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Wireless Charging is Really Happening

Wi-Charge Makes Wireless Power Charging a Reality in the Smart Home

By Jeremy Glowacki

Up until recently, the wireless smart home has been a bit of a myth. Despite developments in Wi-Fi and Bluetooth, the final hurdle has always been that pesky power cord. Soon, however, wireless power technology may finally become a reality.

Wi-Charge (pronounced “Why Charge”), an Israeli company with its U.S. headquarters in Baltimore, has already developed a wireless smart lock solution with Alarm.com and Allegion’s Schlage brand that eliminates the need for batteries. Additionally, Wi-Charge’s Wireless Power Kit for Amazon Echo and Google Home won an Innovation Award at CES 2019 for its ability to “un tether” smart speakers from a power outlet.

As Wi-Charge Chief Marketing Officer Yuval Boger explains it, Wi-Charge has set out to improve and simplify the user experience with smart home devices by investing in innovation and exploring the possibility of integrating their technology into technologies such as smart locks, smart speakers, and smart thermostats.

“Power delivery to smart home devices such as battery-powered smart locks, cameras, and sensors is an issue for manufacturers and consumers alike,” he said. “The existing choices between the convenience of batteries and the power of wired devices limits the features that can be added by developers and used by consumers. Consumers are also forced to deal with low battery notifications and battery replacements or find that devices may lack features when not plugged into an AC outlet.”

Wi-Charge uses infrared (IR) light to deliver energy safely and efficiently across the room. “What that means for companies is that they don’t need batteries and wires,” Boger explained. “They now receive power from a small photo cell that connects to their device. They never have to replace batteries.”

Similar to a laser pointer, IR sends a direct beam of light from one side of the room to the other, ensuring that the receiver collects 100 percent of the energy transmitted.

“We can deliver a couple watts across the room,” Boger explained. “For perspective, if we deliver half a watt to a cell phone, then that phone could be on and playing music endlessly without needing to charge. Any time I deliver more than half a watt, I can contribute to the battery life.”

In a typical setup, the Wi-Charge energy transmitter, which is about the size of a beer can, is connected to a power outlet. That transmitter sends the infrared signal to the devices in need of a charge. It is capable of charging multiple devices, as long as the aggregate power requirement is within the system’s threshold. The distance between transmitter and receiver can be as far as away as 20 feet, within line-of-sight.

Wi-Charge-branded products are not yet in mass production, but expect to find them on Amazon in the early part of 2020, along with products from other OEM partners. “Wi-Charge is collaborating with innovators in the smart home security and automation ecosystem industries to enable the next generation of smart home devices,” Boger said. “Untethered, wireless power will usher in a new era of device and use cases for consumers that have previously been limited or restricted by power cables and batteries.”

Wi-Charge is collaborating with smart home security and automation ecosystem providers to provide wireless power charging capabilities.