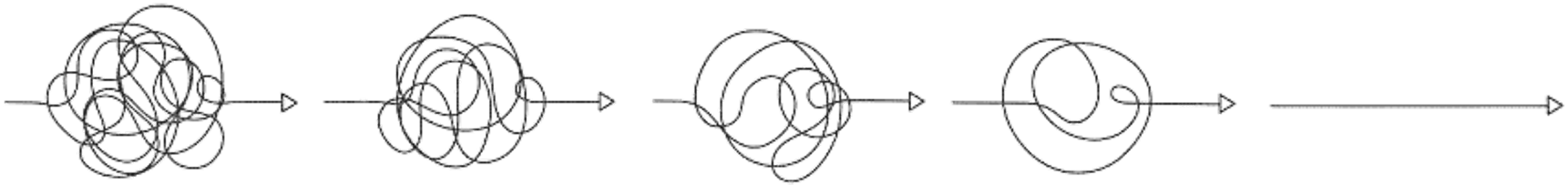


connectivity standards alliance

Alliance and Matter Introduction

Steve Hanna, Distinguished Engineer, Infineon Technologies AG
electronica 2022

IoT should positively transform the way we live, work, and play. But, complexity, closed ecosystems and challenges of accessibility, security and trust have held back progress.



connectivity standards alliance

Since 2002 we have been dedicated to unraveling these challenges. Our goals are to **simplify** the complex, create an open path to **IoT adoption** and innovation, and promote **universal open standards**, enabling all objects to securely connect & interact.

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Global Leadership



Global Collaboration

Since 2002, **Connectivity Standards Alliance** has been dedicated to **simplifying** the complex, creating an **open path** to IoT adoption and innovation, and promoting **universal open standards**, enabling all objects to securely connect & interact.

We are a multi-standards group **enabling collaboration** across IoT players, **accelerating market growth** and **delivering value** to our members & the industry.

What we do:

- Standards Development
- Testing and Certification
- Market Reach and Influence

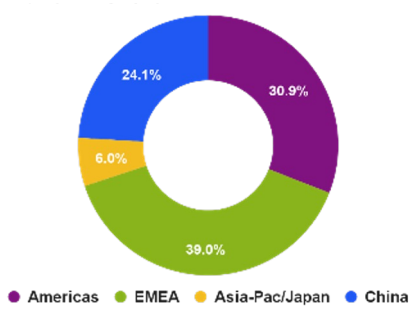
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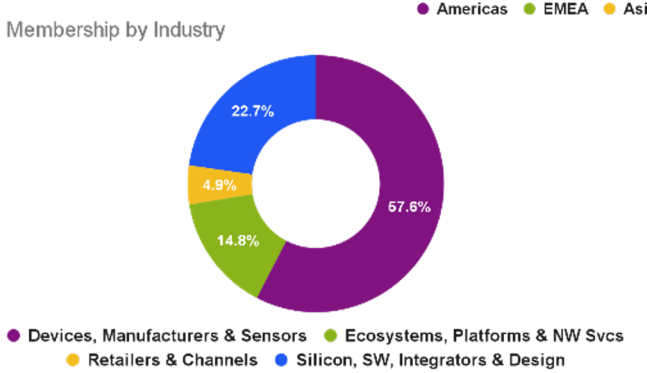
Building the Foundation & Future of the IoT

- Matter Working Group
- Zigbee Working Group
- Data Model Working Group
- Access Control Working Group
- Product Security Working Group
- Member Group China
- EU Interest Group
- Industry Stakeholder Groups

560 Engaged Companies
5,300 member individuals participating in **36** countries

Over **110** New Members in 2021 & over **130** YTD in 2022





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matter

- A single, IP-based protocol – the foundation for connected things
- A seal of approval that devices will work seamlessly together today & tomorrow
- Simplifying development for manufacturers and increasing choice and compatibility for consumers
- Creating a rapid, transformative impact on the market

Simplicity

Interoperability

Reliability

Security

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Matter: Setting the Standard for Smart Home

Simple | Interoperable | Reliable | Secure

- Complete Specification
- Toolkit: Open-source SDK, Test Scripts, and Tools
- Certification Program
- Alliance Developer Community as force multiplier

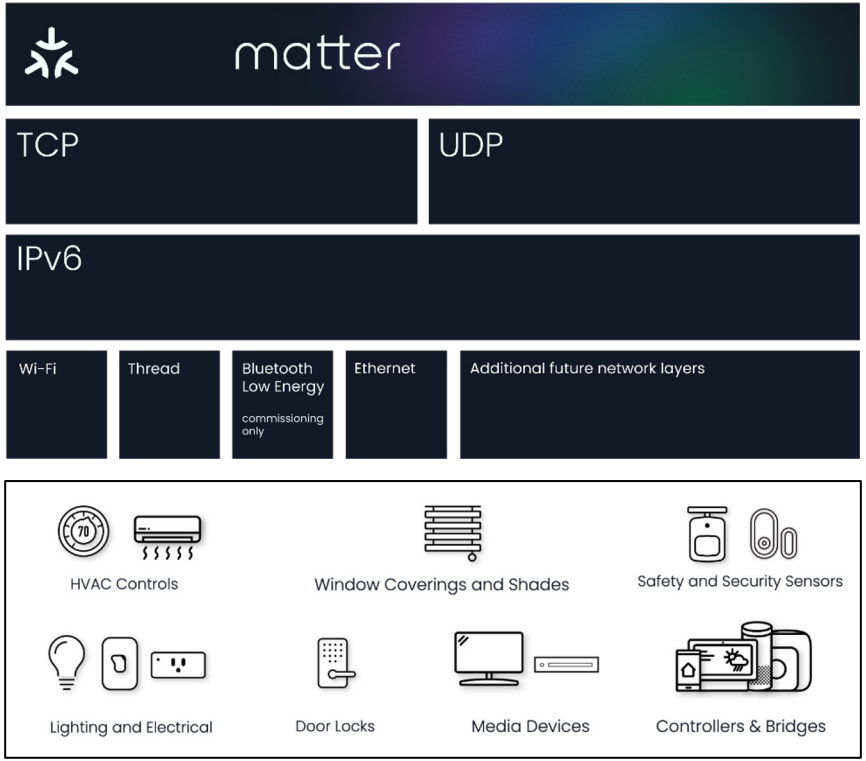
280+ Companies | 3,200+ Individuals



*Sample of companies who have announced support of Matter

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How Matter Stacks Up



Common application layer
Interoperability, simplified setup & control

IP-based
Convergence layer across all compatible networks

Secure
Comprehensive, Layered, Resilient, Agile
AES-128-CCM encryption with 128-bit AES-CBC

Common protocol across devices
Extendible to cloud

Common data model
Core operational functions, multiple device types

Low overhead
MCU-class compute, <128 KB RAM, <1 MB Flash

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Matter: Focus on Security



Comprehensive
- Layered approach with authentication & attestation for commissioning
- Every message protected
- Secure over-the-air firmware updates

Strong
- Single strong cryptographic suite based on well-established standards
- Passcodes and certificates used to setup secure sessions
- Device attestation to ensure authenticity

Easy
- Designed to make smart devices easier to implement and use

Resilient
- Designed to protect, detect and recover
- Distributed Compliance Ledger to enhance resiliency and scale

Agile
- Crypto-flexibility to address new developments and threats

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Extending Our Reach



Devices Planned for 1.0 Launch

- Lighting and electrical
- Fan controls
- HVAC controls
- Door locks
- Sensors (inc. Safety and security)
- Window coverings/shades
- TVs
- Bridges

Next Set of Devices (active Use Case teams)

- Appliances (White goods)
- Robot vacuum cleaners
- Doorbells / Cameras
- Energy management (EV Charging +)
- Access points, Border Routers

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Creating Experiences that Matter

Consumers

- More consistent set up experience
- Multi-Admin works across & with multiple ecosystems

Developers

- Develop once / deploy everywhere
- Secure-by-design approach
- Community of support

Retailers

- Simplified purchasing experience
- Minimized returns

Commercial / Builders

- Future proofed ecosystem compatibility
- Flexibility for users



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matter zigbee

access control product security

green power smart energy

jupiterMesh rf4ce

dotdot

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