

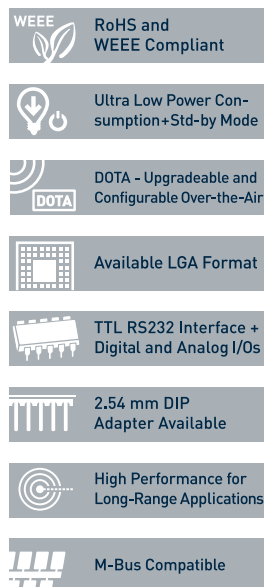
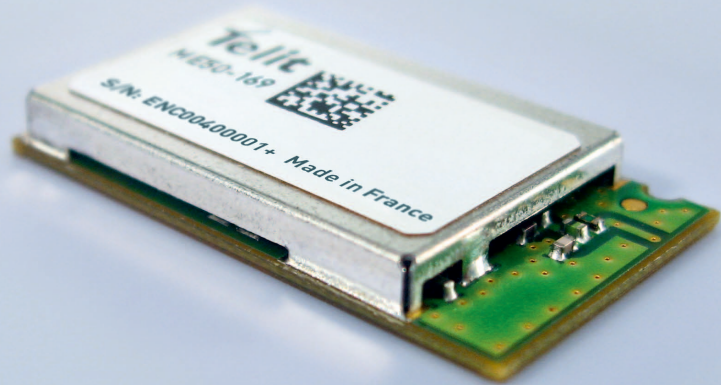
License-Free System
for Frequencies <1 GHz

Wireless M-Bus EN13757

Embedded

ME50-169
RF modules

38.4 Kbps - 25 mW



Telit ME50-169 modules are the latest generation of Wireless M-Bus products compliant with EN13757 part 4 Wireless M-Bus standard optimized for one- or two-way data exchange with gas, water, heat and electricity meters and concentrators.

ME50-169 modules operate in 169MHz band with ultra-low-power for maximum battery life and have a 134 dB budget link, suited for long range applications.

Available in LGA format, these pre-certified RF modules provide a TTL RS232 interface, integrated digital and analog I/Os and can easily be integrated into a system, thus reducing development time and cost.

ME50-169 is also pin-to-pin compatible with ME50-868 (Wireless M-Bus 868MHz), Telit ZE Family (ZigBee 2007 and PRO stack), NE Family (Mesh low power) and LE Family (basic point to point, broadcast stack).

Performance

- Range: Up to 5000 m
- Output Power: 25 mW, 14 dBm
- Serial Data Rate: Up to 115.2 Kbps
- Radio Data Rate: 2.4, 4.8 and 38.4 kbps
- Sensitivity (BER<10⁻²): -120dBm @ 2.4 kbps

Power Requirements

- Power Supply: 2.0 to 3.6 V
- Board Consumption at 25mW:
Rx: <33 mA
Tx: <55 mA
Std-by consumption:
-external wake-up (interrupt) 1µA
-cyclic wake-up (internal timer running) 3µA

Product Features

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

Wireless M-Bus:

- EN13757-4 supported N mode

Networking

- Frequency: 169.400 -169.475 MHz
- Channels: 7 (6 channels 12,5 kHz bandwidth 2,4 kbps FSK or 4,8 kbps GMSK; 1 channel 50kHz bandwidth, 38,4kbps. 4GFSK)
- Modulation: GFSK, GMSK, 4GFSK
- Serial Interface: RS232 TTL (Tx, Rx, Cts, RTS)
- Hayes Mode
- Encryption AES and NRZ
- Download Over-the-Air

Order No.

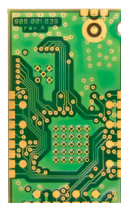
Please contact your Telit representative for order codes and further information.



Making machines talk.®



(a)



(a)



(a)

actual size

Optional Features

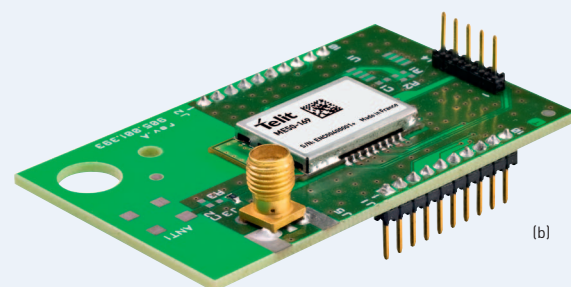
- ME 50-169 modules are available:
 - (a) without integrated antenna
 - (b) in DIP version

License-Free System for Frequencies <1 GHz

Compact

ME50-169 RF modules-Interface

38.4 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.



Complementary Gateway solution GG863-SR that integrates Short Range and GSM/GPRS capabilities with ARM9 - Linux OS core. GG863-SR can extend the wireless M-Bus 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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