

## 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
Green Power <b>*New!*</b>	-	O
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*

## Features & Benefits

Feature	Definition	Benefit	ZigBee Feature Set	ZigBee PRO Feature Set
<b>Network Scalability</b>	<i>Number of devices in a single network. ZigBee also allows multiple networks to co-exist</i>	Feature sets simplify network development depending on user needs	<b>Easily supports networks of hundreds of devices</b>	<b>Advanced support for networks of thousands of devices</b>
<b>Fragmentation</b>	<i>Automatically handles larger messages</i>	Ability to divide longer messages and enable interaction with other protocols and systems	<b>Optional</b>	<b>Included</b>
<b>Frequency Agility</b>	<i>Ability to automatically compensate for RF interference</i>	Ability for network to dynamically change channel if interference arises for long-term, worry free operation	<b>Optional</b>	<b>Included</b>
<b>Green Power</b> <b>*New!*</b>	<i>Add energy harvesting devices to ZigBee PRO 2012 networks</i>	Extends ZigBee control to areas without a source of power.	<b>Not offered</b>	<b>Optional</b>
<b>Channel Selection</b>	<i>Automatically selects the best channel at start-up.</i>	Avoids interference and ensures network has best channel to operate	<b>Included</b>	<b>Included</b>
<b>Automated Device Address Management</b>	<i>Automatic address assignment and route establishment</i>	No-touch deployment with automatic address assignment, route establishment along with supporting configuration tools	<b>Included</b>	<b>Included; plus optimization for larger networks and support for additional network management</b>
<b>Group Addressing</b>	<i>Enables OEMs to define groups of devices, while simultaneously allowing individual devices to belong to multiple groups</i>	Allows the single push of a button to turn off all lights in a single room, floor or home	<b>Included</b>	<b>Included; plus traffic optimization for larger networks</b>
<b>Wireless Commissioning</b>	<i>Allows for creation of new setup tools to facilitate adding devices to a network</i>	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	<b>Included</b>	<b>Included; plus support for secure commissioning</b>
<b>Centralized Data Collection</b>	<i>Performance and status reporting to central device</i>	All devices in a building may report periodic status to a central gateway or base station	<b>Included</b>	<b>Included; plus optimization for larger networks</b>

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