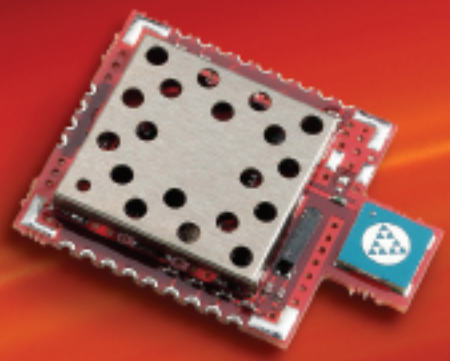
The fastest way to wireless.

AeroComm's new ZB2430 module, based on Texas Instruments' leading edge 802.15.4 SoC & Z-Stack™ technology, is one of the most powerful ZigBee-compliant solutions on the market today. The ZB2430 provides OEMs with industry-leading 2.4GHz module performance in low power consumption, integration, long range, features and functionality.



ZB2430 is ideal for power-restricted or battery-powered applications. Its receive and power-down mode performance offers OEMs the lowest power consumption of any comparable transceiver module. Since the ZB2430 works in the ISM band, the module can be used globally—allowing OEMs to standardize on one platform for their end products. Although the IEEE 802.15.4 (PHY & MAC) and ZigBee stack are industry standards, AeroComm's flexible "ZigBee Your Way" approach allows OEMs to customize a solution that best meets their application needs.

With the embedded Z-stack firmware, ZB2430 is aimed squarely at secure, low-power, mesh network applications. Modules are offered as Coordinators, Routers or End Devices. Network scan, auto-configuration, dynamic routing, discovery, security... all enable the Mesh network. Additionally, the 128kB of embedded Flash provides room for larger, more complex application profiles. The GUI based utility and test software allow an OEM to easily configure and optimize.

Zigbee™ Your Way™

- *Market's first SoC ZigBee compliant module.*
- *Best-in-class power-draw performance.*
- *Reliable ZigBee mesh architecture.*
- *2.4 GHz ISM band for global applications.*
- *Long range performance.*
- *128 bit AES.*
- *128 kB Flash memory.*
- *Battery monitor, temperature sensor, timer.*
- *GPIO, ADC, DAC*
- *"ZigBee Your Way" customizable solutions!*

Applications

- **Building controls**
- **Sensors & data**
- **HVAC**
- **Lighting systems**
- **Home automation**
- **Meter reading**
- **Energy management**
- **Security & access**
- **Agriculture & irrigation**
- **Asset management**
- **Medical equipment**
- **Light industrial**

Easy Integration for Any Application

- ✓ IEEE 802.15.4 & ZigBee compliant
- ✓ Modular solution
- ✓ Serial interface
- ✓ Utility & test software
- ✓ Development kits & technical support
- ✓ AT Commands
- ✓ FCC Part 15 & ETS 300-328 compliant

Specifications

PARAMETER	ZB2430-D	ZB2430-Q
Interface	**Surface-mount**	**Surface-mount or pluggable**
Frequency	2400-2483.5 MHz	2400-2483.5 MHz
RF Data Rate	250 Kbps	250 Kbps
Serial Interface Options	3V TTL	3V TTL
Serial Interface Data Rate	Up to 115.2 Kbps	Up to 115.2 Kbps
Variable Output Power	**-20 to +2 dBm**	**+10 to +20 dBm**
Power Consumption		
Tx	25 mA @ 3.3 V, 0 dBm (conducted)	140 mA @ 3.3 V, +18 dBm (conducted)
Rx	27 mA @ 3.3 V	27 mA @ 3.3 V
Standby	≤ 300uA	≤ 300 uA
Sleep	≤ 1 uA	≤ 1 uA
Hibernate	≤ 0.7 uA	≤ 0.7 uA
Security	128 bit AES & SSP	128 bit AES & SSP
Sensitivity (BER 10^{5})	**-94 dB typical**	**-99 dB typical**
Voltage	3.0 - 3.5V	3.0 - 3.5V
Indoor Range	40 meters	200 meters
Outdoor Range	135 meters	4.8 kilometers
Temperature	-40° to +85° C	-40° to +85° C
Dimensions	25.4 x 34.3 x 5.5 mm	25.4 x 34.3 x 5.5 mm
Antenna	**Chip antenna**	**U.FL connector or chip antenna**

AEROCOMM
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ZigBee Communication

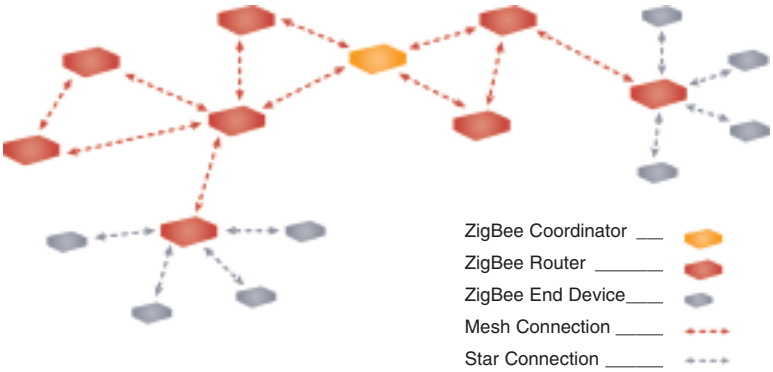
ZB2430 supports mesh architecture. Each system consists of a Coordinator, Router, and optional Reduced-function End Devices.

Coordinator
- One coordinator per network
- Scans to find available channel
- Establishes a network
- Maintains routing tables
- Communicates with any device type

Router
- Multiple routers possible
- Communicates with Coordinator, Router and RFEDs
- Scans and joins active channel; allows another device to join

End Device
- Communicates with Coordinator & Routers only
- Can be powered down
- Dedicated to parent (Router or Coordinator)

Common Capabilities
- Service and device discovery
- Unicast and/or broadcast
- Binding



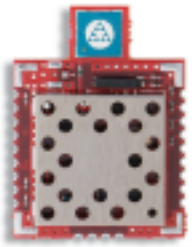
ZigBee™ Your Way™ Defined...

Custom features are available to qualified OEMs. Please contact the AeroComm factory for details.
- Optional LNA/PA
- Chip or external antenna
- Serial (232/485/422) or USB
- Location engine
- H/W only (create your own profile)
- Over the air download (future option)
- Miniature SMT or pluggable

Placing Orders

Select features from the list (right) to identify the appropriate part number (left). More product lines are available for industrial & commercial applications. Contact AeroComm's Sales Team for details: toll-free 1-800-492-2320, email sales@aerocomm.com.

	part	(a)	(b)	(c)	(d)	(e)
"D" Version	ZB243__	–	**D** –	__	– **S**	– __
"Q" Version	ZB243__	–	**Q** –	__	– __	– __



ZB2430, Actual Size

(a)
- **0** = Standard
- **1** = Location Engine

(b)
- **D** = Low power (2mW)
- **Q** = High power (100mW)

(c)
- **C** = Coordinator
- **R** = Router
- **E** = End Device

(d)
- **S** = Surface mount
- **X** = Pluggable

(e)
- **A** = Chip antenna
- **U** = U.FL antenna