# Matter production, simplified.

Silicon Labs is the only IoT embedded solution provider offering a **Custom Part Manufacturing Service (CPMS)** to device makers. This secure provisioning service allows IoT device makers to order customized hardware straight from the factory via the CPMS web portal. CPMS removes the numerous complexities, time, and expense of custom provisioning Matter devices at scale.

Silicon Labs has partnered with Kudelski Security to provide scalable access to Device Attestation Certificates (DACs) for your Matter devices. Kudelski has 30+ years of experience securely provisioning more than 500 million devices. Rest assured that your secrets are stored in HSMs both on and offline to provide maximum security for your secret key material.

KUDELSKI I THINGS

What is Matter?

Matter is an open-source connectivity standard to connect smart home and Internet of Things (IoT) devices securely with one another. The protocol was created by the Connectivity Standards Alliance (CSA) and is supported by companies such as Amazon, Apple, Google, Samsung, and Zigbee Alliance members. Matter includes security features designed to protect devices from cyber attacks.
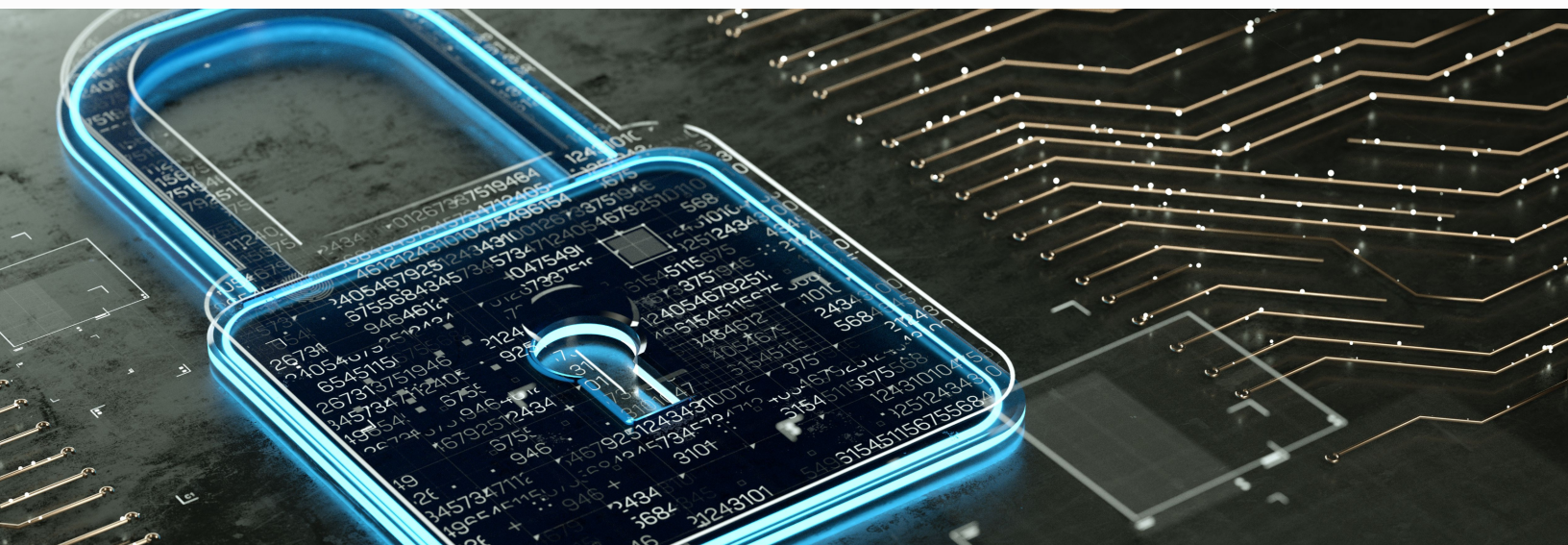
How do I get started with Silicon Labs & Matter?

In order to certify your Matter devices, your organization will need to become a member of the Connectivity Standards Alliance (**CSA**). Silicon Labs provides integrated tooling through Simplicity Studio to help get you moving fast. We provide a number of Matter application examples on Github that you can start with. If you decide to simplify your path to production, we provide integrated production services through our CPMS portal that can work in conjunction with Simplicity Studio to get you setup in CPMS. You will also need to setup and account with our preferred Matter CA, Kudelski in order to get the DACs that will be needed for your Matter devices.

The Development Journey

1 · CSA MEMBERSHIP

Become a member of CSA to take advantage of device certification, early access to updated specifications, and other member services. You will also need to register for a Vendor ID (VID) with CSA once you are a member.

2 · DEVELOP APPLICATION

We recommend using **Simplicity Studio** to take advantage of integrated tools for your Matter development. Check out our sample applications on Github to launch you out of the starting gate.

3 · KUDELSKI ACCOUNT

We partner with Kudelski as a CA to provide the **DAC**s needed for your devices. Set up an account with Kudelski to create and securely store your PAI private key material.

4 · CERTIFY DEVICE

Once development is completed, you will need to certify your device. This happens through a CSA approved test facility. Once approved, CSA will issue a Certification Declaration or **(CD)**.

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How do I get started with CPMS & Matter?

CPMS solves the very difficult problem of **"How in the world do I get unique certificates in every production device on the manufacturing line and do this securely?"**. Rather than spending months solving this workflow yourself and trying to bend your contract manufacturer to do your very complicated bidding, CPMS simply needs to know a few configuration values and your products will be off to the races. If your team uses Simplicty Studio, you can simply export a JSON file to instruct CPMS about your product. Your product will hit the market faster, more securely, and give you that edge over your competitors that are attempting to accomplish this themselves.

The Production Journey

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CPMS CONFIGURATION

Once certified, bring your firmware and **Certification Declaration (CD)** to CPMS. We work with our partner Kudelski to properly secure the device and provide test samples. You will also be issued an Order-able Part Number (**OPN**).

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DAC CREATION

CPMS interacts with Kudelski through our *Secure Vault Services* to generate the signed DACs needed to identify your device on the Matter network. This is done behind the scenes with no action needed by you.

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MANUFACTURING

Silicon Labs securely manufactures your Matter devices based on the OPN provided by CPMS. Unique DACs are injected into each device at the time of manufacture. Your Matter devices are manufactured and ready to ship.

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HAPPY CUSTOMER

The final step is the unboxing of your Matter device and marveling at what you created.

The only action left is to become a leader in the Matter ecosystem.

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Let's get into the details.

1 CSA Membership

Become a member of CSA (Connectivity Standards Alliance, formerly the Zigbee Alliance) to take advantage of device certification and other member services. You will also need to register for a Vendor ID (**VID**) through CSA once you are a member. This VID will be used to identify valid vendors through the Distributed Compliance Ledger (**DCL**).

Learn more at csa-iot.org.

2 Develop your application

Get your development experience heading down the right path to start. We recommend using **Simplicity Studio** to take advantage of integrated tools for your Matter development to help provision your development device. We provide scripts that integrate directly with our **Custom Parts Manufacturing Service (CPMS)** also to simplify your production experience once your are certified and ready to hit the market.

Silicon Labs also provides sample applications on Github to launch you out of the starting gate. Find demo apps for both Wi-Fi and Thread and a growing list of Matter examples.

Download Simplicity Studio: https://www.silabs.com/developers/simplicity-studio
Matter Sample Applications: https://github.com/SiliconLabs/matter

3 Kudelski account

As you get closer to production and start to think about getting your Matter device to market, you will need to start considering how you will provision your devices at scale with a proper Certificate Authority (**CA**) to sign and issue your Device Attestation Certificates (**DAC**).

Silicon Labs partners with Kudelski Security to sign and issue DACs signed with a valid PAA and PAI by Kudelski. This process is integrated into our manufacturing facilities to make this a seamless process saving your organization countless hours trying to develop processes to generate these unique DACs and get them into your parts at scale at your manufacturing facility or CM.

Learn more about Kudelski at https://www.kudelski-iot.com/services-and-systems/matter-paa-pai

Getting ready for production.

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Device Certification

Your team has been working diligently, developing the next great Matter IoT device and you're ready to go to market. Your next step is to get your device certified through a CSA approved testing facility. There are a number of different certification vendors that will test your device to ensure that it properly adheres to the Matter specification.

The end result of the certification process is a **Certification Declaration (CD)** which is issued by CSA once your device passes. The CD will be added to the device programming and used during commissioning to attest that the device is certified.

Why certify? https://csa-iot.org/certification/why-certify/

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CPMS Configuration

Your team has done all of the hard work in creating a Matter device. You've certified that device through a CSA testing facility. *Now what? How do I get these manufactured at scale with unique DACs in each one?*

This is where CPMS excels. CPMS allows you to customize your device even further, including the ability to add the Matter ecosystem to your device. Simply provide the necessary inputs, or you can create a data model through our development tools that will pre-fill these fields for you based on your device. CPMS will work with Kudelski behind the scenes to generate the DACs and provision these to your samples.

CPMS: https://cpms.silabs.com/login

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DAC Creation

When your sample order is submitted, CPMS gets to work ordering the DACs for your device through our Secure Vault Services (SVS). The inputs added to CPMS such as your VID, PID, and other inputs are sent to Kudelski to create the unique DACs for your device and are sent back to Silicon Labs. *One important note when creating your account with Kudelski, you will need to add Silicon Labs as a requestor and receiver of DACs for this PAI so that this process can happen seamlessly*.

Once Silicon Labs has the DACs, the manufacturing process can begin. The DACs are placed into the manufacturing process to generate your sample order.

Manufacture it.

7 Manufacturing

Silicon Labs securely manufactures your Matter devices based on the OPN provided by CPMS. The signed DACs that we received from Kudelski are injected into each device at the time of manufacture. Your Matter samples are manufactured and ready to ship back to you for approval.

Once you have had time to validate that the samples are working to your satisfaction, return to CPMS to approve the samples (or you may reject the samples if a problem exists). Once approved, you have an OPN from Silicon Labs that can be order from any of our third-party distributors.

8 Happy Customer

In the end, we hope that you had a positive experience with CPMS and your Matter device. As always, Silicon Labs is ready to help support you through this process. Setting up custom provisioning in a manufacturing process is a daunting task. Our aim is to make this a seamless process through our Custom Part Manufacturing Service so that you don't have to.

Thank you for your interest in manufacturing your Matter device with Silicon Labs.