

# About Z-Wave Technology



The Z-Wave protocol is an interoperable, wireless, RF-based communications technology designed specifically for control, monitoring and status reading applications in residential and light commercial environments. Mature, proven and broadly deployed (with over 40 million products sold worldwide), Z-Wave is by far the world market leader in wireless control, bringing affordable, reliable and easy-to-use 'smart' products to many millions of people in every aspect of daily life.

For a more complete look at Z-Wave technology for non technologists, and to learn more about Z-Wave's role as a key enabling technology for the Internet of Things and connected objects, please visit [www.z-wave.com](http://www.z-wave.com).

## Z-Wave Technology Essentials:

- Low Powered RF communications technology that supports full mesh networks without the need for a coordinator node
- Operates in the sub-1GHz band; impervious to interference from Wi-Fi and other wireless technologies in the 2.4-GHz range (Bluetooth, ZigBee, etc.)
- Designed specifically for control and status apps, supports data rates of up to 100kbps, with AES128 encryption, IPV6, and multi-channel operation
- The Z-Wave PHY and MAC layers are defined by ITU-T Recommendation G.9959.
- The frequencies used by Z-Wave are listed in Z-Wave Alliance Recommendation ZAD12837, "[Z-Wave transceivers - Specification of Spectrum Related Components](#)"
- Full interoperability through layer 6 with backwards compatibility to all versions.
- Successfully bridged and trialed with OpenADR, SEP 1, SEP 1.1 and other Smart Energy protocols.
- Shares the same position in the NIST / SGIP Catalog of Standards as the IEEE 802.11 and 802.15 and 802.16 families
- For more in-depth technical materials on Z-Wave, please visit our [Developer Section](#), or consider [membership in the Z-Wave Alliance](#).

## Z-Wave Market Facts:

- Over 1350 interoperable products available, 35 million Z-Wave products worldwide.
- Extensively used in residential systems throughout numerous business spectrums, including ADT, Alarm.com, AT&T, DSC, GE/Interlogics, Honeywell, Lowes, Verizon, Vivint, and other prominent service providers worldwide.
- Found in thousands of hotels, cruise ships, and vacation rentals; including 65,000 devices in the flagship Wynn Hotel in Las Vegas, NV.
- Actively supported by over 325 manufacturers and service providers throughout the world.
- Designed specifically for control, monitoring and status operations; no interference from Wi-Fi or other 2.4GHz wireless technologies in similar band.