

# Wi-Fi HaLow has low power, long range advantages

January 5 2016, by Nancy Owano

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The Wi-Fi Alliance has announced the Wi-Fi HaLow designation for products incorporating IEEE 802.11ah technology. All in all, said tech watchers, this is a new low-power and long-range version which carries key advantages.

Wi-Fi HaLow extends Wi-Fi into the 900 MHz band, supporting low power connectivity needed for applications including sensor and wearables .

Matt Hamblen senior editor, *Computerworld*, said this is allowing it to more easily penetrate walls and barriers, with the propagation capabilities of low-frequency radio waves. Hamblen said "Its range will be nearly double today's available Wi-Fi, with some estimates ranging as high as 1 kilometer, a distance equal to 3,280 [feet](#)."

What kinds of connected things will see the impact? Hamblen said "everything from smart homes and wearables to smart cities and connected cars where thousands of battery-operated sensors can be connected to a single Wi-Fi Access Point (AP)."

Wi-Fi HaLow will operate in the unlicensed wireless spectrum below 1GHz; Hamblen translated what Wi-Fi HaLow means in real-world settings.

"A sensor on a water pump or a water leak detector in a basement of an industrial plant or home would benefit from Wi-Fi HaLow, for example, because the signal could carry a 900Mhz signal through a concrete wall, at low power, to an [access point](#) and on to the rest of the network in the cloud."

Also in his article, Kevin Robinson, vice president of marketing for the Wi-Fi Alliance, illustrated another result where, in a "smart city, you may want to connect smart parking meters to a centralized access point. The low-power capability for nodes and Access Points means less power to send transmissions, which means the devices can sweep longer, which is important for a smoke detector or a leak detector. Wi-Fi HaLow will allow devices to run for months or years on their batteries."

Fitting that the announcement was made as interest gears up for the CES event, as Alliance members see Wi-Fi HaLow, with its low power capabilities, as enabling Wi-Fi to maintain its critical role in the [IoT](#).

The Alliance announcement made note of this: "In particular, Wi-Fi Alliance is developing a new secure and simple way to connect and configure devices without a display or input mechanisms, as is the case with many Smart Home devices today. In addition to an expanding list of programs to address unique market needs, Wi-Fi Alliance recently announced a new membership category that will enable a wider variety

of devices not historically thought of as high-tech, including vacuums and door knobs, to include certified Wi-Fi [connectivity](#)."

Wi-Fi HaLow is based on the pending IEEE 802.11ah specification. The IEEE finalization of 802.11ah is far along and already into what's known as the technical phase, said Hamblen in *Computerworld*.

Executive Editor at *BGR*, Zach Epstein, underscored the importance of the announcement. Reflecting on CES 2016, he said that with all the devices on board at the show, "one of the most exciting announcements from CES 2016 so far concerns the means by which all of these new devices will [communicate](#)."

The Wi-Fi Alliance is a global non-profit industry association.

**More information:** — [www.wi-fi.org/news-events/news...ng-range-wi-fi-halow](http://www.wi-fi.org/news-events/news...ng-range-wi-fi-halow)

— [www.wi-fi.org/discover-wi-fi/wi-fi-halow](http://www.wi-fi.org/discover-wi-fi/wi-fi-halow)

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