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MAT-102

Is Matter Right for My Products?

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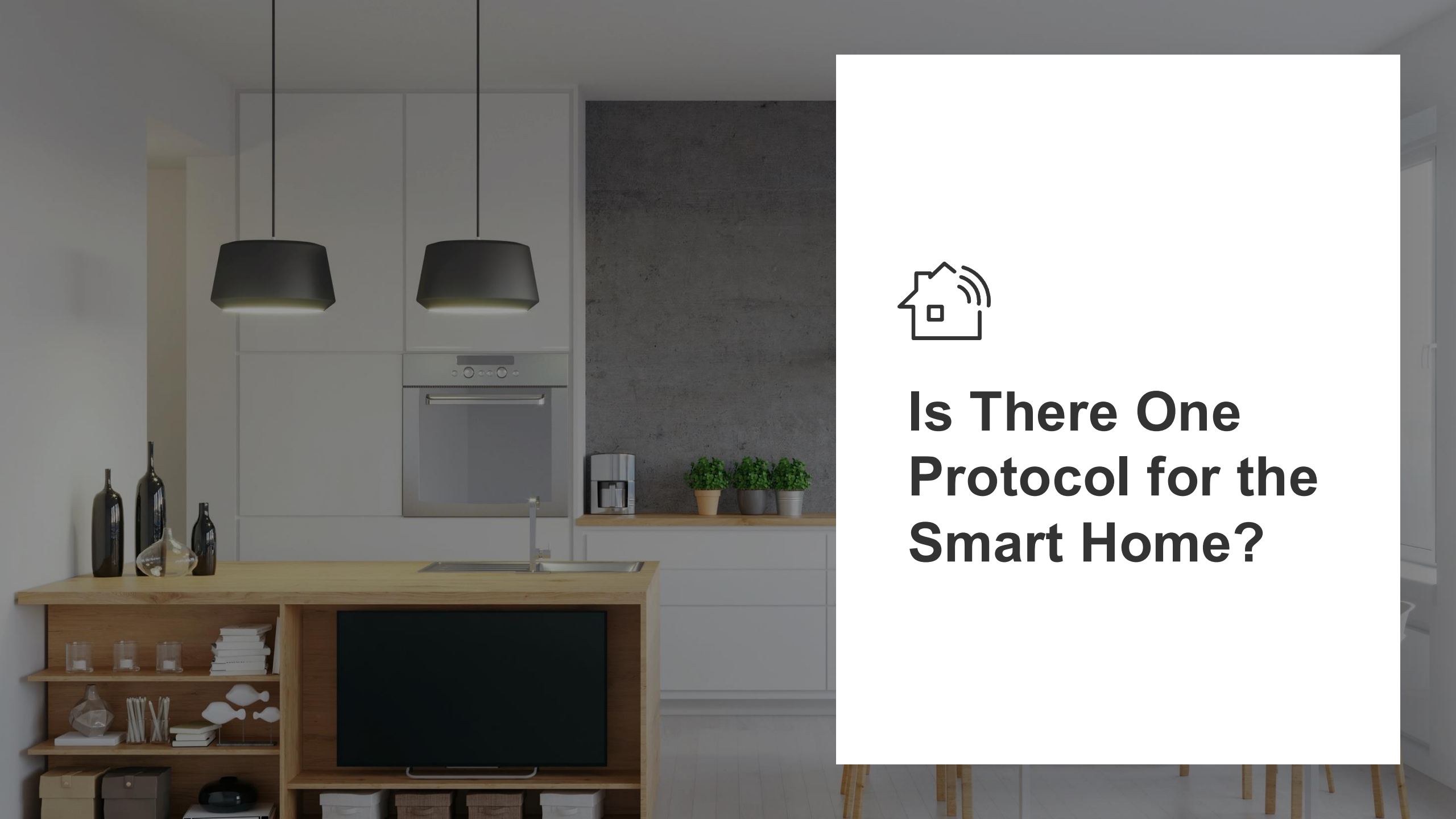

Is There One Protocol for the Smart Home?

Key Features That Drive Protocol Selection

Features	Why It Matters
Range	Determines how far devices can communicate. Crucial for Smart home, single app control and user experience.
Power Consumption	Impacts battery types, battery life and energy efficiency - vital for IoT devices.
Bandwidth / Throughput	Defines how much data can be transmitted. Important for high-data applications like video or analytics.
Latency	Affects responsiveness. Critical for real-time home automation systems
Ecosystem Support	Large number of ecosystem helps ensures that devices work at customer home

Wi-Fi

ADVANTAGES

- High data rate and bandwidth, suitable for streaming video and audio.
- Ubiquitous and compatible with many devices and platforms.
- Easy to set up and use, with existing infrastructure and standards.
- Supports cloud and remote access and control.
- Wi-Fi mesh has improved the coverage in the Home for IoT connected devices.

DISADVANTAGES

- High Peak power requirement – Requires batteries that can supply over hundreds of mA of peak current.
- Prone to interference and congestion from other Wi-Fi devices and networks.
- Limited range and coverage, especially in large or multi-story buildings.
- Wi-Fi is widely used and familiar, making it a common target for hackers. The extensive use of Wi-Fi means that vulnerabilities are more likely to be discovered and exploited.

TARGET APPLICATIONS

- **Smart Speakers and Displays**
  - Always-on devices; Wi-Fi handles higher power.
  - Needs high bandwidth for streaming and voice.
  - Wi-Fi ensures low-latency, rich media support.
- **Smart TVs and Cameras**
  - Require stable, high-throughput for HD/4K.
  - Wi-Fi supports real-time video and audio.
  - Ensures smooth, uninterrupted streaming.
- **Thermostats and Locks**
  - Needs bursts of data for control and updates.
  - Wi-Fi enables secure, direct cloud access.
  - Works well with voice and mobile apps.
- **White Goods**
  - Line-powered devices need high bandwidth.
  - Wi-Fi is widely compatible and scalable.
  - Ideal for smart appliances like washers, ovens.

Thread

THREAD

ADVANTAGES

- It consumes less power than Wi-Fi, which means that battery-operated devices can last longer.
- It can maintain a stable and robust connection, as it can automatically adjust to changes in the network topology or environment.
- It can support a large number of devices, and devices can act as a routers that extend the network range.
- Like Matter it supports IP

DISADVANTAGES

- Low data rate and bandwidth, unsuitable for streaming video and audio.
- Dependent on a border router or gateway device for internet and cloud access.
- Limited availability and adoption of devices and products.
- Thread only defines the layers up to the network layers and does not define the application layer. Developers would need to create their own application layer or use an application layer that supports Thread natively like Matter, KNX and Dali+.

TARGET APPLICATIONS

- **Smart Sensors**
  - Smart Sensors (motion, temperature, humidity, light)
    - Require ultra-low power and reliable mesh connectivity.
    - Thread enables long battery life (even on coin cells) and consistent communication.
- **Smart Switches, Plugs and Lights**
  - Need fast, responsive control and interoperability.
  - Thread's low-latency and IP-based architecture ensures seamless operation across ecosystems.
- **Smart Locks**
  - Demand secure, low-power, and always-available connectivity.
  - Thread supports secure, resilient mesh networking with minimal energy use.

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Matter

ADVANTAGES

- Supports multiple wireless technologies and protocols, enabling flexibility and versatility.
- Supports IP-based communication and interoperability with other devices and platforms.
- Supports high security and encryption, with public key infrastructure and device authentication. Also Supported by existing Ecosystems and products in the field from companies like Google, Apple, Amazon and Samsung.

DISADVANTAGES

- New standards typically require time to rollout a strong product mix from manufactures.
- May face initial challenges and interoperability issues between vendors and different Ecosystems.

TARGET APPLICATIONS

- **LED Lighting**
  - Works across Apple, Google, Alexa, and SmartThings.
  - Supports Thread (low power) and Wi-Fi (high bandwidth).
  - Ensures seamless, robust lighting performance.
- **IoT Gateways and Access Points**
  - Built on IPv6 for native Wi-Fi, Ethernet, and Thread support.
  - Compatible with modern gateways and access points.
  - Enables smooth integration across networks.
- **Smart Switches and Plugs**
  - Quick setup with secure IP-based control.
  - Thread mesh ensures low-latency, reliable performance.
  - Supports energy monitoring and automation.
- **Sensors**
  - Long battery life with stable connectivity.
  - Direct IP communication, no proprietary hubs.
  - Secure and interoperable across platforms.

Zigbee

ADVANTAGES

- Consumes very little power, which means that battery-operated devices can last for years.
- Supports a variety of device types. It is a Mature technology, with large install base and proven interoperability.
- Zigbee mesh networking combined with high output power and sensitivity provide good coverage in the home and beyond the front door.

DISADVANTAGES

- Routers for mesh networking need to be line powered (this is typical for any mesh network).
- Not suitable for High-Speed Data Transmission, like voice and video.
- Zigbee does require a hub/gateway. Certain Ecosystem devices and device makers have this native.

TARGET APPLICATIONS

- **Sensors and Switches**
  - Ultra-low power enables years of operation on coin cell batteries.
  - Longer sleep modes extends battery life significantly
  - Supports compact, sleek device designs.
- **LED Lighting**
  - Low-latency communication for instant light control
  - Mesh networking extends range and reliability
  - Interoperability across brands and ecosystems
- **Smart Switches and Plugs**
  - Fast, secure setup with IP-based control via Wi-Fi or Thread and built-in encryption.
  - Reliable, low-latency performance with energy monitoring and automation via Thread mesh.

Amazon Sidewalk

amazon sidewalk

ADVANTAGES

- It can improve the connectivity and functionality of smart home devices, especially those that are located outdoors or far from the router, such as security cameras, smart lights, or pet trackers.
- Because it's a shared network, users can have access to Amazon Sidewalk without having actual infrastructure devices.

DISADVANTAGES

- It can consume some of your internet bandwidth and power. It can have a limited compatibility and availability, as it only works with certain devices and is currently limited to the US region.
- It can raise some concerns about data sharing and privacy.

TARGET APPLICATIONS

- **In-the-Home (Bluetooth LE) Applications**
  - Tracking & Theft Prevention (Smart Tags): Enables low-power, always-on tracking for items and pets.
  - Access Control: Provides secure, reliable connectivity for smart locks and entry systems.
  - Home Automation – Sensors and Locks
  - Sidewalk's Bluetooth LE support ensures energy efficiency, strong local coverage, and seamless integration with smart home devices.
- **Beyond the Front Door (Sub-GHz FSK)**
  - Long Range: Sub-GHz FSK reaches outdoor areas like gardens and driveways.
  - Low Power: Ideal for battery-operated devices like water sensors and lights.
  - Reliable Mesh: Maintains strong connectivity where Wi-Fi may not reach
  - Useful for Garden and Pool Management, Water Mitigation and Control

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Z-Wave

ADVANTAGES

- It can avoid interference and congestion from other Wi-Fi devices, as it uses a different frequency band (868 MHz or 908 MHz, depending on the region).
- It can ensure a high level of compatibility and interoperability, as it follows a standardized and certified protocol that is maintained by the Z-Wave Alliance.
- Z-Wave Long Range can extend the range to hundreds of meters, allowing for reliable communication beyond the fence for application like gate openers and irrigation as well as multi-dwelling units.

DISADVANTAGES

- Z-Wave devices operate in the sub-GHz band which vary regionally. This means products are specific to regions and require vendor to have region specific products based on regulatory approvals.
- Z-Wave devices have a maximum data rate of 100 kbps, which is sufficient for simple commands and status updates, but not for streaming audio or video. grows.
- While Z-Wave is backward compatible to standard Z-Wave, it does require a Long Range compatible hub for extended range.

TARGET APPLICATIONS

In the Home (Z-Wave)

- Low Power for Battery Devices: Perfect for coin cell-powered sensors and remotes that need to last for years.
- Perfect for Sensors and Security
- Reliable Mesh Networking: Ensures consistent communication between devices like smart plugs, switches, and locks - even in dense environments.
- Secure & Interoperable: Built-in encryption and certification ensure safe, seamless operation across brands.

Beyond the Home (Z-Wave LR)

- Extended Range: Z-Wave LR supports direct-to-hub communication over hundreds of meters - ideal for driveways, gardens, and detached structures.
- Perfect for Garden and Pool Management, Water Mitigation
- No Repeaters Needed: Simplifies deployment by eliminating the need for mesh extenders.
- Resilient in Harsh Conditions: Maintains reliable performance in outdoor environments and through walls or interference.

Bluetooth Low Energy

ADVANTAGES

- It is easy to set up and use, as you only need to pair your devices with your smartphone or tablet. It is widely available and supported, as most smartphones, tablets, laptops, and smart home devices have Bluetooth capabilities.
- Bluetooth LE supports location estimation to locate and track
- It is used as a secondary connection for sensors and lighting to enable fast commissioning and direct smartphone access, using DMP (Zigbee + Bluetooth LE) or (Matter + Bluetooth LE).

DISADVANTAGES

- Bluetooth LE is more targeted towards connectivity through phone and not for larger smart home applications.
- Bluetooth LE range is limited

TARGET APPLICATIONS

Smart Wearables

- Ultra-low power consumption extends battery life for days or even weeks.
- Compact and cost-effective for small, lightweight wearable designs.
- Reliable short-range connectivity ideal for syncing with smartphones and health apps.

Smart Appliances

- Low power consumption ensures energy-efficient operation for always-on devices.
- Direct, secure connectivity enables fast control without needing a hub.
- Cost-effective and scalable for a wide range of home appliance integrations.

Lighting and Sensors

- Low Power & Long Battery Life – Perfect for battery-operated sensors and wireless lighting controls.
- Easy Integration – Works with smartphones and hubs for simple setup and control.

Bluetooth Mesh

ADVANTAGES

- Bluetooth mesh networks are self-healing, rerouting messages through other devices if one fails or goes out of range, ensuring uninterrupted operation and reliable message delivery.
- Bluetooth mesh supports a large number of nodes to meet the needs of large-scale and complex IoT applications.
- Bluetooth mesh has a feature to standardize interface with phones, which have native Bluetooth support. That's an advantage over 15.4 mesh technologies.

DISADVANTAGES

- Bluetooth mesh uses a repeating mesh, so they don’t scale as well as routing mesh networks. Bluetooth Mesh 1.1 introduced Direct Forwarding which helps reduce the amount of traffic.
- Large networks require careful planning and configuration to reduce delays and latency

TARGET APPLICATIONS

Scalable Lighting Control

- Supports large-scale, synchronized lighting across buildings or campuses.
- Mesh architecture ensures no single point of failure— no flicker or dropouts.
- Bluetooth Mesh enables hub-free setup with scene and schedule configuration.

Smart Tags

- Scales to thousands of tags in a self-healing Bluetooth mesh network.
- Low power usage enables months to years of battery life.
- Easily managed via smartphones—no gateway required.

Proprietary (Sub-GHz and 2.4 GHz)

Proprietary

ADVANTAGES

- They can offer a unique or exclusive feature or functionality that is not available in other protocols.
- They can ensure a high level of quality and performance, as they are optimized and customized for their own devices.
- They can provide a better customer service and support, as they have a direct and dedicated relationship with their users.

DISADVANTAGES

- They can limit the compatibility and choice of smart home devices, as you may not be able to mix and match products from different brands or platforms.
- They can have increased cost compared to standard based technologies.
- They can pose a risk of obsolescence or discontinuation, as they may not be updated or supported by their manufacturers or platforms.

TARGET APPLICATIONS

Switches and Plugs

- Proprietary stacks can be fine-tuned for ultra-low latency and high reliability—critical for switches and plugs that must respond instantly to user commands.

Sensors

- Proprietary stacks can be finely tuned to minimize energy consumption which allow sensors to operate autonomously and wake up only when needed.
- Proprietary stacks support both **Sub-GHz and 2.4 GHz** bands, enabling long-range communication a

Smart Locks

- Proprietary stacks can be fine-tuned for **ultra-fast response times**, **low latency**, and **stable connections**, which are essential for smart locks where delays or failures can compromise user experience and security.
- Many proprietary stacks are designed for **ultra-low power operation**, enabling longer battery life—critical for battery-powered smart locks.

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Smart Home Protocol Summary

	Bluetooth	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
Market Focus (Home)								
Frequency Bands								
Range								
Native IPv6 Connectivity								
Cloud Connectivity								
Application Layer								
Existing Infrastructure								
Ecosystems Support								
Mesh Networking								
Additional Notes								

Smart Home Protocol Summary

	Bluetooth	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
Market Focus (Home)	Lighting, Locks	Lighting	Smart Home	Smart Home, Metering	Smart Home	Smart Home	Smart Home	Smart Home and Home Security
Frequency Bands								
Range								
Native IPv6 Connectivity								
Cloud Connectivity								
Application Layer								
Existing Infrastructure								
Ecosystems Support								
Mesh Networking								
Additional Notes								

Smart Home Protocol Summary

	Bluetooth	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
Market Focus (Home)	Lighting, Locks	Lighting	Smart Home	Smart Home, Metering	Smart Home	Smart Home	Smart Home	Smart Home and Home Security
Frequency Bands	2.4 GHz	2.4GHz	2.4 & 5 GHz	2.4GHz	2.4 GHz (Thread) 2.4 & 5 GHz (Wi-Fi)	2.4 GHz and Sub-GHz	2.4 GHz (Bluetooth) Sub-GHz (FSK & CSS)	Sub-GHz
Range								
Native IPv6 Connectivity								
Cloud Connectivity								
Application Layer								
Existing Infrastructure								
Ecosystems Support								
Mesh Networking								
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	Bluetooth	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
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Range	In Home	In Home	Beyond Front Door (Wi-Fi Mesh)	Beyond Front Door	Beyond Front Door	Beyond Front Door	Beyond Fence	Beyond Fence
Native IPv6 Connectivity								
Cloud Connectivity								
Application Layer								
Existing Infrastructure								
Ecosystems Support								
Mesh Networking								
Additional Notes								

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Native IPv6 Connectivity	No	No	Yes	No	Yes	No	No	No
Cloud Connectivity								
Application Layer								
Existing Infrastructure								
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Range	In Home	In Home	Beyond Front Door (Wi-Fi Mesh)	Beyond Front Door	Beyond Front Door	Beyond Front Door	Beyond Fence	Beyond Fence
Native IPv6 Connectivity	No	No	Yes	No	Yes	No	No	No
Cloud Connectivity	Gateway, Phone	Gateway, Phones	Router	Gateway	Border Router	Gateway	Amazon	Gateway
Application Layer								
Existing Infrastructure								
Ecosystems Support								
Mesh Networking								
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Native IPv6 Connectivity	No	No	Yes	No	Yes	No	No	No
Cloud Connectivity	Gateway, Phone	Gateway, Phones	Router	Gateway	Border Router	Gateway	Amazon	Gateway
Application Layer	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Existing Infrastructure								
Ecosystems Support								
Mesh Networking								
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Cloud Connectivity	Gateway, Phone	Gateway, Phones	Router	Gateway	Border Router	Gateway	Amazon	Gateway
Application Layer	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Existing Infrastructure	Large	Small	Everywhere	Medium-Large	Medium	Fragmented	Very Small	Medium
Ecosystems Support								
Mesh Networking								
Additional Notes								

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Cloud Connectivity	Gateway, Phone	Gateway, Phones	Router	Gateway	Border Router	Gateway	Amazon	Gateway
Application Layer	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Existing Infrastructure	Large	Small	Everywhere	Medium-Large	Medium	Fragmented	Very Small	Medium
Ecosystems Support	Amazon, Apple, Google, Signify	Amazon, Leedarson, Alibaba, Xiaomi	All	Amazon, IKEA, Signify, Somfy, Legrand, Tuya	Amazon, Apple, Google, Comcast, SmartThings, IKEA	Amazon, Google, Lutron	Amazon	Alarm.com, Ring, ADT, Leedarson, Assa Abloy, Samsung
Mesh Networking								
Additional Notes								

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Native IPv6 Connectivity	No	No	Yes	No	Yes	No	No	No
Cloud Connectivity	Gateway, Phone	Gateway, Phones	Router	Gateway	Border Router	Gateway	Amazon	Gateway
Application Layer	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Existing Infrastructure	Large	Small	Everywhere	Medium-Large	Medium	Fragmented	Very Small	Medium
Ecosystems Support	Amazon, Apple, Google, Signify	Amazon, Leedarson, Alibaba, Xiaomi	All	Amazon, IKEA, Signify, Somfy, Legrand, Tuya	Amazon, Apple, Google, Comcast, SmartThings, IKEA	Amazon, Google, Lutron	Amazon	Alarm.com, Ring, ADT, Leedarson, Assa Abloy, Samsung
Mesh Networking	NA	Yes	Yes (Infrastructure)	Yes	Yes	Yes	NA	Yes
Additional Notes								

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	Bluetooth	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
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Application Layer	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Existing Infrastructure	Large	Small	Everywhere	Medium-Large	Medium	Fragmented	Very Small	Medium
Ecosystems Support	Amazon, Apple, Google, Signify	Amazon, Leedarson, Alibaba, Xiaomi	All	Amazon, IKEA, Signify, Somfy, Legrand, Tuya	Amazon, Apple, Google, Comcast, SmartThings, IKEA	Amazon, Google, Lutron	Amazon	Alarm.com, Ring, ADT, Leedarson, Assa Abloy, Samsung
Mesh Networking	NA	Yes	Yes (Infrastructure)	Yes	Yes	Yes	NA	Yes
Additional Notes	Location services, Direct phone connectivity	Direct phone connectivity	Ubiquitous connectivity	Mature technology, 4000+ certified devices, Battery-less ZGP	Self-healing (Thread), State of art security, Large ecosystems interest	Large install base of devices but market is fragmented and devices from different manufacturers don't interoperate	Multiple PHY support and long range	Mature technology, 4000+ certified devices, new Long Range

Smart Home Protocol Selector Guide

	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting								
Television								
Access Points								
Controllers and Bridges								
Smart Wearables (Watches, Fitness Trackers)								
White Goods								
Switches and Plugs								
Sensors								
Locks								
Thermostats								
Cameras								
Wireless Devices (Keypads, Mouse, Ear pods)								
Smart Appliances								
Smart Tags								
Garden and Pool Management								
Water Mitigation and Control								

Smart Home Protocol Selector Guide

	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting	✓							
Television								
Access Points								
Controllers and Bridges								
Smart Wearables (Watches, Fitness Trackers)	✓							
White Goods								
Switches and Plugs								
Sensors								
Locks								
Thermostats								
Cameras								
Wireless Devices (Keypads, Mouse, Ear pods)	✓							
Smart Appliances	✓							
Smart Tags	✓							
Garden and Pool Management								
Water Mitigation and Control								

Smart Home Protocol Selector Guide

	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting	✓	✓						
Television								
Access Points								
Controllers and Bridges								
Smart Wearables (Watches, Fitness Trackers)	✓							
White Goods								
Switches and Plugs								
Sensors								
Locks								
Thermostats								
Cameras								
Wireless Devices (Keypads, Mouse, Ear pods)	✓							
Smart Appliances	✓							
Smart Tags	✓	✓						
Garden and Pool Management								
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	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting	✓	✓	✓					
Television			✓					
Access Points								
Controllers and Bridges								
Smart Wearables (Watches, Fitness Trackers)	✓							
White Goods			✓					
Switches and Plugs								
Sensors								
Locks			✓					
Thermostats			✓					
Cameras								
Wireless Devices (Keypads, Mouse, Ear pods)	✓							
Smart Appliances	✓		✓					
Smart Tags	✓	✓						
Garden and Pool Management								
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	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting	✓	✓	✓	✓				
Television			✓					
Access Points								
Controllers and Bridges								
Smart Wearables (Watches, Fitness Trackers)	✓							
White Goods			✓					
Switches and Plugs				✓				
Sensors				✓				
Locks			✓	✓				
Thermostats			✓					
Cameras								
Wireless Devices (Keypads, Mouse, Ear pods)	✓							
Smart Appliances	✓		✓					
Smart Tags	✓	✓						
Garden and Pool Management								
Water Mitigation and Control								

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	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting	✓	✓	✓	✓	✓			
Television			✓		✓			
Access Points					✓			
Controllers and Bridges					✓			
Smart Wearables (Watches, Fitness Trackers)	✓							
White Goods			✓		✓ (Matter Over Wi-Fi)			
Switches and Plugs				✓	✓ (Matter Over Thread and Wi-Fi)			
Sensors				✓	✓ (Matter Over Thread and Wi-Fi)			
Locks			✓	✓	✓ (Matter Over Thread and Wi-Fi)			
Thermostats			✓		✓ (Matter Over Thread and Wi-Fi)			
Cameras					✓ (Matter Over Wi-Fi)			
Wireless Devices (Keypads, Mouse, Ear pods)	✓							
Smart Appliances	✓		✓					
Smart Tags	✓	✓						
Garden and Pool Management								
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Smart Home Protocol Selector Guide

	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting	✓	✓	✓	✓	✓			
Television			✓		✓			
Access Points					✓			
Controllers and Bridges					✓			
Smart Wearables (Watches, Fitness Trackers)	✓							
White Goods			✓		✓ (Matter Over Wi-Fi)			
Switches and Plugs				✓	✓ (Matter Over Thread and Wi-Fi)	✓		
Sensors				✓	✓ (Matter Over Thread and Wi-Fi)	✓		
Locks			✓	✓	✓ (Matter Over Thread and Wi-Fi)	✓		
Thermostats			✓		✓ (Matter Over Thread and Wi-Fi)			
Cameras					✓ (Matter Over Wi-Fi)			
Wireless Devices (Keypads, Mouse, Ear pods)	✓							
Smart Appliances	✓		✓					
Smart Tags	✓	✓						
Garden and Pool Management								
Water Mitigation and Control								

Smart Home Protocol Selector Guide

	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting	✓	✓	✓	✓	✓			
Television			✓		✓			
Access Points					✓			
Controllers and Bridges					✓			
Smart Wearables (Watches, Fitness Trackers)	✓							
White Goods			✓		✓ (Matter Over Wi-Fi)			
Switches and Plugs				✓	✓ (Matter Over Thread and Wi-Fi)	✓		
Sensors				✓	✓ (Matter Over Thread and Wi-Fi)	✓	✓	
Locks			✓	✓	✓ (Matter Over Thread and Wi-Fi)	✓	✓	
Thermostats			✓		✓ (Matter Over Thread and Wi-Fi)			
Cameras					✓ (Matter Over Wi-Fi)			
Wireless Devices (Keypads, Mouse, Ear pods)	✓							
Smart Appliances	✓		✓					
Smart Tags	✓	✓					✓	
Garden and Pool Management							✓	
Water Mitigation and Control							✓	

Smart Home Protocol Selector Guide

	BLE	Bluetooth mesh	Wi-Fi	Zigbee	Matter	Proprietary	Sidewalk	Z-Wave
LED Lighting	✓	✓	✓	✓	✓			
Television			✓		✓			
Access Points					✓			
Controllers and Bridges					✓			
Smart Wearables (Watches, Fitness Trackers)	✓							
White Goods			✓		✓ (Matter Over Wi-Fi)			
Switches and Plugs				✓	✓ (Matter Over Thread and Wi-Fi)	✓		✓
Sensors				✓	✓ (Matter Over Thread and Wi-Fi)	✓	✓	✓
Locks			✓	✓	✓ (Matter Over Thread and Wi-Fi)	✓	✓	✓
Thermostats			✓		✓ (Matter Over Thread and Wi-Fi)			
Cameras					✓ (Matter Over Wi-Fi)			
Wireless Devices (Keypads, Mouse, Ear pods)	✓							
Smart Appliances	✓		✓					
Smart Tags	✓	✓					✓	
Garden and Pool Management							✓	✓ (Z-Wave LR)
Water Mitigation and Control							✓	✓ (Z-Wave LR)

Is Matter Right for Me?

- **Matter is a good choice if:**
  - You need to work multiple Ecosystems
    - Amazon, Google, Apple, Samsung, etc.
  - You can use Wi-Fi and/or Thread for your products
    - Full application layer support
  - You want an open Ecosystem
    - 3rd party devices can join the network
  - You need to have direct support of IP (Internet Protocol)
    - Matter is based on IP
  - Your device types are supported by Matter
    - Device types are required for interoperability

- **Matter might NOT BE a good choice if:**
  - You require sub-GHz for range
    - Consider a Matter bridge (i.e. Matter to Z-Wave)
  - You want a closed ecosystem
    - May be better options with less overhead
  - Matter device types are not supported
    - Consider joining CSA to help define new device type

Summary

- **Matter addresses the challenges faced by consumers, manufacturers, and retailers**
  - Reduces purchasing confusion and returns
  - Improves interoperability and user experience
- **Matter aims to bring simplicity, interoperability, reliability, and security to smart home devices**
  - Enables devices from multiple brands to work natively together on multiple ecosystems
- **Silicon Labs' provides lowest power Matter over Thread and Matter over Wi-Fi solutions**
  - Designed to address a broad range of applications
- **Silicon Labs' end-to-end Matter developer journey**
  - Simplifies Matter development, testing, and manufacturing
- **Silicon Labs is committed to the success of Matter**
  - Strong portfolio of both Matter over Wi-Fi and Matter over Thread
  - Continued development and support in CSA for new features and device types
  - Largest Matter code contributor among Semiconductor companies

SILICON LABS

CONNECTED INTELLIGENCE