







Product Description

The ZE51-2.4 and ZE61-2.4 modules operate in the 2.4 GHz ISM license free frequency bands with TX Power up to 2.5mW (ZE51) and 100mW (ZE61). ZE modules run the Zig-Bee® communication protocol (based on the IEEE 802.15.4 standard) widely adopted in a range of markets such as home automation and control, building automation, AMR, and telecom applications

- Certified RF modules, LGA xE Form Factor, TTL RS232 interface
- Telit developed ZigBee PRO protocol (ZigBee Certified) and Telit Demo profile
- Telit developed Smart Energy 1.1 (IHD&ESI certified) and Home Automation profiles
- Very low power consumption
- Custom development and integration
- Excellent RX sensitivity
- Download Over The Air (DOTA)
- Industrial temperature range

Key Benefits

- Application profiles for ZigBee Pro developed by Telit, integrators can focus on the application
- Wide (ZE51) or and very wide (ZE61) area coverage
- Low consumption for battery powered applications
- Select from low-power (ZE51-2.4) and high-power (ZE61-2.4) solutions with a single design

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









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Product features

- Performance ZE51
 - Range: Up to 1 km (Ext antenna, LOS)
- Performance ZE61
 - Range: Up to 4 km (Ext antenna, LOS)
- 256 kB Flash memory, 8 kB SRAM, 8 kB EEPROM for non-volatile application data storage
- 32.768 kHz real time clock (RTC), 4 timers
- Configurable output power

Networking

- Frequency: 2400 2483.5 MHz
- Channels: 16
- Modulation: QPSK
- Technology: DSSS
- Hayes Mode
- · Download Over-the-Air

Optional Features

- ZE51-2.4 and ZE61-2.4 modules are available:
 - (a) as a compact SMD component with integrated antenna
 - (b) as a compact SMD component without integrated antenna
 - (c) in DIP version with integrated antenna
 - (d) in DIP version with SMA connector for external antenna
 - (e) as a USB dongle (only ZE51-2.4)

Data

ZE51-2.4

- Serial Data Rate: Up to 115.2 Kbps
- Radio Data Rate: 250 Kbps

7F61-2 4

- Serial Data Rate: Up to 115.2 Kbps
- Radio Data Rate: 250 Kbps

Environmental

- Rectangular 26 x 15 mm, height 3 mm
- Temperature: -40°C to +85°C

Interfaces

• Serial Interface: RS232 TTL (Tx, Rx, Cts, RTS)

Approvals

- Zigbee certified
 - Telit Zigbee PRO Stack: Yes
- ZigBee Profiles
 - Smart Energy 1.1 (IHD & ESI) ZigBee Certified
 - Home Automation
 - Telit Demo Profile
- CF certified
- FCC/IC certififed
- Anatel certified.
- Compliant with ARIB STDT66 (Japan)

Electrical & Sensitivity

7F51-2.4

- Output Power: 2.5 mW, 4 dBm (ZE51)
- Power Supply: 2 to 3.6 V
- Board Consumption:
- Rx: 26 mA
- Tx: 35 mA
- Std-by: 2 μA
- Sleep: 1µA
- Sensitivity (PER=1%): -97 dBm (ZE51)

ZE61-2.4

- Output Power: Up to 100 mW, 20 dBm (ZE61)
- Power Supply: 2 to 3.6 V
- Board Consumption:
 - Rx: 31 mA
- Tx: 150 mA
- Std-by: 2,5 μA
- Sleep: 1,5 μA
- Sensitivity (PER=1%): -100 dBm (ZE61)



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Telit Communications S.p.A. Via Stazione di Prosecco, 5/B

I-34010 Sgonico (Trieste), Italy +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 Sao Paulo-SP-Brazil

Phone +55 11 3031 5051 +55 11 3031 5051 E-Mail LATINAMERICA@telit.com Telit Wireless Solutions Co., Ltd. 12th Fl., Shinyoung Securities Bld. 34-12, Yeouido-dong, 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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