

License-Free System for Frequencies <1 GHz

Embedded








LE50-433 RF modules

115.2 Kbps - 25 mW

LE50-868 RF modules

115.2 Kbps - 25 mW



-  **RoHS and WEEE Compliant**
-  **Ultra Low Power Consumption+Std-by Mode**
-  **DOTA - Upgradeable and Configurable Over-the-Air**
-  **Available LGA Format**
-  **TTL RS232 Interface + Digital and Analog I/Os**
-  **2.54 mm DIP Adapter Available**
-  **Embedded In-House Star Network Stack**

Telit LE modules family are the latest generation of multi-band multi-channel radio module with advanced proprietary embedded stack easy to integrate and use in point-to-point or star network communication.

LE50 modules operate in 433 MHz and 868 MHz band with ultra-low power stand by mode, efficient wake up on radio and budget link of 123 dB (119 dB for 433 MHz frequency in EU). Available in LGA format, these pre-certified RF modules provide TTL RS232 interface, integrated digital and analog I/Os and can be integrated into a system, thus reducing development time and cost for applications in building automation, irrigation, tracking, lightning and access control.

LE modules family is also pin-to-pin compatible with Telit ZE Family (ZigBee 2007 and PRO stack), NE Family (Mesh low power) and ME Family (Wireless M-Bus).

Performance LE50-433

- Range: Up to 2000 m
- Output Power: Up to 14 dBm (default for EU 10 dBm)
- Serial Data Rate: Up to 115.2 Kbps
- Radio Data Rate: from 9.6 kbps to 115.2 kbps
- Sensitivity (CER 10^{-3}): -109 dBm

Performance LE50-868

- Range: Up to 2000 m
- Output Power: Up to 14 dBm
- Serial Data Rate: Up to 115.2 Kbps
- Radio Data Rate: from 4.8 kbps to 115.2 kbps
- Sensitivity (CER 10^{-3}): -109 dBm

Power Requirements

- Power Supply: 2.0 to 3.6 V
- Board Consumption at 25 mW:
Rx: 26 mA
Tx: 45 mA
Std-by consumption:
-external wake-up (interrupt) 1µA
-cyclic wake-up (internal timer running) 3 µA

Product Features

- Rectangular 26 x 15 mm, height 3 mm, weight 1.7g
- Temperature: -40°C to +85°C
- up to 128kB Flash, 4 kB RAM, 2kB EEPROM
- 32.768 kHz real time clock (RTC), 4 timers
- Configurable output power
- 9 I/O ports max available

Networking

- Frequency: 433.05 - 434.79 MHz
Channels: 4 to 8
- Frequency: 863 - 870 MHz
Channels: 2 to 60
- Modulation: GFSK
- Point to point, star network
- Serial Interface: RS232 TTL (Tx, Rx, Cts, RTS)
- 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

Order No.

Please contact your Telit representative for order codes and further information.

Making machines talk.®



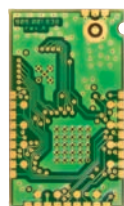
Embedded

LE 50 - 433
RF modules

LE 50 - 868
RF modules



(a)



(a)



(a)

actual size

Optional Features

- LE50 RF modules are available:
 - (a) without integrated antenna
 - (b) in DIP version

License-Free System
for Frequencies <1 GHz

Compact

LE 50 - 433
RF modules-Interface
115.2 Kbps - 25 mW

LE 50 - 868
RF modules-Interface
115.2 Kbps - 25 mW



(b)



Demo Kit & Development Tools

Demo kits with development tools are available for testing and to assist with integration into the final application.

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Distributed by:



Complementary Gateway solution GG863-SR that integrates Short Range and GSM/GPRS capabilities with ARM9 - Linux OS core. GG863-SR can extend the network range, establishing a direct connection between the IP host and gaining full control of the Short Range Network over IP.



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