mesh features

- Ultra low power end point
- Up to 10 hops on the network
- Up to 10 000 device in the network
- Cluster tree
- Auto-association
- Auto-repair
- Configurable network period and synchronous part

Power Requirements

- Power Supply: 2.3 to 3.6 V
- Board Consumption at 500 mW:
  - Rx: ‹ 25 mA
  - Tx: ‹ 330 mA
  - Std-by consumption: external wake-up (interrupt) 1µA

Environmental

- LGA mount technology, 30 pads, RF pads for antenna
- Dimensions: 26 x 15 mm, height 3 mm
- Weight 1.7 g
- Temperature: -40°C to +85°C
- 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: 500mW allowed from 869.4 to 869.65 MHz)
- Channels: 23 (EU: 13 Channels; India: 10 Channels)
- Modulation: GFSK
- Serial Interface: RS232 TTL
- Hayes Mode
- Download Over-the-Air
- Mesh Network
- I/O Copy
- Listen Before Talk

Optional Features

- NE70-868 module is available with DIP adapter and SMA connector

Join the Telit Technical Forum

For a quicker and more rewarding integration experience join the Telit Technical Forum. There you can browse the first open forum covering all m2m topics, get direct support by region (EMEA, North America, Latin America, APAC), take part in this quickly growing m2m community and exchange experiences.

Telit Communications S.p.A.
Via Stazione di Prosecco, 5/B
I-34010 Sgonico (Trieste), Italy
Phone +39 040 4192 200
Fax +39 040 4192 383
E-Mail EMEA@telit.com

Telit Wireless Solutions Inc.
3131 RDU Center Drive, Suite 135
Morrisville, NC 27560, USA
Phone +1 888 846 9773 or +1 919 439 7977
Fax +1 888 846 9774 or +1 919 840 0337
E-Mail NORTHAMERICA@telit.com

Telit Wireless Solutions Inc.
Rua Paes Leme, 524, Conj, 126
05424-101, Pinheiros
São Paulo-SP-Brazil
Phone +55 11 3031 5051
Fax +55 11 3031 5051
E-Mail LATINAMERICA@telit.com

Telit Wireless Solutions Co., Ltd.
8th Fl., Shinyoung Securities Bld.
6, Gukjegeumyung-ro8-gil, Yeongdeungpo-gu
Seoul, 150-884, Korea
Phone +82 2 368 4600
Fax +82 2 368 4606
E-Mail APAC@telit.com

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