# A matter of smart connectivity

**Navigating the Matter connectivity standard**

## Introducing Matter

In the autumn of 2022, a new logo has appeared on smart home devices: the three-sided geometric pattern of Matter. A foundation for connected devices, Matter is a new, royalty-free standard for delivering reliable, seamless and secure connectivity. Supported by leading technology companies — including UL Solutions — through the Connectivity Standards Alliance (CSA), Matter increases and improves compatibility among smart home products, with security and privacy as fundamental design tenets.

Built on Internet Protocol (IP) and proven technologies, Matter enables communication across various manufacturers' smart home devices, mobile apps and cloud services. The standard also defines a set of IP-based networking technologies for device certification. **Watch the CSA video for more on Matter**

## Connectivity Standards Alliance (CSA)

CSA members include hundreds of companies that create, maintain and deliver open global standards for the Internet of Things (IoT).

Established in 2002, the CSA's global membership creates and evolves universal open standards for the products that transform the way we live, work and play. Through the collective expertise of its members, robust certification programs and a full suite of open IoT solutions, the Alliance is leading the movement to enable all objects to simply, securely and seamlessly connect the world around you. The CSA launched the Matter working group at the end of 2019. UL Solutions joined the project in 2020.
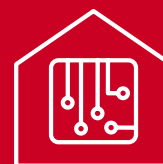
## Matter testing and certification through UL Solutions

UL Solutions supports Matter testing and certification with locations worldwide. UL Solutions is one of the few one-stop-shop laboratories for connectivity certifications (Bluetooth®, Matter, Thread, Wi-Fi, Zigbee). **Contact us to learn more**

*>50% More than 100 million Matter-supported devices are expected to ship by the end of 2022. Within five years, more than half the world's key smart home devices will ship supporting Matter.\**

*ABI Research Press Release:* "Matter and its Smart Home Impact" application analysis report.

**UL** **Solutions**
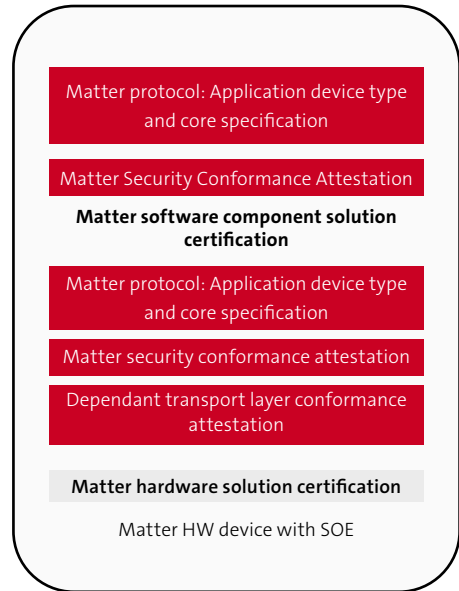
## Matter certifications

A Matter Software Component is an implementation of the Matter Specifications. UL Solutions tests Matter Software Components that:
- Run within the context of a standard operating environment (SOE)
- Support certifiable functionality
- Are not attestable/commissionable Matter hardware devices

Matter Hardware Solutions submitted for testing are complete solutions. UL Solutions tests Matter Hardware Solutions (including cluster libraries and device types) that:
- Conform to interoperability specifications
- Support certifiable functionality

Components that qualify as both Matter Software Components and Hardware Solutions may be certified for both independently.

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|---|
| Matter protocol: Application device type and core specification |
| Matter Security Conformance Attestation |
| **Matter software component solution certification** |
| Matter protocol: Application device type and core specification |
| Matter security conformance attestation |
| Dependant transport layer conformance attestation |
| **Matter hardware solution certification** |
| Matter HW device with SOE |

# Certification process

**Apply to the CSA**
- Become a CSA member as a Promoter, Participant or Adopter and request manufacturer ID.
- Complete development and choose an authorized test laboratory (ATL) such as UL Solutions to test your product according to Matter specifications.
- Complete and submit an application for certification in the CSA certification tool/portal, which includes PICS, DoC, DCP attestation and certification fees.

**Testing**
- Tests are scheduled and performed by the ATL according to the CSA certification policy and procedure.
- The ATL maintains comprehensive documentation of testing.
- Upon successful completion of the relevant certification data, the ATL submits the final product test results to the CSA for final review.

**Auditing**
- The CSA reviews the test results submitted by the ATL.
- Questions related to the submitted test results are forwarded to the ATL.

**Approval**
- If submitted test results meet Matter specification requirements, the CSA issues a product certificate to the applicant within two to three weeks of receiving the results.

**UL Solutions**

**Safety. Science. Transformation.™**