

License-Free System
for Frequencies <1 GHz









Wireless M-Bus EN13757

Embedded

ME70-169
RF modules

19.2 Kbps - 1 W



-  **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**
-  **High Performance for Long-Range Applications**
-  **M-Bus Compatible**

Telit ME70-169 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.

ME70-169 modules operate in 169MHz band with high RF power transmission and with ultra-low-power for maximum battery life and have a 150 dB budget link, suited for very long range applications.

An additional, and remarkable feature is that ME70-169 gives 1W output power with a single 3.3V power supply, allowing an easy interfacing with application power supply.

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.

ME70-169 has the same form factor, the same pinout and is over the air compatible with ME50-169. In addition it has the same form factor and is 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 25 km
- Output Power: up to 1W (30dBm)
- Serial Data Rate: Up to 115.2 Kbps
- Radio Data Rate: 2.4, 4.8 and 19.2 kbps
- Sensitivity (BER<10⁻²): -120dBm @ 2.4 kbps

Power Requirements

- Power Supply: 2.3 to 3.6 V
- Board Consumption:
 - Tx: 475mA (at 500mW)
 - 650mA (at 1W)
 - Rx: 34mA
- Std-by consumption:
 - external wake-up (interrupt) 2 µA
 - cyclic wake-up (internal timer running) 4 µA

Product Features

- Rectangular 26 x 15 mm, height 3 mm, weight 1.7 g
- Temperature: -40°C to +85°C
- 128 kB 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)

Optional Features

- ME70-169 modules are available:
 - without integrated antenna
 - in DIP version



(a)



(a)

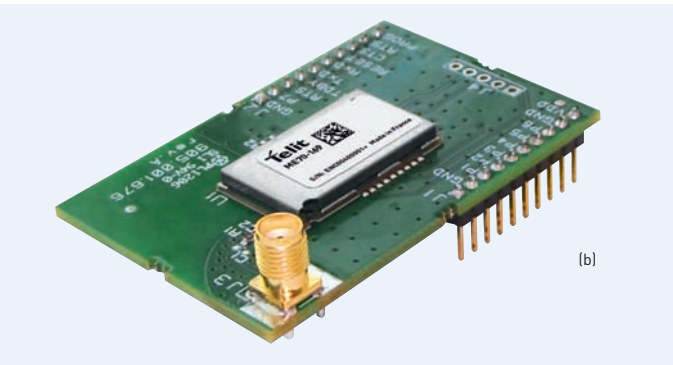
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Compact

ME70-169
RF modules-Interface

19.2 Kbps - 1 W



(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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