

THE FASTEST WAY TO WIRELESS

Based on Texas Instruments' leading edge 802.15.4 SoC & Z-Stack™ technology, the ZB2430 family of wireless modules is one of the most powerful ZigBee™-compliant solutions in the market today. It provides OEMs with industry-leading 2.4GHz module performance in low power conservation, ease of integration, range, features, and functionality.

ZB2430 is ideal for power-restricted or battery-operated applications. Its receive and power-down performance offer OEMs the lower power consumption of any comparable transceiver module. Since it operates in the 2.4 GHz ISM band, the modules can be used globally--allowing OEMs to standardize on a single platform. Although the IEEE 802.15.4 (PHY & MAC) and ZigBee stack are industry standards, our flexible approach allows OEMs to customize a solution specific to application requirements.

With the embedded Z-stack, ZB2430 is aimed squarely at secure, low-power mesh network applications. Modules are offered as Coordinators, Routers, End Devices or Commissioners. Network scan, remote configuration, dynamic routing, discovery, security...all unleash the full power of ZigBee. The Development Kit platform and test utility allow the OEM to explore the best of ZigBee straight out of the box.

FEATURES

- Outstanding power consumption
- Reliable ZigBee™ mesh architecture
- 2.4GHz ISM band for global applications
- Temperature sensor
- Long-range performance
- Configurable GPIO, ADC
- Over-the-air download (OAD) firmware updating capability

APPLICATIONS

- Automated meter reading
- Irrigation systems
- Medical devices
- ePOS

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ZB2430 supports ZigBee's MESH architecture. Each system consists of a Coordinator, Router, Commissioner and optional End Devices.

COORDINATOR

- a) One coordinator per network
- b) Scans to find available channel
- c) Establishes a network
- d) Maintains routing tables
- e) Communicates with any device type

ROUTER

- a) Maintains routing tables
- b) Communicates with any device type
- c) Extends range of network by routing data over multiple hops

END DEVICE

- a) Communicates with any device type
- b) Supports sleep modes
- c) Dedicated to parent (Router or Coordinator)

COMMISSIONER

- a) One Commissioner per network
- b) Server module for OAD firmware upgrades
- c) Required for OAD ability

ORDERING INFORMATION

Coordinator	Z100S1*FC
Router	Z100S1*FR
End Device	Z100S1*FE
Commissioner	Z100S1*FM
Coordinator	Z040S1*FC
Router	Z040S1*FR
End Device	Z040S1*FE
Commissioner	Z040S1*FM

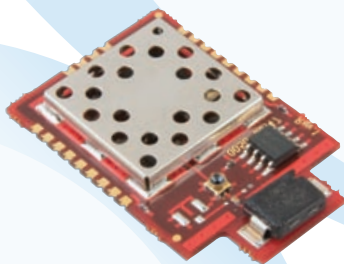
* = A for integrated antenna; U for u.FL connector (external antenna)

Parameter	Z100S1*	Z040S1*
Form Factor	Surface Mount	Surface Mount
Output Power	100mW	40mW
Frequency	2400-2483.5 MHz	2400-2483.5 MHz
Outdoor Range	4.8 km (ext antenna)	1.6 km (ext antenna)
Indoor Range	400m	160m
Receive Sensitivity	-100 dB typical	-100 dB typical
Serial Data Rate	Up to 115 bps	Up to 115 bps
RF Baud Rate	250 kbps	250 kbps
Temperature Range	-40° C to +85° C	-40° C to +85° C
Size	25.4mm x 39 mm x 3.6 mm	25.4mm x 39 mm x 3.6 mm
Serial Interface	3V TTL	3V TTL
Power Consumption:		
Tx	140mA@ 3.3V +18dBm	95mA@ 3.3V +14dBm
Rx	44mA @ 3.3V	30mA @ 3.3V
Sleep	7.6 uA	7.6 uA
Antenna Options	Integrated 2dBi ceramic antenna, u.FL connector for external antenna	Integrated 2dBi ceramic antenna, u.FL connector for external antenna
Approvals*	FCC/IC	CE

*for additional country approvals, contact us for more information.

Development Kit – External antenna	SDK-Z100S1UF
Development Kit - Integrated antenna	SDK-Z100S1AF
Development Kit – External antenna, CE	SDK-Z040S1UF
Development Kit - Integrated antenna, CE	SDK-Z040S1AF
Development Kit – External antenna OAD	SDK-Z100S1UF-M
Development Kit - Integrated antenna OAD	SDK-Z100S1AF-M
Development Kit – External antenna, CE, OAD	SDK-Z040S1UF-M
Development Kit - Integrated antenna, CE, OAD	SDK-Z040S1AF-M

Development Kit include one Coordinator module, two router modules and two end devices.



LWS-SPEC-ZB2430 0209

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