

# MATTER FAQ

Frequently asked questions about Matter technology



## Contents

What is Matter?.....	02
There are already so many smart home protocols these days. Why should I consider adding Matter?.....	02
Which device categories does Matter support? .....	03
How does Matter help protect my security? .....	03
Matter device setup: how do I do it? .....	03
Are my Matter devices still dependent on many different apps? .....	04
How likely is it that Matter will be used for industrial or commercial purposes? .....	04
How does a Matter Controller work?.....	04
What is Renesas’ involvement in Matter?.....	05
Renesas Matter compatible products.....	05

# What is Matter?

A new unified IP protocol to connect smart devices securely and robustly, regardless of brand, across all smart home ecosystems.

Through Matter's collaboration with the Connectivity Standards Alliance and support from major brands, manufacturers can develop IoT smart devices faster and make them more user friendly. With Matter solutions, you can integrate your smart home with any major ecosystem.

## There are already so many smart home protocols these days. Why should I consider adding Matter?

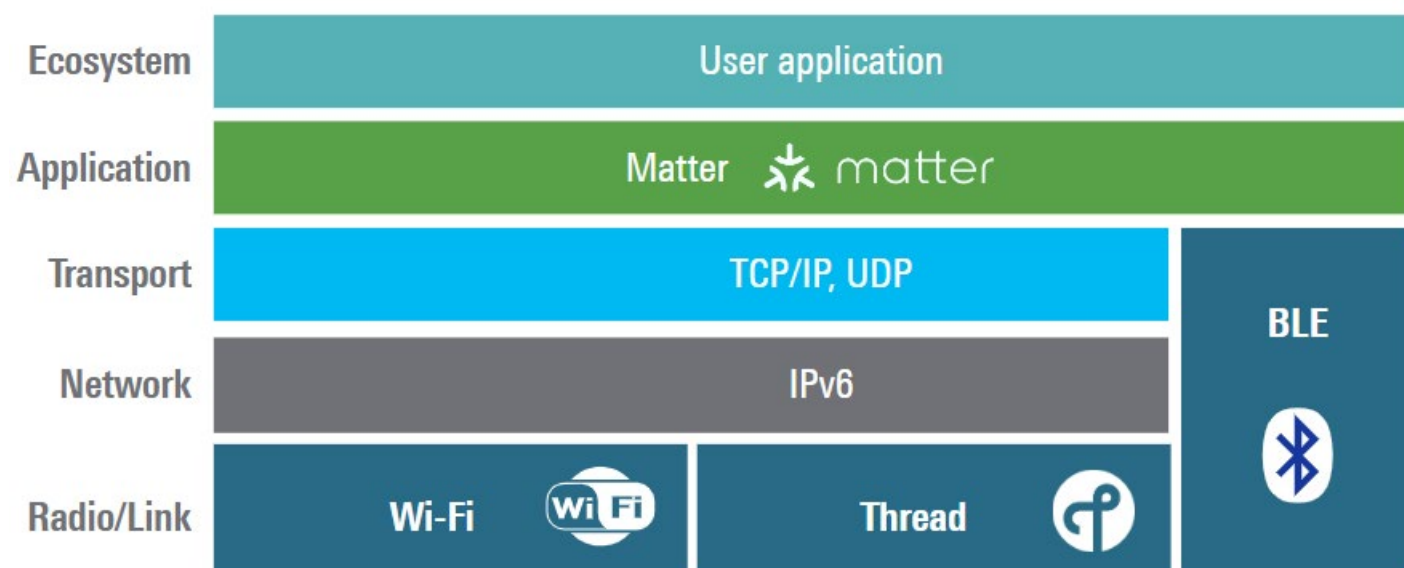
While it's true that there are already a number of smart home protocols available, Matter offers several unique benefits that make it worth considering for your smart home setup.

First off, Matter is an open protocol that operates at the application layer of the smart home technology stack. The application layer is the top layer of the stack, and it is responsible for defining how applications communicate with each other and with the underlying hardware and operating system. Other protocols that are commonly used in smart home systems, such as Wi-Fi, Bluetooth, Zigbee, and Z-Wave, operate at lower layers of the stack and are responsible for managing the physical connection between devices.

Matter allows devices from different manufacturers to work together seamlessly. This can be especially useful if you have a mix of devices from different brands and want to be able to control and integrate them all using a single platform or application. By operating at the application layer, Matter can provide a common set of rules and standards for how these devices can communicate with each other, regardless of their underlying protocols.

Another reason to consider Matter is that it is designed to be more reliable and responsive than some other smart home protocols. Because it is IP-based and operates at the application layer, it can offer improved reliability and lower latency compared to protocols that operate at lower layers of the stack. This means that your smart home devices should be able to respond more quickly and reliably to commands and requests.

Finally, Matter includes security features designed to protect your smart home devices and data. This can be especially important if you are concerned about the security of your smart home system and want to ensure that your devices and data are protected from potential threats.



## Which device categories does Matter support?

A variety of devices are supported by Matter 1.0, such as bridges, controllers, door locks, HVAC controls, lighting, electrical devices, media players, safety and security sensors, and window coverings. A wide variety of new device types has already been defined for post-launch support, including cameras, home appliances, robot vacuums, electric vehicle charging, and energy management systems.

Renesas [DA16200](#) will be the first device that will support Matter. Following [DA16200](#), all Renesas connectivity chips (Wi-Fi, Bluetooth Low Energy and Thread) will support Matter. Renesas low power [DA16200](#) SoC is built from the ground up for the Internet of Things. It is ideal for door locks, thermostats, security video cameras, sensors, and other devices that require low power consumption.



## How does Matter help protect my security?

Matter embodies best practices around security. Communication between the products must be tap-proof. Device identity and firmware security are the primary focuses of Matter. In the same way a website domain or IP address identifies a website, Matter devices will also include a unique identifier. This technology ensures that only authentic, certified devices are allowed on the network.

Encryption is used to protect confidential data. A Matter device uses end-to-end encryption and the information that is shared between devices is limited to what is necessary for proper operation. This minimizes the risk of information being leaked. Renesas connectivity solutions also feature very strong IoT security, including WPA3 and TLS for authentication and encryption at Wi-Fi and higher stack layers.

## Matter device setup: how do I do it?

An important aspect of Matter is simplifying the commissioning process. Matter can be onboarded using numeric and QR setup codes, as well as Bluetooth Low Energy to simplify setup, enabling it to be onboarded into networks, apps, and platforms in a single operation.

There are various ways for this identification to be displayed - directly on the housing or on a piece of paper supplied with the device - either in the form of a combination of numbers or graphically encoded in a QR code that can be scanned with the smartphone camera. Alternatively, NFC tags can transmit the required information.

Wi-Fi-connected devices receive their access data at the same time. Without entering a password, the smartphone transmits the files via Bluetooth automatically. It is already possible to create such processes, for instance with Apple's SmartThings or Samsung's IoT systems. The standardization of these devices will ensure their compatibility across manufacturers in the future, meaning that they should work with all smart home systems that support matter.

## Are my Matter devices still dependent on many different apps?

There are too many apps, which leads to a degraded user experience and additional steps for connecting devices to the network. If you use Matter, you don't have to switch between two or three separate apps and connect their cloud services to get your devices to work together for a better experience at home. You just need one Matter Controller app to set up automation. Matter can bridge any Bluetooth, Zigbee, or Z-Wave-based smart home gadget you have.



## How likely is it that Matter will be used for industrial or commercial purposes?

The advantage of Matter is that it does not require securing and maintaining a separate network for controlling Internet of Things devices in a commercial or industrial setting. The Matter platform connects electrical, mechanical, and lighting systems inside a building using a single unified platform, making it easy for system integrators to connect them.

Matter is not aimed at industrial or commercial use cases, but CSA members are working to make building automation and management as simple to use as smart homes.

## How does a Matter Controller work?

Since Matter is a local protocol, any entity that has direct control over Matter devices must also be local. 'Controllers' in Matter serve as the brain of your smart home, managing communications, controlling, automating, and allowing remote access.

Rather than being a physical device, a controller is the role of a device in Matter. A Matter controller may be a bridge or a hub, the SmartThings hub, TV, or appliance products from Samsung, as well as Apple's HomePod Mini, will all be controllers. It is possible for a smartphone, or even an app, to act as a Matter controller, and many will. However, those devices and apps may not always be running or connected, and certainly won't always be local to the home. So, while they're great for controlling devices at home, users will want a resident Matter controller for remote access.

# What is Renesas' involvement in Matter?

As a member of the CSA alliance, Renesas is committed to taking an active role in the development of the CSA and Matter. We will be Matter-compliant with all of our upcoming Wi-Fi, Bluetooth Low Energy, and Thread products. Our Matter-ready SDK for Wi-Fi will be released by the end of Q1'2023.

## Renesas Matter compatible products

As part of Renesas' vision for a connected home, the Matter component plays a crucial role. Renesas is very well positioned to capitalize on Matter strengths as we have key Building Blocks to lead in a Matter based smart home (Wi-Fi, Thread, BLE). In the future, we also support Matter on 802.15.4 (Thread) products that are currently under planning.

First products in Renesas to support Matter will be low power Wi-Fi solutions including [DA16200 Wi-Fi SOC](#) and Modules. Plan is to support Matter on all future connectivity products.



For more details, please visit <https://www.renesas.com/matter>.