ZigBee®Alliance
Wireless Control That Simply Works

Features At-A-Glance

Feature	ZigBee Feature Set	ZigBee PRO Feature Set
Network Scalability	Easily supports networks of hundreds of devices	Advanced support for networks of thousands of devices
Fragmentation	O	X
Frequency Agility	O	X
Channel Selection	X	X
Automated Device Address Management	X	X+
Group Addressing	X	X+
Wireless Commissioning	X	X+
Centralized Data Collection	X	X+
Device Maintenance & Network Recovery	X	X
Group Broadcasts	X	X
Compatibility	Devices can participate in ZigBee and ZigBee PRO networks	Devices can participate in ZigBee and ZigBee PRO networks
AES128 Encryption/ Authentication/ Trust Centers	X	X
IEEE 802.15.4 Physical Radio	X	X
Global Operation in 2.4 GHz plus 915MHz Americas / 868 MHz Europe	X	X
Single-hop Extended Range - up to Hundreds of Meters	X	X
Reliable Self-Healing Mesh Network	X	X
Ultra Low-Power, Long Battery Life	X	X
Low Cost	X	X
Network Traffic Load	Average	Increased

Legend:
X – Standard
+ – Optimized
O – Optional

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Features & Benefits

Feature	Definition	Benefit	ZigBee Feature Set	ZigBee PRO Feature Set
Network Scalability	*Number of devices in a single network. ZigBee also allows multiple networks to co-exist*	Feature sets simplify network development depending on user needs	Easily supports networks of hundreds of devices	Advanced support for networks of thousands of devices
Fragmentation	*Automatically handles larger messages*	Ability to divide longer messages and enable interaction with other protocols and systems	Optional	Included
Frequency Agility	*Ability to automatically compensate for RF interference*	Ability for network to dynamically change channel if interference arises for long-term, worry free operation	Optional	Included
Channel Selection	*Automatically selects the best channel at start-up.*	Avoids interference and ensures network has best channel to operate	Included	Included
Automated Device Address Management	*Automatic address assignment and route establishment*	No-touch deployment with automatic address assignment, route establishment along with supporting configuration tools	Included	Included; plus optimization for larger networks and support for additional network management
Group Addressing	*Enables OEMs to define groups of devices, while simultaneously allowing individual devices to belong to multiple groups*	Allows the single push of a button to turn off all lights in a single room, floor or home	Included	Included; plus traffic optimization for larger networks
Wireless Commissioning	*Allows for creation of new setup tools to facilitate adding devices to a network*	New setup tools can be used to bind specific devices, such as a light fixture and a corresponding switch together, and professional installers may use the tools to modify a network on a larger scale	Included	Included; plus support for secure commissioning
Centralized Data Collection	*Performance and status reporting to central device*	All devices in a building may report periodic status to a central gateway or base station	Included	Included; plus optimization for larger networks

ZigBee Specification

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Features & Benefits

Feature	Definition	Benefit	ZigBee Feature Set	ZigBee PRO Feature Set
Device Maintenance & Network Recovery	*Device type data can be stored in another network device*	When a device is replaced, the information can be easily restored to the new device without recommissioning the network	Included	Included
Group Broadcasts	*Targeted broadcasts to devices by status or type*	Broadcasts can be sent only to routers, awake devices or sleeping devices allowing easier device management	Included	Included
Compatibility	*Devices work together*	Device flexibility increases ease of installation and long-term operation	Devices can participate in ZigBee and ZigBee PRO networks	Devices can participate in ZigBee and ZigBee PRO networks
AES128 Encryption/ Authentication/ Trust Centers	*Wireless data security for maximum protection*	Trust Centers automate key management	Included	Included
IEEE 802.15.4 Physical Radio	*International standards-based two-way radio*	Global standard ensures solid performance	Included	Included
Global Operation in 2.4 GHz plus 915MHz Americas / 868 MHz Europe	*ZigBee supported radio frequencies*	Approved for convenient, license-free operation in most of the world	Included	Included
Single-hop Extended Range - up to Hundreds of Meters	*Single link range between two devices*	Added range and robustness for outdoor or challenging indoor environments	Included	Included
Reliable Self-Healing Mesh Network	*ZigBee network architecture*	Mesh robustness increases convenience, overall coverage area, and reliability	Included	Included
Ultra Low-Power, Long Battery Life	*Efficient radio transmission and power usage*	Battery life of 5 to 10 years depending on battery and usage	Included	Included
Low Cost	*Wireless design and use*	Compared to other wireless technology or wired solutions	Included	Included
Network Traffic Load	*Expected amount of data on network*	Network algorithms balanced for load requirements	Average	Increased