Matter Channel Training Kit

Messaging Guide, FAQs, and Glossary

Messaging Guide

Matter Messaging for Retailers

Matter Definition for Users: Matter enables smart devices from different brands and manufacturers to work reliably together. The Matter logo lets consumers buy with confidence.
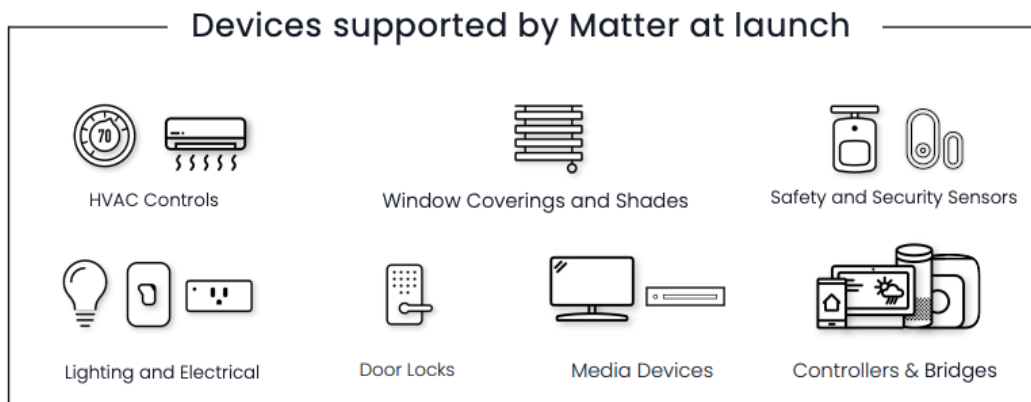
Principles + Proof Points

- **Simple:** Easy to purchase, set up, and use
- **Reliable:** Consistent and responsive local connectivity
- **Interoperable:** Devices from multiple brands work natively together
- **Secure:** Robust and streamlined for users

The Smart Home is Matter-Ready

Matter is a new, open smart home protocol that uses existing, familiar technologies, including Bluetooth Low Energy for device setup and Wi-Fi, Thread, and Ethernet for connecting devices. Major smart home platforms and device brands have already committed to upgrading many existing hubs, smart speakers, and other devices already in millions of homes and on store shelves today.

Look for the Matter badge on new smart home controllers and devices, check with your favorite brands for their Matter plans, or check out this link for the latest official announcements and news about Matter-certified products.

Devices supported by Matter at launch

HVAC Controls — Window Coverings and Shades — Safety and Security Sensors — Lighting and Electrical — Door Locks — Media Devices — Controllers & Bridges

Thread Messaging for Retailers

Thread Definition for Users: Thread is an energy efficient wireless mesh network that enables smart devices such as door locks, lighting, and smart speakers to reliably and instantly connect while offering extended range to deliver wider coverage in your home.

Border Router Definition for Users: Like an access point does for Wi-Fi, a Thread Border Router from any brand and embedded in a range of always powered devices like smart speakers and lighting, extends connectivity directly to the Internet, eliminating the need for proprietary hubs or bridges.

Benefits + Proof Points:

- **Reliable:** Thread is dependable. All of your Thread-enabled devices connect to create a reliable, secure and self-forming mesh network with no dropped connections. In contrast to Wi-Fi and Bluetooth, Thread scales easily and strengthens with every new device.
- **Instant Control:** Thread is fast. Thread-enabled smart devices deliver fast responses regardless of network size.
- **Extended Range:** Thread is well connected. A Thread mesh network extends with each additional Thread-enabled device, which means wider coverage in your home.
- **Years of Battery Life:** Thread is efficient. With its low power consumption, Thread significantly extends the battery life of devices like door locks and sensors.

FAQs

What does the Matter badge mean?

Matter is the new symbol of connectivity. This industry-unifying standard has a promise of reliable, secure connectivity — a seal of approval that devices will work seamlessly together, today, and tomorrow. Only Matter-certified devices will carry the Matter logo, so look for the mark that matters.

Does Matter replace my currently used smart home platform?

No. Matter is supported by most major smart home platform providers.

What are the Matter basics I need to know to get started?

Matter is a new, open smart home protocol that uses existing, familiar technologies, including Bluetooth Low Energy for device setup and Wi-Fi, Thread, and Ethernet for connecting devices. Major smart home platforms and device brands have already committed to upgrading many existing hubs, smart speakers, and other devices already in millions of homes and on store shelves today, so new Matter devices will work seamlessly with your existing smart home.

To build or grow your smart home with Matter, look for the Matter badge on new smart home controllers and devices, check with your favorite brands for their Matter plans, or check out this link for the latest official announcements and Matter-certified products.

Which device categories does Matter support?

Devices supported by Matter 1.0: bridges, controllers, door locks, HVAC controls, lighting and electrical, media devices, safety and security sensors, and window coverings and shades.

Support for new device types is driven by Alliance members, and new use case teams have already begun defining new device types to be supported post-launch, such as cameras, home appliances, robot vacuums, Electric Vehicle charging, and energy management.

Does Matter certification require certification for the underlying transports?

Yes. Matter is a protocol that runs over other technologies like Wi-Fi, Ethernet, Thread, and Bluetooth. Matter certification requires that devices are certified to use those technologies as required by their governing organizations.

What is Thread?

Thread is a wireless mesh network technology designed for devices with long-range, low-power applications in mind. Thread devices connect to the home network through Thread Border Routers, which may be built into other devices, such as smart speakers, home routers, lights, or other smart home devices. Thread devices are responsive, reliable, provide extended coverage in your home, and can run for years without needing to change the battery.

How do I know if I have a Thread Border Router? Do I need one? What is the difference between the Thread Border Router Badges and Requires Border Router Badges?

A Thread Border Router connects Thread devices to the local network, other devices built on IP-based technologies such as Wi-Fi or Ethernet, and the internet. Matter devices connect to users' networks and each other using Wi-Fi, Ethernet, or Thread. Those using Thread carry the Thread badge, many with the "Requires Border Router" mark to help consumers know they'll need a Thread Border Router, often built into many smart home hubs and devices.

What's the difference between Thread and Matter?

Thread is a technology that connects smart devices together in your home and Matter is a protocol that devices use to talk to one another over that network.

How will I know if my existing devices will get an update to support Matter?

Many existing smart home products will be upgradable to Matter via software updates so keep an eye out for communications from your favorite device manufacturers on when your device may support Matter.

How do I set up a Matter device?

Onboarding a new Matter device is easy. Matter uses numeric and QR setup codes, and Bluetooth Low Energy to simplify setup, allowing you to onboard it onto your network, apps, and/or platforms often in a single flow.

You can start the setup process from the device maker's app, or your favorite smart home platform, by scanning the QR code or manually entering the setup digits.

Optionally, some manufacturers may also support onboarding by tapping on the NFC icon with your phone. Additionally, some platforms or apps may automatically detect the device when powered on, and provide a mobile or voice notification to start guiding you through the setup process.

Once your device is set up, it's easy to connect it to other apps, platforms, or smart home devices with this familiar flow. Matter's multi-admin support also allows you to easily share devices across multiple platforms through a similar process, and choose which apps and platforms can access each device.

As a device maker, my current product already supports all platforms I want to use. Why should I be excited about Matter?

Many products today are connected to smart home platforms and apps via the cloud. Adding Matter to those products will enable them to use a local connection for greater reliability and responsiveness.

Matter will also make your future roadmap simpler, allowing you to develop products that work with any ecosystem using a single local protocol. Developers that want to maintain their cloud connectivity can of course do so, giving their users additional flexibility and supporting remote control of their products.

Will my existing devices be updated to support Matter?

Because Matter runs over existing technologies like Wi-Fi, Ethernet, and Thread, many existing smart home products can and will be updated to support Matter via software updates. Product makers may do this either by updating those devices or in some cases the bridges they are connected to.

Whether a device is updated to support Matter depends on the technical capabilities of the device, and of course, whether the product maker chooses to make an update available.

Many brands have already announced that their devices will support Matter. Click here for the latest Matter news and keep an eye out for communications from your favorite device manufacturers on when your device may support Matter.

Can my existing devices that use other technologies work with Matter devices?

Matter natively supports Wi-Fi, Ethernet, and Thread, but its goal is to simplify smart homes, including those that already have devices using other networking technologies.

To enable this, Matter supports bridges that allow devices using other protocols (such as Zigbee or Z-Wave) to participate in a Matter ecosystem. A number of product makers that use bridges today have announced support for Matter. And bridges can be built into a number of devices like controllers and hubs, providing a seamless user experience across existing devices and new Matter devices.

Will Matter products interoperate with / are they compatible with Zigbee?

Yes, Matter can connect other technologies, like Zigbee, using smart home bridges to interact with devices using those other protocols.

From a technical perspective, Matter does utilize some of the same underlying technology that would be familiar to Zigbee developers. Thread-based devices support the same 802.15.4 radio technology as Zigbee but use IP-based technology for the network stack. At upper levels of the stack and spec, Matter's data model borrows heavily from what those familiar with Zigbee know as the Zigbee Cluster Library and Alliance Data Model.

While these are important elements in terms of ensuring that Matter is based on market-proven and developer-friendly technologies, Matter and Zigbee are different protocols, giving product makers different options suited to their applications. This means, however, there is no native interoperability between Matter and Zigbee devices.

However, in our goal to harmonize the industry, we needed to make sure that the Matter ecosystem can be inclusive of products that choose Zigbee for their applications, and perhaps even more importantly, for the tens of millions of Zigbee devices already driving great experiences in homes and businesses. That's why Matter also includes specifications for

bridging devices, so that product makers and ecosystems who have Zigbee as part of their current or future portfolio, can create seamless experiences for users across these networks.

What types of products do I need to strengthen my mesh network?

A Mesh Extender is an always powered device that repeats signals and extends the range or coverage of the Thread network to far corners of homes and buildings. The Thread network expands automatically as more mesh extenders are added, thus building a stronger, more reliable network.

How does Matter help protect my security?

By bringing together member companies with many years of IoT security expertise, we have designed Matter's security to be comprehensive and strong while also being easy for device makers and consumers alike.

Matter embodies best practices around security. For example, each Matter device includes a unique identity, ensuring that only the user's authentic and certified devices are permitted to join the network. Data is encrypted to protect confidentiality. Fine-grained access control policies ensure that each device can only perform the operations that it needs to perform.

Who issues the device attestation certificates for Matter devices?

All Matter devices come with a device attestation certificate, which is used to verify that the device is authentic and certified. These device attestation certificates are issued by specified root Certificate Authorities (CAs). These root CAs are not operated by the Connectivity Standards Alliance. Rather, they are operated by Alliance members and are required to comply with rigorous standards. This approach helps to establish a healthy marketplace for root CA services and avoids any single point of failure.

Are device manufacturers required to use the DCL?

Yes, Device Manufacturers must put data for their products into the Distributed Compliance Ledger (DCL).

This database (the DCL) doesn't have information about every individual device, just the set of product models that have been certified. Once a product has been certified and is in the market, that product will be listed in the DCL. This is similar to the way that the Alliance lists certified products on its website today but adds more information and assurance.

How will my Matter devices get updated?

A Matter device in the home can obtain updates using the over-the-air (OTA) update functionality included in the Matter specification or use its own software update methods. These updates can provide new features and security patches.

How is my privacy protected with Matter?

The Matter standard places a high priority on the protection of user privacy through practices such as data minimization. We use end-to-end encryption and limit the information shared between devices to whatever is necessary for proper function. Thus, in the event of a compromise of a Matter participant, the information that is leaked is minimal. However, the complete protection of user privacy and compliance with all relevant privacy tenets and

regulations will depend on the protections provided by service providers and device makers as well.

Why is the Connectivity Standards Alliance using a Distributed Compliance Ledger (DCL) for Matter Certification?

The DCL provides a highly reliable and timely source of information about device authenticity and certification status and other helpful information including resources to assist users with setup.

This allows commissioners to verify that a new Matter device is certified and secure, identify the device to the user using the manufacturer-provided descriptions, and provide any additional setup guidance for more complex devices. In doing so, DCL provides confidence and assistance to users and incentivizes developers to maintain their certification.

How do I access my Matter devices when I'm not at home?

Matter is a local connectivity technology, so Matter-only devices require an internet-connected controller — such as those built into smart speakers and smart home hubs — to be present in the home to enable control when away from the home. Most controller devices will offer an app or web interface to control Matter end devices.

Some Matter devices may also have a direct connection to the internet, enabling control from outside the home by the device maker's application.

Do I still need many different apps to use my Matter devices?

Smart home apps are a valuable part of the user experience for many devices. Yet the industry often talks about "too many apps". The problem is really the number of different user experiences and steps for doing things that should be simple like connecting devices to the network and linking them to apps, other devices, and ecosystems.

Matter makes it easy for users to set up and control their devices with a simplified, consistent set of steps, and connect those devices to one or more of the apps and platforms they choose. Whether that's a smart home platform app that lets them coordinate devices from many different vendors, or a device vendor app that offers advanced configuration and differentiated features.

How can I control what platforms can access my Matter devices?

Users can choose which platforms access their Matter devices using Matter's multi-admin feature. Multi-admin is one of the core features that allows users to connect their Matter devices to multiple platforms, apps, or other control points, so they can control them where and how they choose.

Glossary

Term	Definition
AC Powered Thread Device	A device that has a constant power source may be used as a Thread Mesh Extender to widen the network coverage. Some AC powered devices may also include a battery backup in case of intermittent power, or outages.

Administrator	Matter devices are connected together on a virtual network within the home. Matter Administrators are the objects (such as a physical device like a hub, apps, etc.) that create, maintain, and manage security and privileges for all devices on that network. Matter Administrators are often also Matter Controllers. Matter's Multi-Admin functionality refers to the fact that Matter devices can be connected to multiple virtual networks, so that they can be controlled by multiple Administrators (hubs, apps, etc).
Battery Powered Thread Device	A Thread battery-powered end device is a cordless device that remains inactive or in "sleep" mode to extend the battery life until interaction is needed. Battery Powered End Devices cannot act as Mesh Extenders.
Thread Border Router	A Thread Border Router enables Thread devices to connect to the local network, so that they are able to communicate with other devices built on IP-based technologies such as Wi-Fi or Ethernet. Thread Border Routers may be built into existing products, such as Wi-Fi access points, smart speakers, and more.
Matter Bridge	Matter bridges translate from one protocol to another, allowing non-Matter devices (such as Zigbee or Z-Wave) to participate in a Matter ecosystem. These bridges can be built into a number of devices like controllers and hubs, providing a seamless user experience across existing devices and new Matter devices.
Non-Matter device	A non-Matter device, such as Zigbee or Z-Wave, that is connected to the Matter network through a Matter bridge.
Set up, onboard, add, or join	Do not use commission with end users. Use the terms set up, onboard, add, or join.
An app, mobile OS or smart speaker/ display used to set up Matter devices	A device or application that can be used as a tool to set up a Matter device. A platform, device vendor, or other Matter-enabled app, mobile OS, or smart speaker or display may all be able to set up Matter devices.
A Matter Device that a user is setting up or sharing	A device that is being set up, added, or onboarded to the Matter network.
Setting up, adding, onboarding or joining	The process of setting up, adding, or onboarding a Matter device to the Matter network.
Joining Mode	It is the state in which a Matter device is enabled to establish a connection so it can be added/onboarded to the Matter network.
Matter Controller	A Matter Controller is a device or app that can control Matter devices the user has connected to it. It can be built into many types of hardware devices like phones, always-powered smart home hubs that provide local and remote control, or even mobile apps.
Matter Device	A smart home hardware product that supports Matter, so that it can be connected to and controlled by a Matter Controller.
Ecosystem	Used when referring to a specific set or the general availability of a collection of smart home devices from multiple vendors.

End-to-End Encryption	End-to-End Encryption is a way to secure communications from attacks while they are being sent from one device to another.
For non-technical consumer audiences, it is recommended to <u>not use</u> the term "Fabric". Terms such as "Platform" are more common language for this audience. ***For technical audiences, the use of the term "Fabric" is accepted.***	A Matter Fabric is the virtual network Matter devices create when they are connected together. For more technical audiences: A Matter Fabric is the shared domain of trust among devices in a home network that enables them to communicate with each other. This shared domain of trust is established via a common set of cryptographic keys. Devices can be on multiple fabrics simultaneously. For example, you can have a lightbulb commissioned both on a smart home platform's fabric and a device vendor's fabric.
Hub	A smart home Hub is a device that serves as a connection point for multiple smart home devices, allowing them to interact with each other and/or a smart home platform. A hub may be built into other kinds of devices (Smart speaker or display, router, dedicated hub, TV, refrigerator, etc). In Matter, a hub will often be a Matter Controller that enables control of Matter devices connected through it.
Internet Protocol (IP)	Internet Protocol is the protocol by which data is sent between devices on the Internet and/or in the home. It is a common protocol that runs over technologies like Wi-Fi, Ethernet, and Thread, enabling them to form a unified network, allowing all Matter devices to communicate with each other, regardless of who makes them or which of these network technologies they are using.
Latency	Latency is a time delay between the cause and the effect of some change in the system being observed. Lower latency results in faster response times.
Numeric Setup Code	An 11 or 21-digit numeric code manually entered/spoken, which contains the information needed to add a Matter device. In addition to a numeric code, a Matter product may also provide other mediums for transmitting this information, such as a QR code or an NFC tag.
Thread Mesh Extender	A Mesh Extender is an AC powered device that repeats signals and extends the range or coverage of the Thread network to far corners of homes and buildings. The Thread network expands automatically as more mesh extenders are added, thus building a stronger, more reliable network.
Thread Mesh Network	Thread creates a Mesh Network by enabling each device in the system to speak with each other and the internet, thus allowing extension of the wireless coverage.
Network	A physical transport network (such as Wi-Fi, Ethernet, or Thread, or a combination of them) that Matter devices are connected to, and over which Matter devices can communicate with each other.
NFC Setup Code, or NFC	A chip embedded in a device or a label that contains the

Tag	information needed to add a Matter device. This is an optional feature of Matter that enables users to set up their devices with another device capable of reading NFC.
Platform	A smart home system from a specific vendor, that is capable of connecting to and controlling Matter devices from multiple vendors.
QR Setup Code	A machine-readable label that contains the information needed to set up or add a Matter device. This is an optional feature of Matter that enables users to set up or add their devices using the camera on their screen devices (smartphone, touchscreen, TV, etc).
Self-Healing	Self-healing means that if an extender device stops working, network traffic can be automatically re-routed via other devices without the user noticing or needing to take action.
Setup Code or Matter Setup Code	A label found on Matter devices or in packaging that contains one or more possible formats to guide the user in inputting the information needed to set up a Matter device, or add it to a new smart home platform or app. See also: Numeric Setup Code QR Setup Code NFC Setup Code
Thread	Thread is an IP-based wireless mesh network technology that is designed for devices with long-range, low-power applications in mind. Thread devices connect to the home network through Thread Border Routers, which may be built into other devices, such as smart speakers, home routers, lights, or other smart home devices.
Vendor or Manufacturer	The company or brand that manufactures and/or markets a Matter device.