

TI extends support of Amazon Sidewalk to improve connectivity between homes, neighborhoods and cities



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Many of us have experienced the wave of innovation inside our homes. Lights, thermostats, appliances and locks are wirelessly connected. We have sensors for motion, temperature, light, water leaks, and air quality – even for keeping track of our valuables such as keys, wallets, or pets.

This network of connected gadgets has made life easier in our homes, but we might pop out of that connectivity bubble when we step into the garage or walk to the mailbox. The time has come to push the boundaries of what feels like home and expand that connectivity bubble to the yard, a neighbor’s house, and even the whole neighborhood; but certainly not by attaching another proprietary gateway to a router, installing range extenders at the farthest reaches of a router’s wireless signal, or writing down a neighbor’s Wi-Fi credentials at the next dinner party.

Amazon Sidewalk is a long-range, community wireless network that uses participating Sidewalk Bridges to keep products securely and consistently connected all throughout a community. These Sidewalk Bridges are already sprinkled throughout neighborhoods in the form of compatible Ring and Echo devices. Texas Instruments (TI) has enabled support for Amazon Sidewalk with low power in mind, along with Sub-1 GHz and *Bluetooth*® Low-Energy (LE) radios. Now, third-party developers can deploy solutions into the existing network of Sidewalk Bridges without attaching any additional hubs to a router, freeing up designers to focus on innovative products and offloading the cost of creating, maintaining and securing their own proprietary gateways. With Sidewalk Bridges providing seamless connection from products to the cloud, end users and developers benefit from always having access to control and monitoring information. By combining long range, robust connectivity with low power performance, TI’s wireless solutions are helping the extension of the smart home.

“The ever-evolving innovation in wireless connectivity technology for homes, buildings, neighborhoods, and even entire cities brings new efficiencies to our daily life, but with more products coming online, we must remain ahead of problems in network congestion, power consumption and security,” said Marian Kost, Vice President and General Manager of Connectivity at Texas Instruments, “With TI’s scalable portfolio of Sub-1 GHz and 2.4 GHz devices supporting the Amazon Sidewalk protocol, it has never been easier to connect any embedded system wirelessly to the cloud and benefit from our industry leading RF performance and low-power technology. TI enables Amazon Sidewalk to bring more sustainability, security and quality into neighborhoods.”

For example, a sprinkler system can have water sensors that communicate from underground and alert for the best time to water the lawn. With a small long-range wireless chip from TI, a pet’s next smart collar can help an owner find it, no matter how far it chases that squirrel. Such a chip with its low power consumption could run for years off a single coin-cell battery. TI’s integrated [sensor controller technology](#) enables asset trackers with integrated temperature sensors to monitor perishables and maintain quality control from the warehouse to your doorstep, ensuring your next fresh food or medicine package safely arrives. Amazon Sidewalk supports Bluetooth® Low Energy to seamlessly establish an automatic connection with products through your home network to control your coffee machine, thermostat, lights and locks without requiring any new hubs.

We’ve gotten comfortable with all the connected solutions in our homes, it’s time to be able to find that same comfort – as well as reliability and longevity - *anywhere in our neighborhood.*

Hear from TI Customers

“Air pollution, pollen, ventilation, radon - there are so many things that impact air quality. At Airthings we create products that manage air quality and energy efficiency in any building so that we can all breathe better,” said Audhild Randa, COO of Airthings. “In the age of the Internet of Things, homes and buildings have become busy and congested environments for wireless connectivity. The scalable portfolio of multiband wireless connectivity devices from TI enable Airthings to quickly scale our investments and offer products supporting standards and ecosystems like Wi-Fi, Bluetooth, Sub-1 GHz, Matter, and Amazon Sidewalk with reliable and robust connectivity.”

“Our customers in pharmaceuticals, food and beverage, and other high value goods rely on us for real time tracking solutions in shipping and receiving. The Amazon Sidewalk protocol allows us to safely and securely use an IoT network throughout the delivery process to provide more granular status updates for our customers and individuals receiving shipments, especially in the last mile,” said Venu Gutlapalli, CEO, of Tag-N-Trac. “We rely on Texas Instruments (TI) wireless connectivity products which support the Amazon Sidewalk protocol and provide highly secure and reliable long-range connectivity at lowest power consumption. We can then focus on our end to end enterprise supply chain IoT solutions without the hassles of complex coding, parts availability, or interoperability.”

TI devices supporting the Amazon Sidewalk protocol

TI offers a suite of low-power, multi-band devices with various security enablers to support Amazon Sidewalk. TI’s [CC1352P7](#) wireless microcontroller (MCU) provides an integrated +20 dBm power amplifier (PA) for an extended range solution that supports both Bluetooth LE and Sub-1GHz frequency shift keying (FSK). If you’re seeking a single-band solution, consider the [CC1312R7](#) wireless MCU for 915 MHz or [CC2652R7](#) wireless MCU for Bluetooth LE. For extended Bluetooth Low Energy range the [CC2652P7](#) comes with an integrated PA. These devices enable developers to build applications that leverage Amazon Sidewalk via Bluetooth LE for in home IoT products. TI’s Sub-1 GHz devices offer low power FSK modulation technology, which has high spectral efficiency enabling high density, low cost applications outside the home.

Getting started with Amazon Sidewalk

The [SimpleLink™ multiband CC1352P7 wireless MCU LaunchPad™ \(Figure 1\)](#) is a Sidewalk development kit that combines integrated environmental and motion sensors with low-power Sub-1 GHz and Bluetooth LE wireless connectivity. With this development kit and TI’s Amazon Sidewalk qualified [SimpleLink CC13xx and CC26xx software development kit \(SDK\)](#), you can build a Sub-1 GHz or Bluetooth LE application and then in the future leverage Bluetooth LE via a mobile app to load the Sidewalk image. For more information, see TI’s Amazon Sidewalk Quick Start Guide in the [Amazon Sidewalk development tool kit \(AMZ-3P-SIDEWALK-TOOLKIT\)](#).

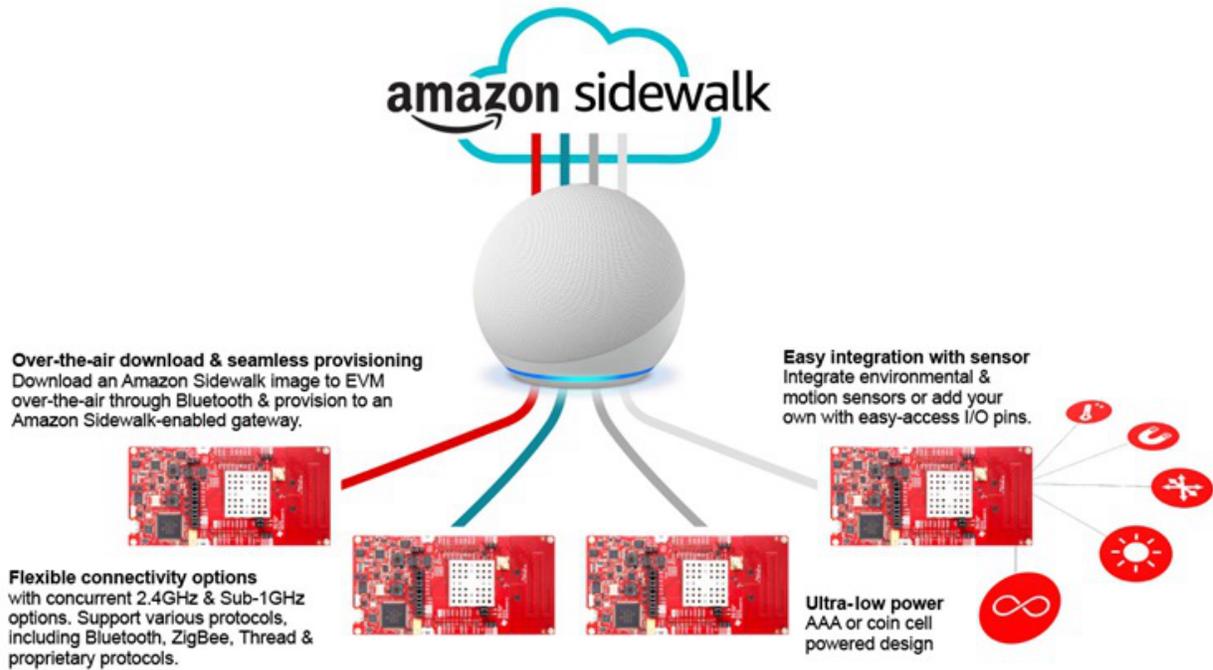


Figure 1. The Amazon Sidewalk development environment, enabled by the TI Launchpad

The increasing number of connected nodes within homes, now moving to the exterior and beyond, makes building reliable, long-range networks critical. Long range connectivity extends the ability to collect more sensor data, monitor more devices and build smarter products. What will you connect next?

List of Resources

- Learn more about [Amazon Sidewalk](#)
- Learn more about the benefits of using [TI for Amazon Sidewalk](#)
- Check out Amazon Sidewalk [Getting Started Guide](#)
- Get started with our [Amazon Sidewalk development tool kit \(AMZ-3P-SIDEWALK-TOOLKIT](#) - including the TI quick start guide)
- Watch how easy the [Out of Box Experience](#) can be with TI's development environment
- Explore the [SimpleLink CC13xx and CC26xx software development kit](#)

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