



MATTER SERIES

Presentation  
Will Begin  
Shortly

tech **talks** UPCOMING SESSIONS

FEB 9<sup>TH</sup> | Matter: Evaluation to Certification

MAR 9<sup>TH</sup> | Certifying a Matter Device: Thread and Wi-Fi

APR 6<sup>TH</sup> | Getting Started: Matter Over Wi-Fi

MAY 4<sup>TH</sup> | Start Your Matter Development Journey

JUN 1<sup>ST</sup> | Future-Proofing Matter Security with Secure Vault

We will begin in:

0:00



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2023



WEBINAR SERIES

# Welcome

## Getting Started: Matter over Wi-Fi

Alfredo Pérez Grovas



**MATTER SERIES**

# Agenda

- 01** Introduction
- 02** Where to Go to Get Started
- 03** Hardware and Software Prerequisites
- 04** Building and Running a Matter over Wi-Fi demo
- 05** Video of Demo Execution
- 06** Silicon Labs Matter Over Wi-Fi Portfolio

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# Introduction

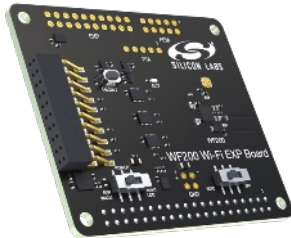
# Getting Started with Silicon Labs Matter over Wi-Fi

- **WF200/WFM200S**

- Raspberry Pi header
- EXP header
- WF200S Wi-Fi transceiver
- On-board antennas
- $\mu$ .FL connector

- **Kit contents**

- SLEXP8022A

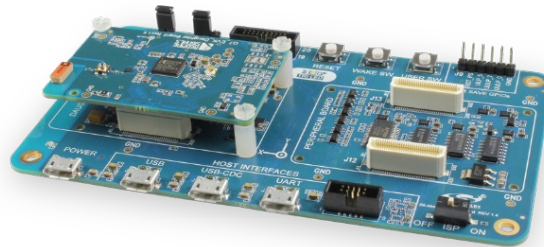


- **RS9116 Kits**

- Modular development platform
- Advanced development
- RF measurements
- Current measurements
- Serial interface to host

- **Kit contents**

- Baseboard
- Wireless daughter card

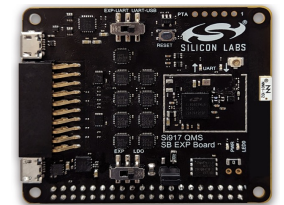


- **SiWx917 Kits<sup>1</sup>**

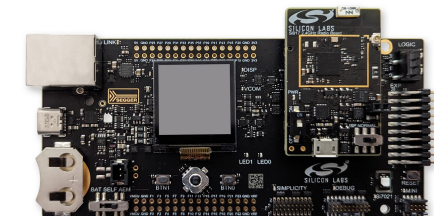
- EXP and Radio board options

- **Kit contents**

- Radio Board Kit (SoC Mode)
  - ▶ 1 x Radio board
  - ▶ 1 x Main Board
- EXP Kit (NCP Mode)
  - ▶ 1 x EXP board



SiWx917 EXP board



SiWx917 Dev kit

<sup>1</sup>SW with Matter support in Q4 2022

# Selection Guidelines for Matter over Wi-Fi Ecosystems

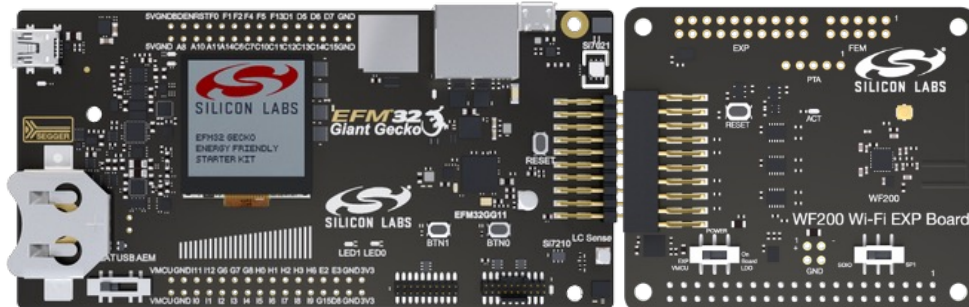
Use Case	Protocols	Mode	RS9116W + EFR32MG24 <sup>1</sup>	WF200 + EFR32MG24 <sup>1</sup>	SiWx917 <sup>2</sup>	SiWx917 <sup>2</sup> + EFR32MG24 <sup>1</sup>
Matter Wi-Fi End Device	Wi-Fi 4	RCP		✓		
Matter Wi-Fi End Device	Wi-Fi 4, Bluetooth LE	NCP	✓			
Matter Wi-Fi End Device	Wi-Fi 6, Bluetooth LE	SoC			✓	
Matter Wi-Fi End Device	Wi-Fi 6, Bluetooth LE	NCP				✓

<sup>1</sup>In addition to the EFR32MG24, other host MCUs can also be used by porting host software

# Development Kits – WF200/WFM200S



**SLEXP8022A**  
WF200 Wi-Fi Expansion Kit



**WF200 Wi-Fi Expansion board with Giant Gecko Starter Kit**

## ■ Hardware Features

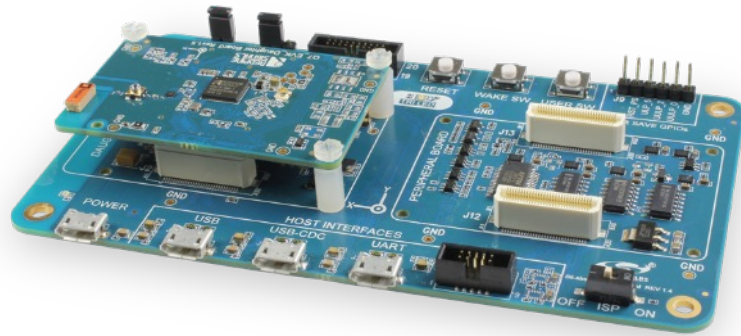
- Raspberry Pi header
  - Supports Raspberry Pi (2, 2B & 3)
- EXP header - support for Silicon Labs' MCUs (GG11) and Wireless MCUs (MG12) starter kits
- WF200S Wi-Fi transceiver
- On-board antennas
- $\mu$ .FL connector for conducted measurements and adding in an external antenna

## ■ Software tools and support

- Open-Source drivers for Linux and RTOS
- Example demo applications



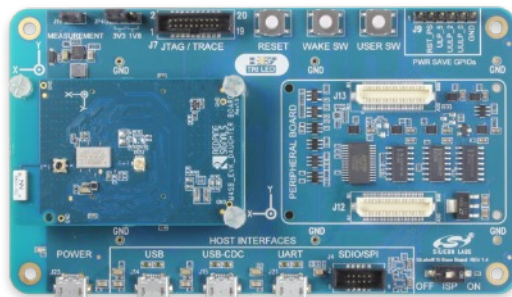
# Development Kits – RS9116



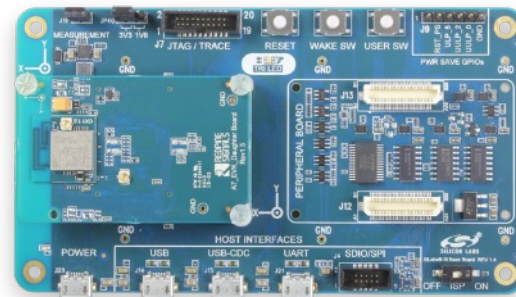
**RS9116X-SB-EVK1**  
Single Band (QMS)



- Same EVK for Transceiver and Full NCP
- All accessories and software included
  - Sample examples for reference
- Interface card for EFR & EFM boards

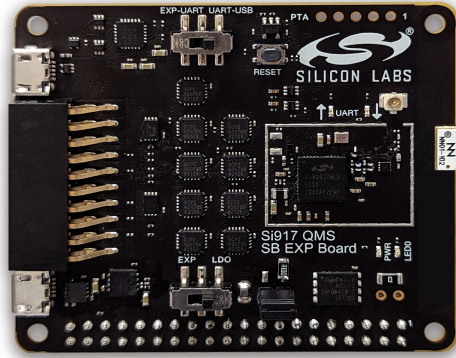


**RS9116X-SB-EVK2**  
Single Band (B00)

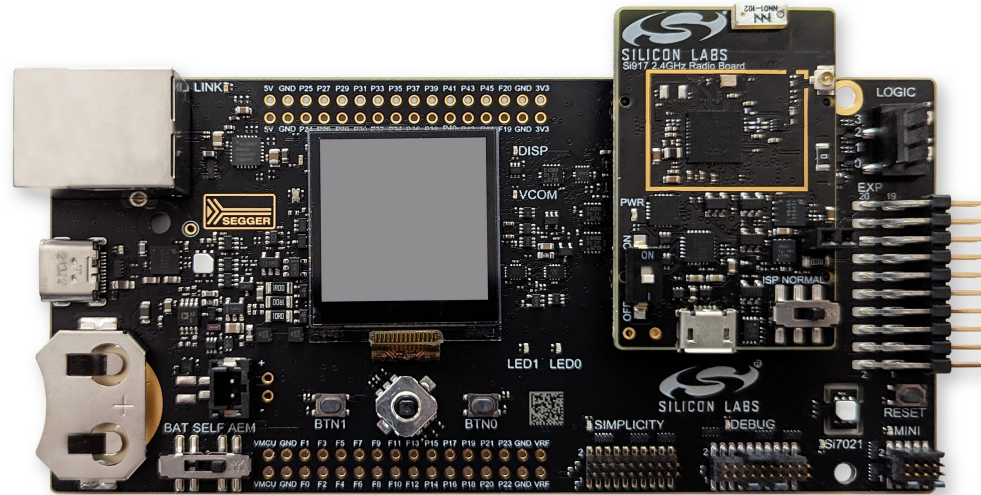


**RS9116X-DB-EVK1**  
Dual Band (CC1)

# Development Kits – SiWx917 (Upcoming)



SiWx917 Expansion Board



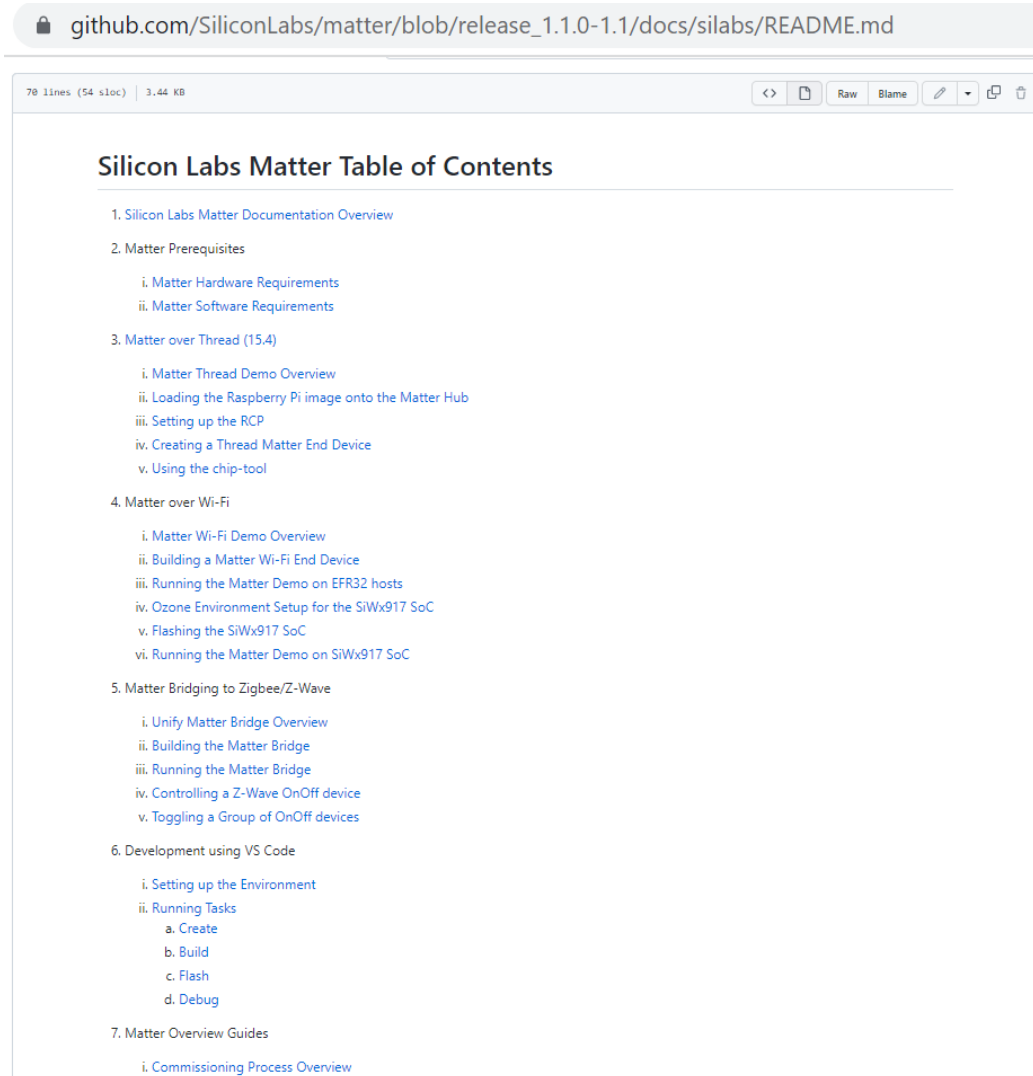
SiWx917 Development Kit

- SiWx917 EXP board for use with Silicon Labs MCU development board for NCP and RCP modes
- SiWx917 development board kit for use in SoC mode

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# Where to Go to Get Started

# Get Started



The screenshot shows a GitHub repository page for Silicon Labs Matter. The URL is [github.com/SiliconLabs/matter/blob/release\\_1.1.0-1.1/docs/silabs/README.md](https://github.com/SiliconLabs/matter/blob/release_1.1.0-1.1/docs/silabs/README.md). The page title is "Silicon Labs Matter Table of Contents". The table of contents is as follows:

- 1. Silicon Labs Matter Documentation Overview
- 2. Matter Prerequisites
  - i. Matter Hardware Requirements
  - ii. Matter Software Requirements
- 3. Matter over Thread (15.4)
  - i. Matter Thread Demo Overview
  - ii. Loading the Raspberry Pi image onto the Matter Hub
  - iii. Setting up the RCP
  - iv. Creating a Thread Matter End Device
  - v. Using the chip-tool
- 4. Matter over Wi-Fi
  - i. Matter Wi-Fi Demo Overview
  - ii. Building a Matter Wi-Fi End Device
  - iii. Running the Matter Demo on EFR32 hosts
  - iv. Ozone Environment Setup for the SiWx917 SoC
  - v. Flashing the SiWx917 SoC
  - vi. Running the Matter Demo on SiWx917 SoC
- 5. Matter Bridging to Zigbee/Z-Wave
  - i. Unify Matter Bridge Overview
  - ii. Building the Matter Bridge
  - iii. Running the Matter Bridge
  - iv. Controlling a Z-Wave OnOff device
  - v. Toggling a Group of OnOff devices
- 6. Development using VS Code
  - i. Setting up the Environment
  - ii. Running Tasks
    - a. Create
    - b. Build
    - c. Flash
    - d. Debug
- 7. Matter Overview Guides
  - i. Commissioning Process Overview

- Instructions for usage of Matter on Silicon Labs Wi-Fi and Thread platforms can be found at the following Github and Silicon Labs online locations:

[https://github.com/SiliconLabs/matter/blob/release\\_1.1.0-1.1/docs/silabs/README.md](https://github.com/SiliconLabs/matter/blob/release_1.1.0-1.1/docs/silabs/README.md)

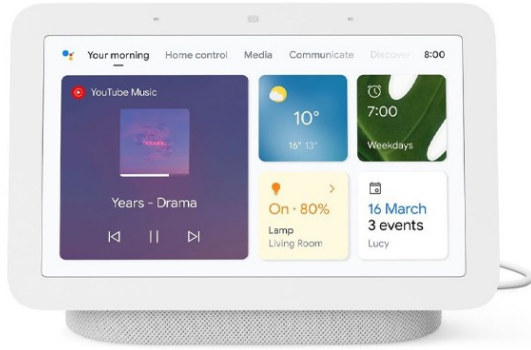
<https://docs.silabs.com/matter/1.0.5/matter-start/>

- These pages provide information for getting started with matter development using either of the following:
  - Silicon Labs Wi-Fi platforms
  - Silicon Labs Thread platforms
- You will find the following in them:
  - Hardware and software prerequisites
  - Build environment instructions
  - Matter demo overviews and running instructions

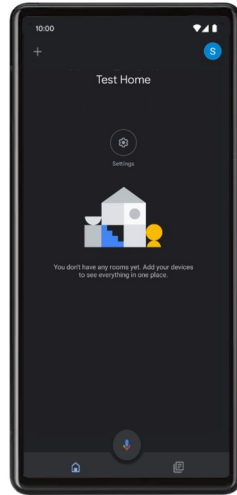
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# Hardware and Software Prerequisites

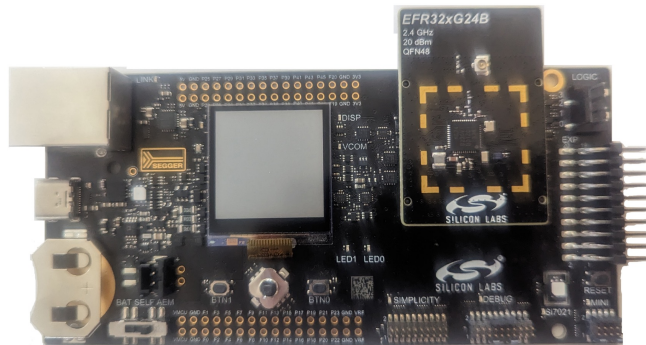
# Hardware Prerequisites



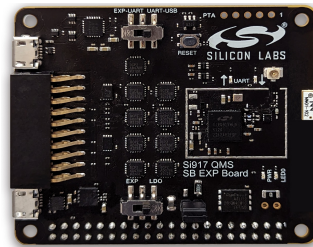
Nest Hub 2<sup>nd</sup> Gen



Google Pixel 6



BRD4002A dev kit baseboard with  
BRD4187C MG24 daughterboard



SiWx917 EXP Board

To execute matter over Wi-Fi code examples on an SiWx917, you will need the following hardware if using a Google Pixel phone:

- Google Pixel 6 with Android 13 and March 5, 2023 security update

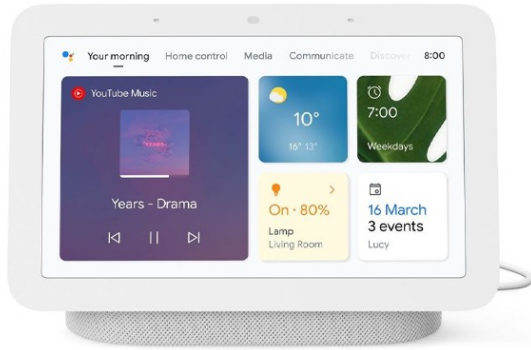
<https://www.bestbuy.com/site/google-pixel-cell-phones/google-pixel-6/pcmcat1634653430690.c?id=pcmcat1634653430690>

- Google Nest Hub gen 2

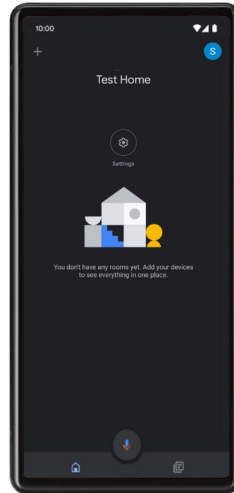
[https://store.google.com/product/nest\\_hub\\_2nd\\_gen?hl=en-US](https://store.google.com/product/nest_hub_2nd_gen?hl=en-US)

- Silicon Labs BRD4002A dev kit baseboard
- Silicon Labs BRD4187C MG24 (EFR32xG24B) daughterboard
- Silicon Labs SiWx917 QMS SB EXP Board
- Windows-based PC with available USB port
- Dual-band Wi-Fi access point

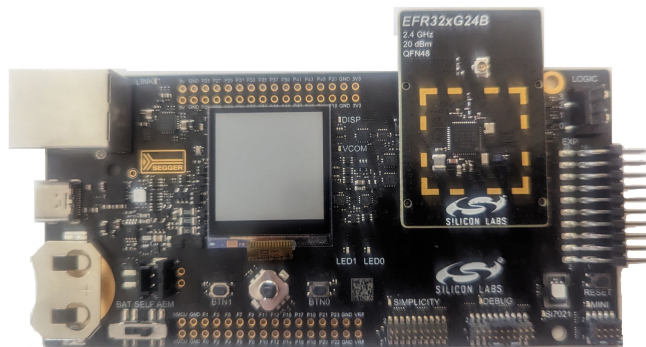
# Software Prerequisites



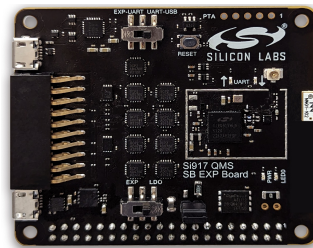
Nest Hub 2<sup>nd</sup> Gen



Google Pixel 6



BRD4002A dev kit baseboard with  
BRD4187C MG24 daughterboard



SiWx917 EXP Board

In order to execute matter over Wi-Fi code examples on an SiWx917 you will need the following software:

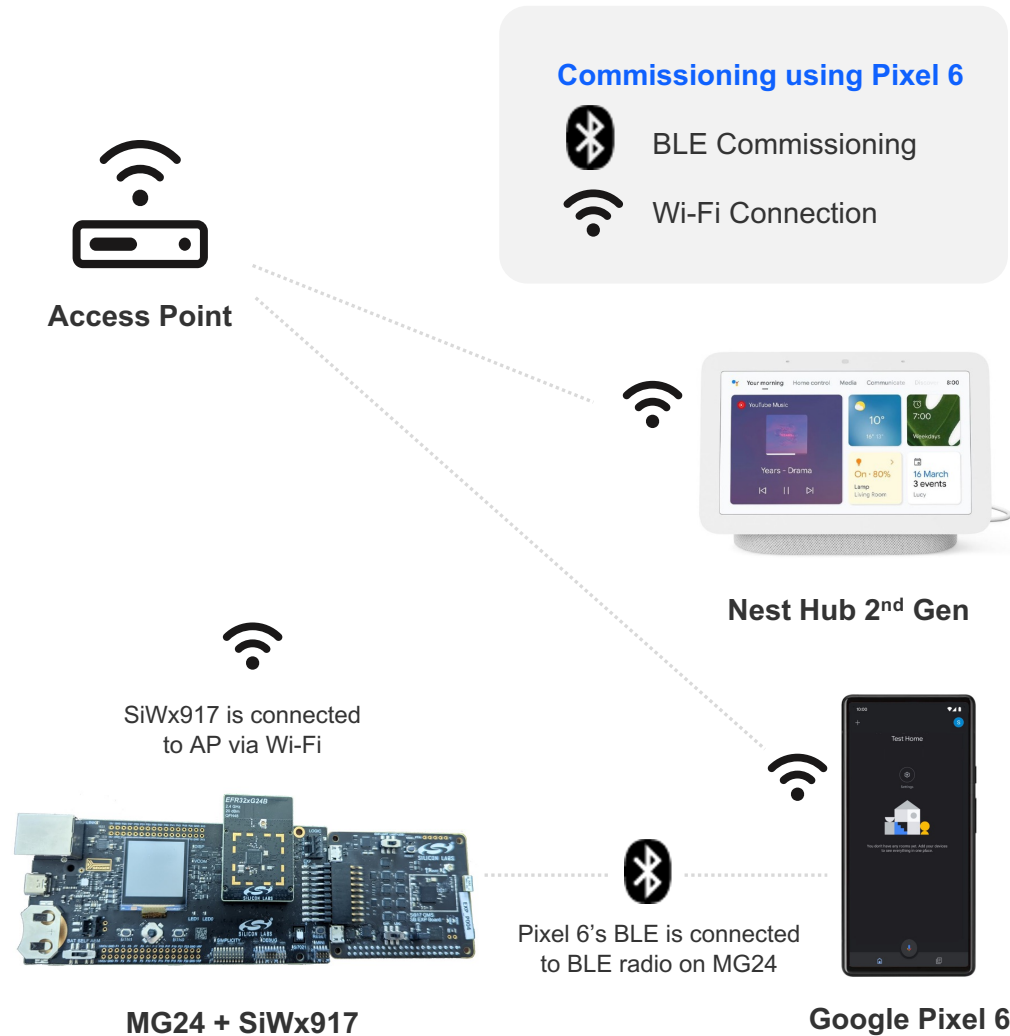
- Android 13 with latest security update (March 5, 2023) running on Pixel 6
- Latest version of Google Home app installed on Pixel 6
- Latest version of firmware running on Nest Hub Gen 2
- Silicon Labs Simplicity Studio v5.6.3.0 or later
  - ▶ <https://www.silabs.com/developers/simplicity-studio>

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# Building and Running a Matter over Wi-Fi Demo

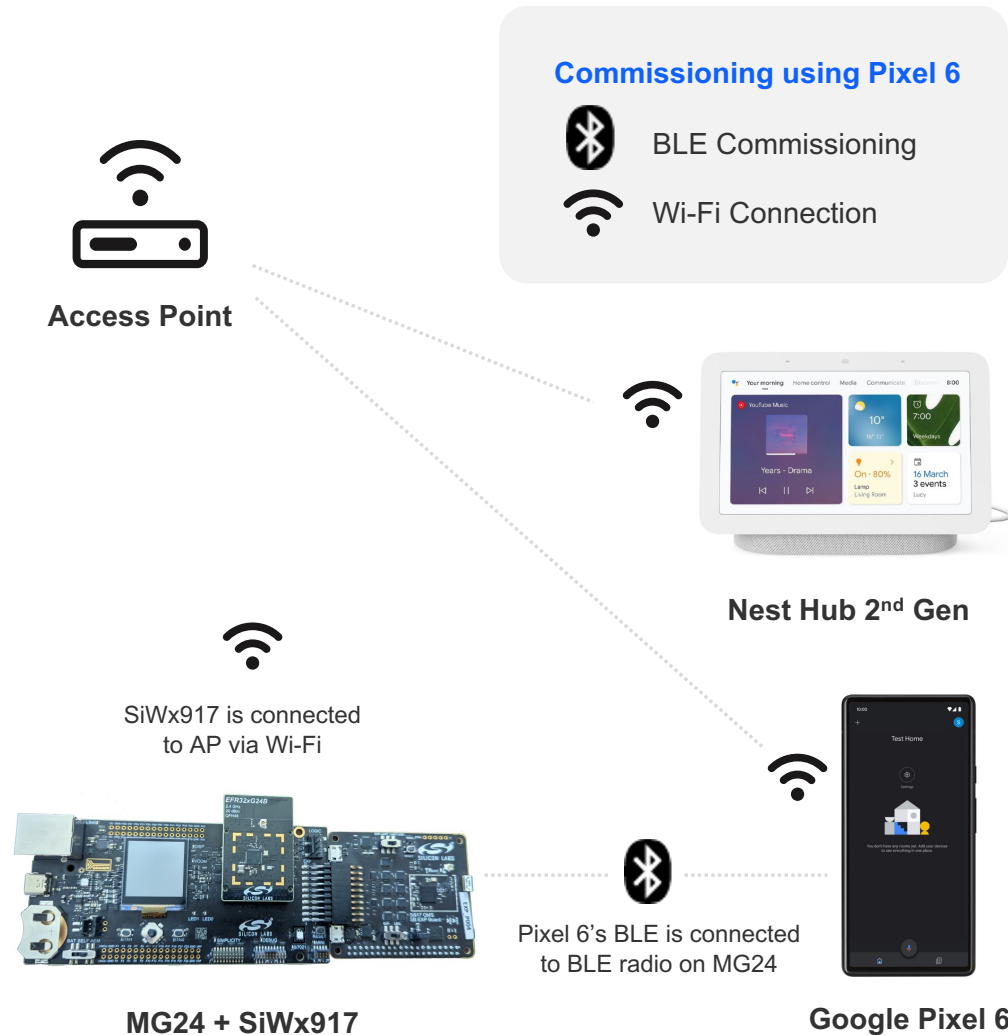


# Steps to set up and run the Matter over Wi-Fi lighting demo



- In today's presentation we will show you how to build and run the lighting matter over Wi-Fi demo
- This is one of the matter over Wi-Fi demos available to you within Simplicity Studio, some others are:
  - Lock over Wi-Fi
  - Window Cover over Wi-Fi
  - Thermostat over Wi-Fi
  - Light Switch over Wi-Fi
- The lighting matter over Wi-Fi demo will perform the following functions
  - Commissioning over BLE from Google Home app in Pixel 6
  - Associating to Wi-Fi network configured through commissioning
  - Control of LED on MG24 dev board through Matter over Wi-Fi
- We will describe its setup in the next slides

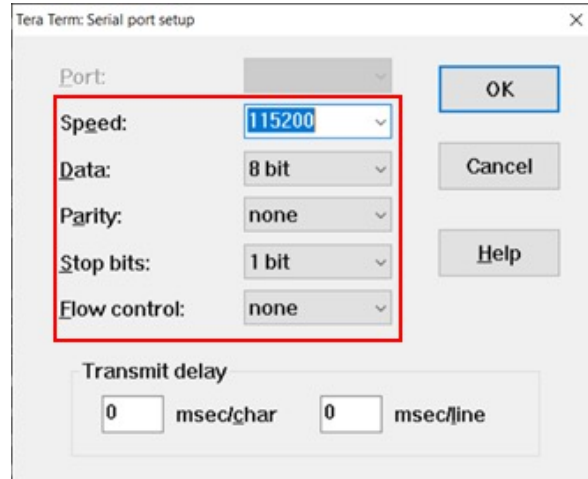
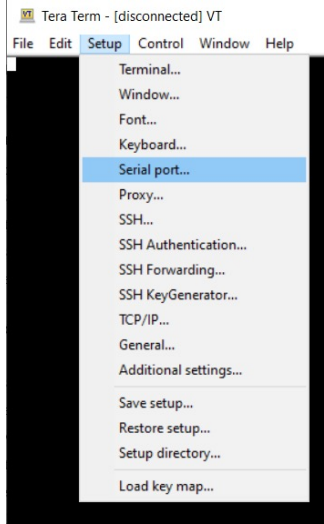
# Steps to set up and run the Matter over Wi-Fi lighting demo



The following steps will be followed to set up the Matter over Wi-Fi lighting demo:

- Step 1: Load firmware onto SiWx917 module
- Step 2: Connect MG24 evaluation board to SiWx917 expansion board
- Step 3: Load bootloader binary image into MG24
- Step 4: Compile and download lighting matter over Wi-Fi code onto the MG24
- Step 5: Setup Pixel 6 and Nest Hub setup
- Step 6: Use Google Home app to commission MG24 + SiWx917 matter device to your AP
- Step 7: Control LED on MG24 eval board from Google Home app using matter over Wi-Fi

# Step 1: Load firmware into SiWx917 module (Part 1)

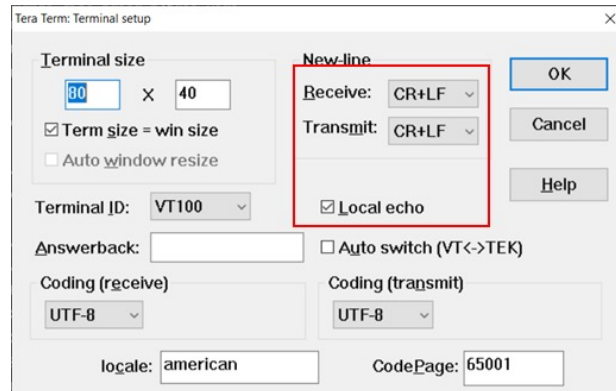
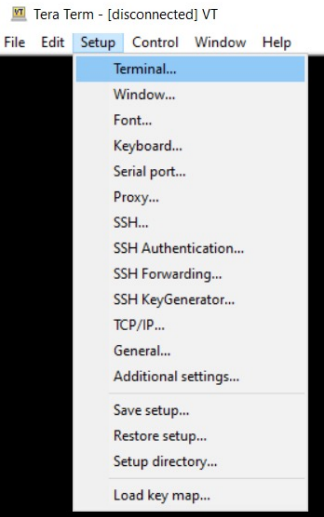


- Download Tera Term from the following link, install it on your PC and run it:

<https://tssh2.osdn.jp/index.html.en>

- Configure its serial port settings as follows (Setup -> Serial port...):

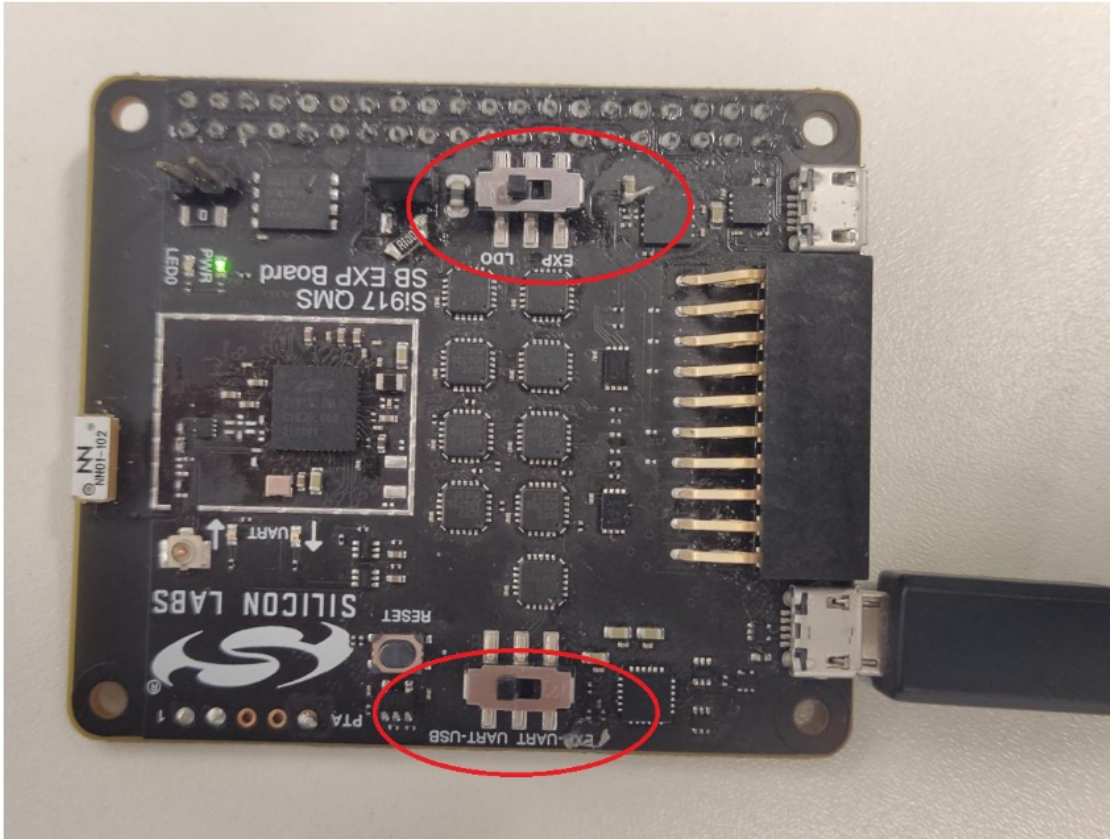
- Speed: 115200
- Data: 8 bit
- Parity: None
- Stop bits: 1 bit
- Flow control: none



- Configure its terminal settings as follows (Setup -> Terminal...):

- New-line: CR+LF
- Transmit: CR+LF
- Local echo: Enabled

## Step 1: Load firmware into SiWx917 module (Part 2)



- Go to the following link for the reference to load firmware into SiWx917 module on EXP board

<https://docs.silabs.com/matter/1.0.3/matter-wifi/loading-firmware-expansion-board>

- Set the jumpers on the EXP board as stated below:
- Set EXP/ LDO switch to LDO position
- Set EXP-UART / UART-USB switch to UART-USB position
- Once you have set switches on board to above positions, connect the board to your PC via USB by the connector near to the EXP-UART / UART-USB switch

# Step 1: Load firmware into SiWx917 module (Part 3)

```
|UU
WELCOME TO REDPINE SIGNALS

BootLoader Version 1.0

1 Load Default Wireless Firmware
A Load Wireless Firmware (Image No : 0-f)
B Burn Wireless Firmware (Image No : 0-f)
5 Select Default Wireless Firmware (Image No : 0-f)
K Check Wireless Firmware Integrity (Image No : 0-f)
7 Enable GPIO Based Bypass Mode
8 Disable GPIO Based Bypass Mode
Q Update KEY
Z JTAG Selection
```

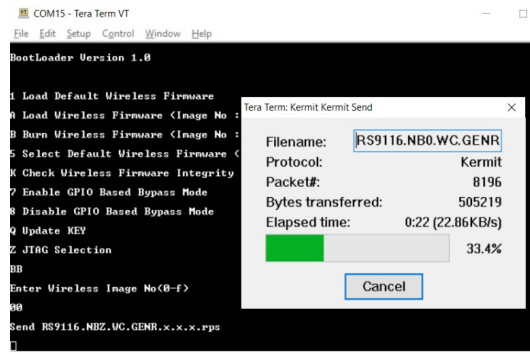
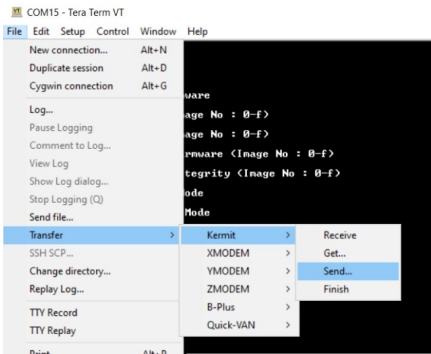


```
|UU
WELCOME TO REDPINE SIGNALS

BootLoader Version 1.0

1 Load Default Wireless Firmware
A Load Wireless Firmware (Image No : 0-f)
B Burn Wireless Firmware (Image No : 0-f)
5 Select Default Wireless Firmware (Image No : 0-f)
K Check Wireless Firmware Integrity (Image No : 0-f)
7 Enable GPIO Based Bypass Mode
8 Disable GPIO Based Bypass Mode
Q Update KEY
Z JTAG Selection

BB
Enter Wireless Image No (0-f)
00
Send RS9116.NBZ.WC.GENR.x.x.x.rps
```



- After setting switches on SiWx917 EXP board and connecting it to PC, follow instructions at:

<https://docs.silabs.com/rs9116/wisconnect/2.0/update-evk-firmware>

- The steps are as follows:

- Open connection on Tera Term to the port for your SiWx917 (Use device manager to find port)
- enter SiWx917 bootloader by pressing \*\*Shift + | followed by Shift + u
- Press “B” to select “Burn Wireless Firmware” option
- Press “0” to select Wireless Image 0
- In Tera Term menu, select “File->Transfer->Kermit->Send”
- Select firmware to burn from windows explorer window that will open up
- Firmware will be uploaded and burnt into SiW917
- Once process is complete, press “1” to load firmware
- Module will reply with “Loading... Loading Done”
- Type “at+rsi\_fwversion?” command to check that firmware was upgraded to desired version

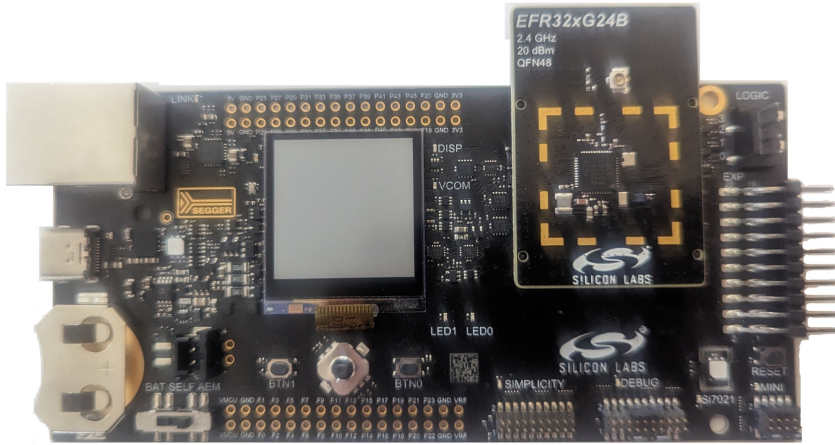
- To obtain SiWx917 firmware, please contact Silicon Labs

```
...
Loading...
Loading Done
```

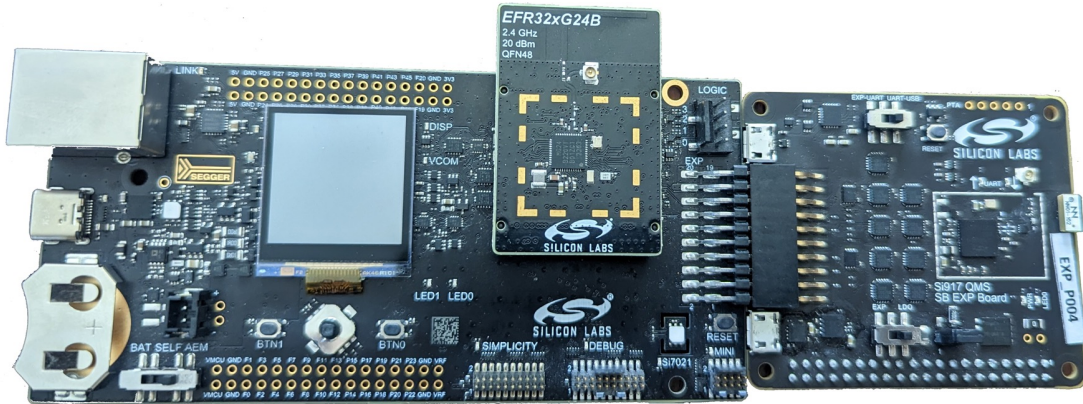


```
...
at+rsi_fwversion?
OK1610.1.2.24.0014
```

## Step 2: Connect MG24 Evaluation Board to SiWx917 expansion board



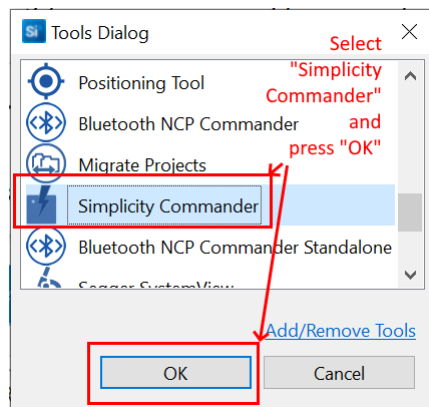
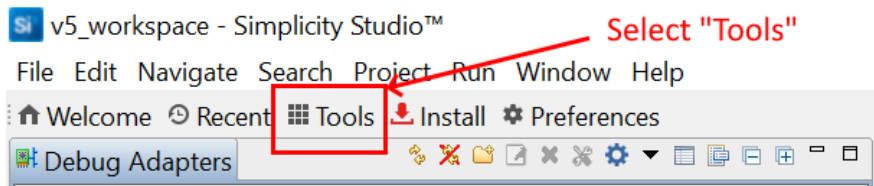
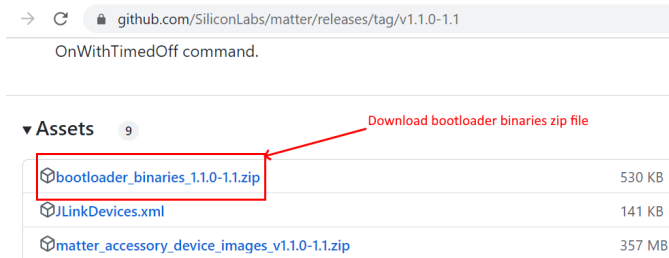
First plug in BRD4187C daughterboard onto BRD4002A dev kit baseboard



Then connect SiWx917 expansion board to BRD4002A baseboard

- This will be a simple step. To complete it, simply do the following:
- Make sure that the BRD4002A baseboard has a BRD4187C MG24 (EFR32xG24B) daughterboard plugged into it
- After the step above is validated, simply connect the SiWx917 expansion board to the BRD4002A baseboard as shown here.

# Step 3: Load Bootloader Binary Image onto MG24 (Part 1)

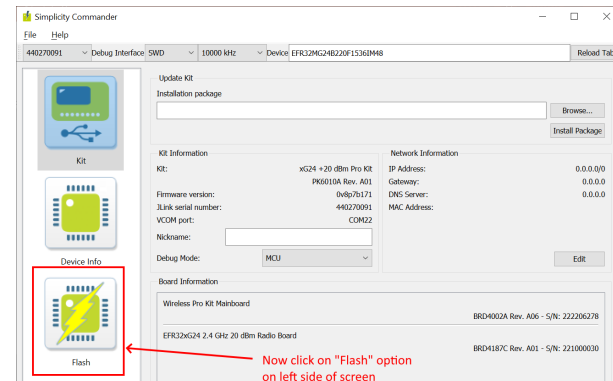
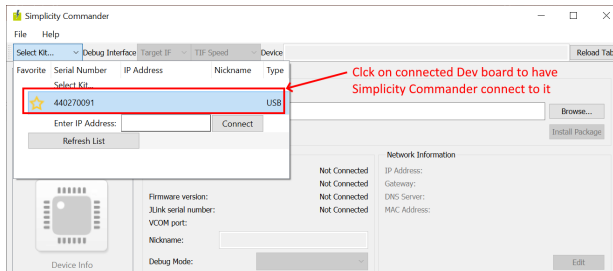
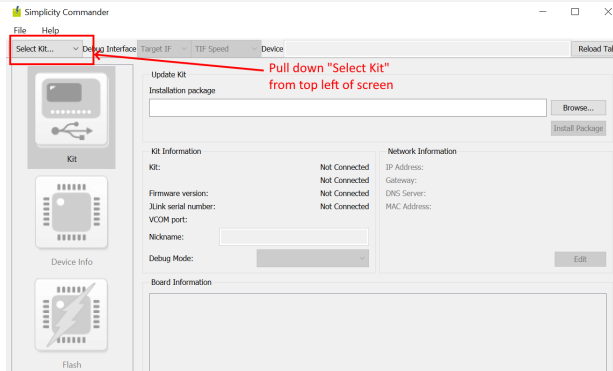


- Download the bootloader binaries named “bootloader\_binaries\_1.1.0.1.zip” from the Assets section of the following webpage:

<https://github.com/SiliconLabs/matter/releases/tag/v1.1.0-1.1>

- Open Simplicity Studio on your PC and select “Tools” from its menu
- In the window that will pop-up, select “Simplicity Commander” and click “OK”

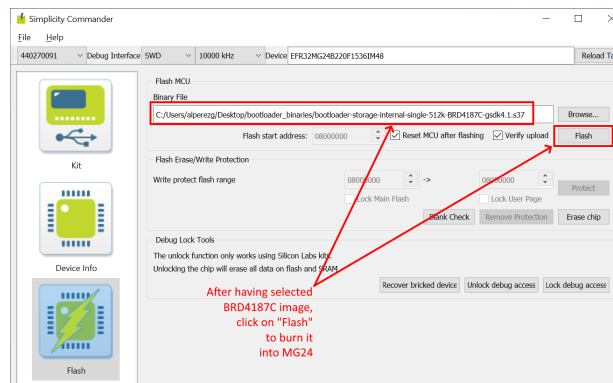
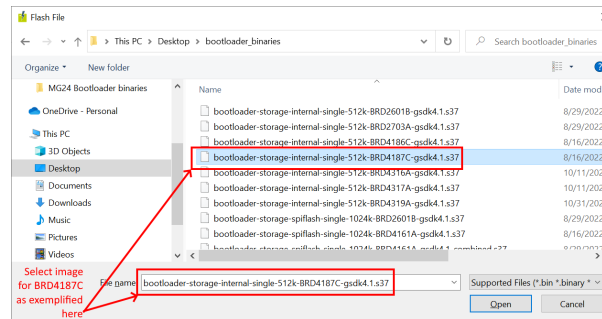
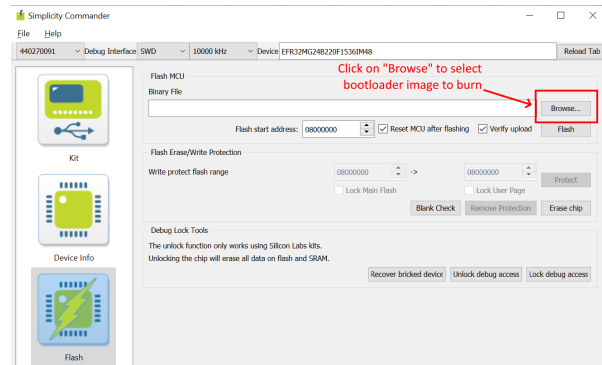
# Step 3: Load Bootloader Binary Image onto MG24 (Part 2)



- In the window that will pop-up, pull down on the “Select Kit” pull-down menu at the top left of the screen
- Click on connected MG24 dev board on pull down menu to connect to it
- After this, click on the green “Flash” option on the left side of the screen



# Step 3: Load Bootloader Binary Image onto MG24 (Part 3)

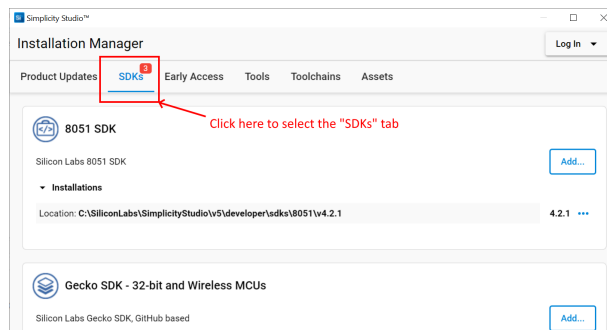
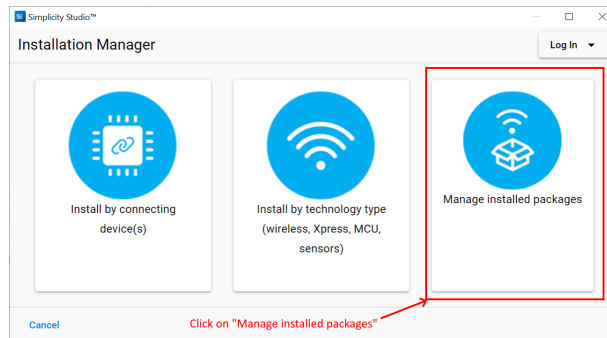
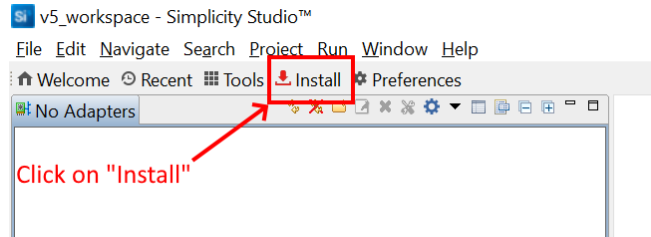


- Click on “Browse” to select the bootloader image to burn to your MG24

- Select image for BRD4187C as shown here

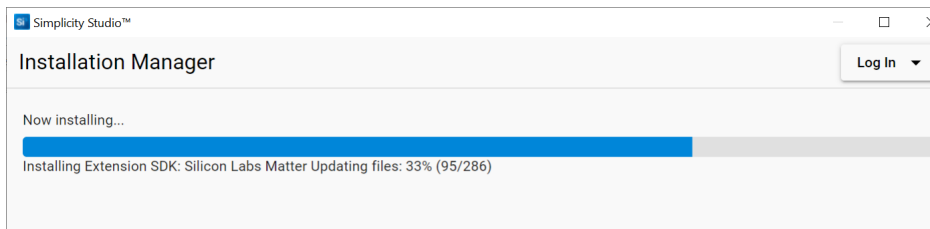
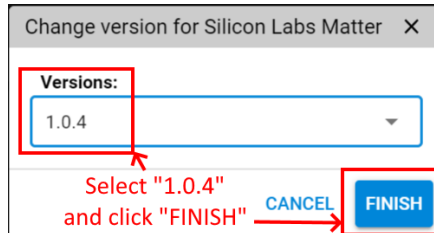
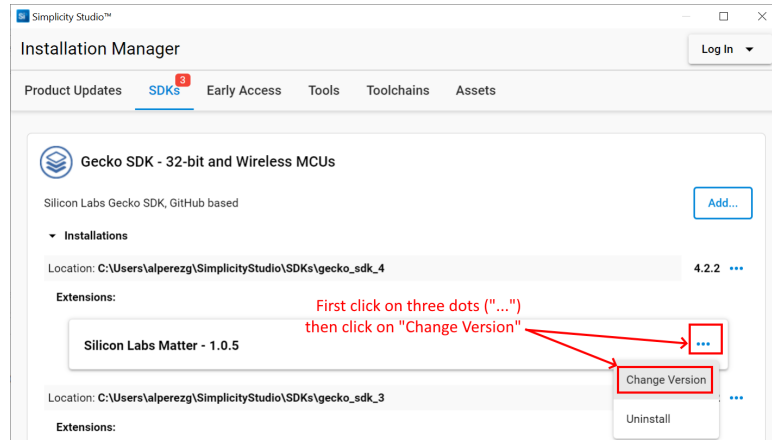
- After having selected image, click on “Flash” to burn it into MG24 as shown here

# Step 4: Compile & download lighting matter over Wi-Fi code onto MG24 (Part 1)



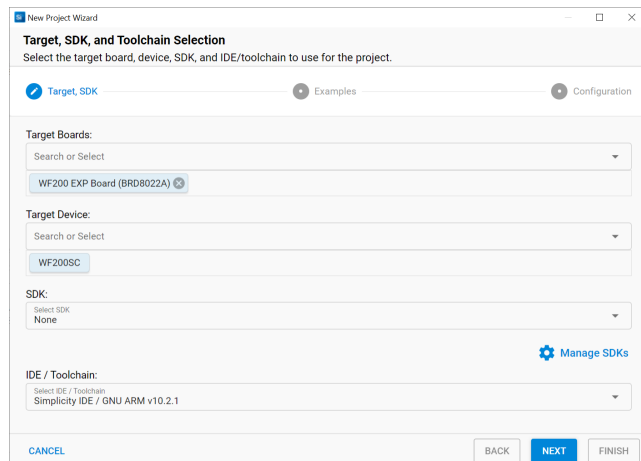
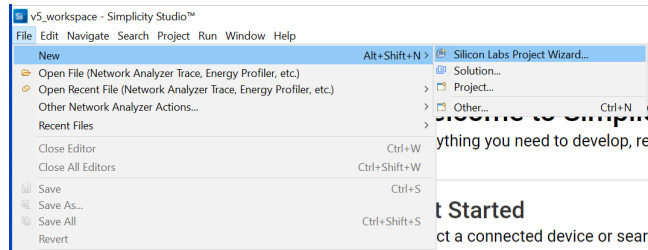
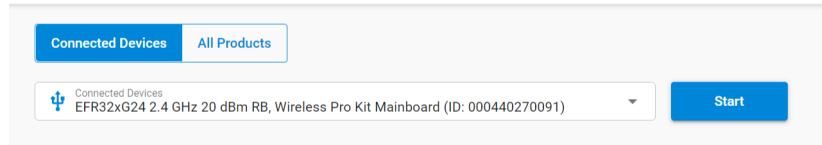
- Before compiling the lighting matter code, we'll need to update our Simplicity Studio environment to have matter support to be able to do so. First, go to Install as shown here.
- In the window that will pop-up, click on "Manage installed packages"
- Next, select the "SDKs" tab as shown here

## Step 4: Compile & download lighting matter over Wi-Fi code onto MG24 (Part 2)



- Once in the SDKs tab, under Gecko SDK, click on the “Silicon Labs Matter” option to select the one that we will use
- Select version 1.0.4 and click FINISH
- Wait for the installation manager to complete and once it is done click CLOSE

# Step 4: Compile & download lighting matter over Wi-Fi code onto MG24 (Part 3)

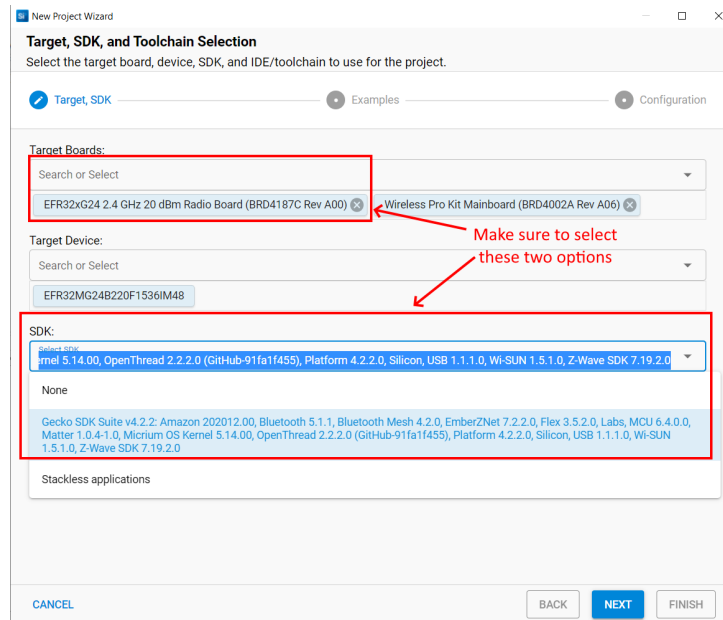


- Connect your MG24 dev board (with SiWx917 connected) to your computer and make sure it is detected

- Select File -> New -> Silicon Labs Project Wizard

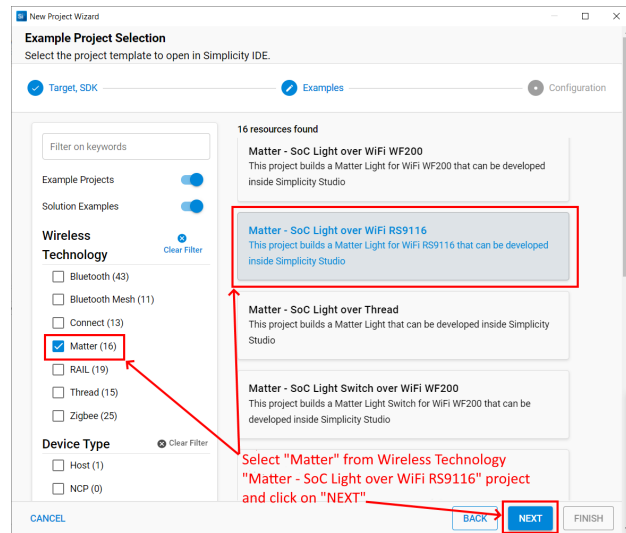
- The following window will pop up

# Step 4: Compile & download lighting matter over Wi-Fi code onto MG24 (Part 4)

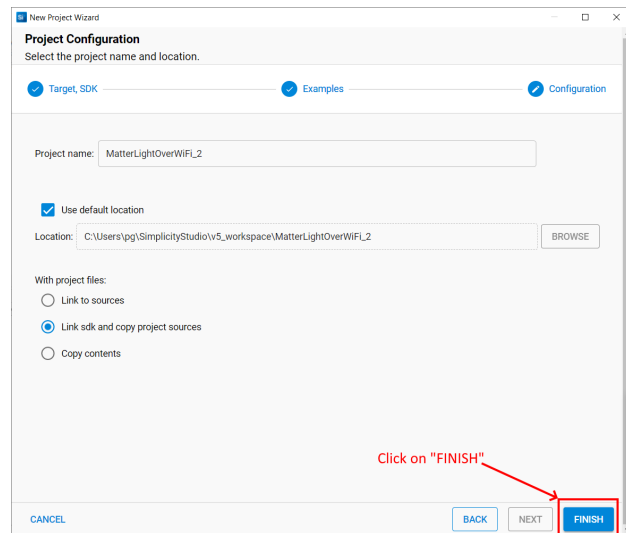


- In the window that will pop-up, make sure that you select the following options:
- Target Boards: EFR32xG24 2.4 GHz 20 dBm radio Board (BRD4187C Rev A00)
- SDK: Gecko SDK Suite v4.2.2: Amazon 202012.00, Bluetooth 5.1.1, Bluetooth Mesh 4.2.0, EmberZNet 7.2.2.0, Flex 3.5.2.0, Labs, MCU 6.4.0.0, **Matter 1.0.4-1.0**, Micrium OS Kernel 5.14.00, OpenThread 2.2.2.0 (GitHub-91fa1f455), Platform 4.2.2.0, Silicon, USB 1.1.1.0, Wi-SUN 1.5.1.0, Z-Wave SDK 7.19.2.0

# Step 4: Compile & download lighting matter over Wi-Fi code onto MG24 (Part 5)

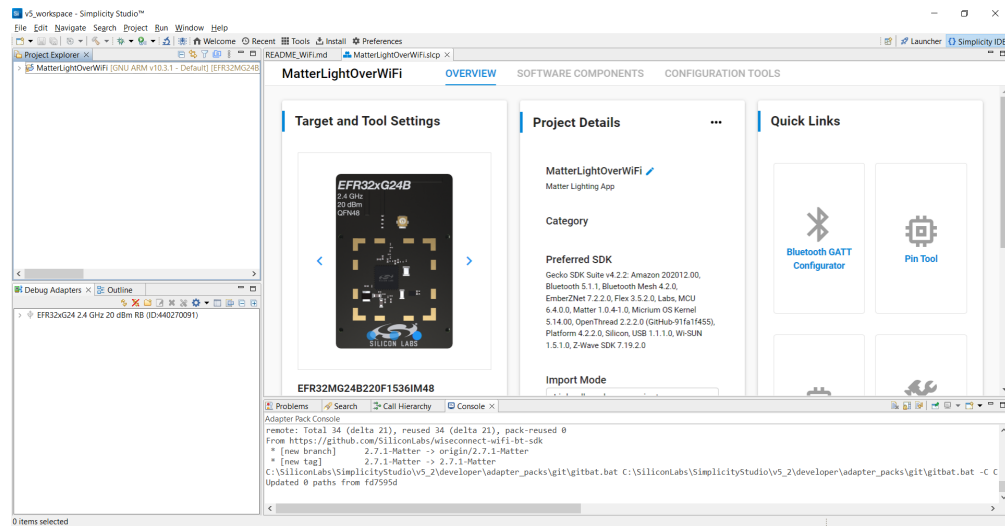


- In the next window, select “Matter” and pick the “Matter – SoC Light over WiFi R69116” project, then click on “NEXT”

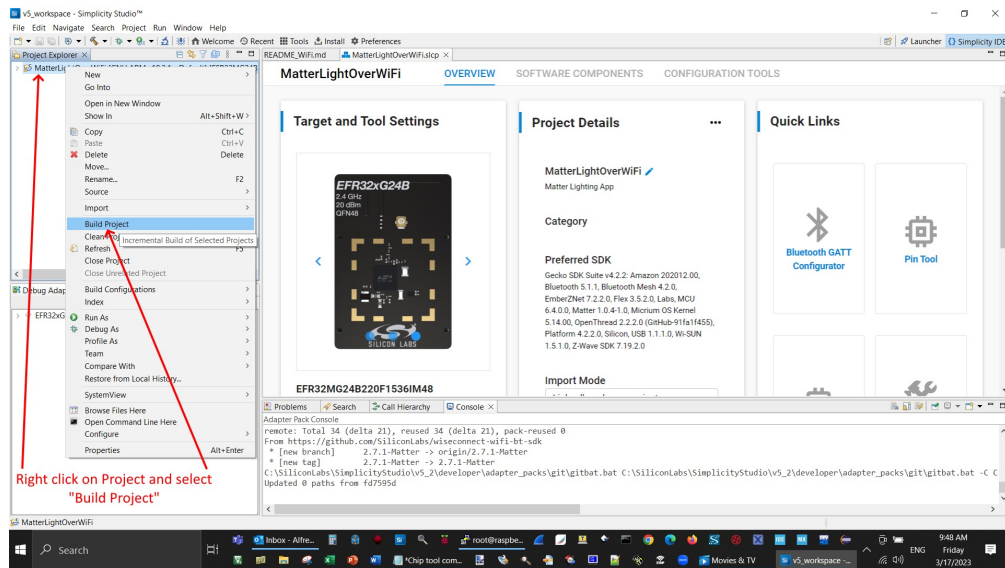


- Finally, click “FINISH” on the next screen, this will download the lighting Matter over Wi-Fi project to Simplicity Studio

# Step 4: Compile & download lighting matter over Wi-Fi code onto MG24 (Part 6)

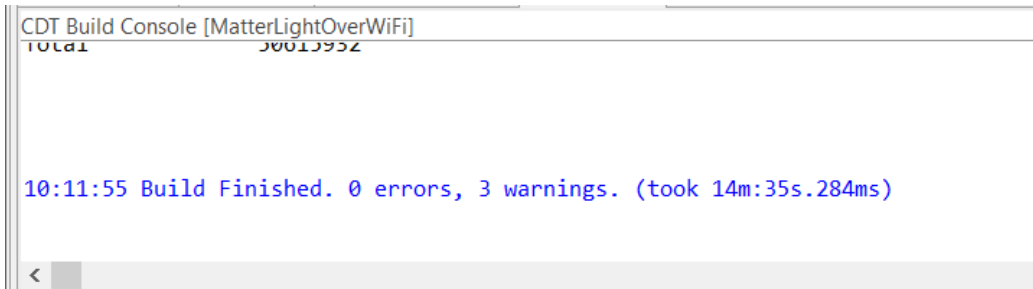
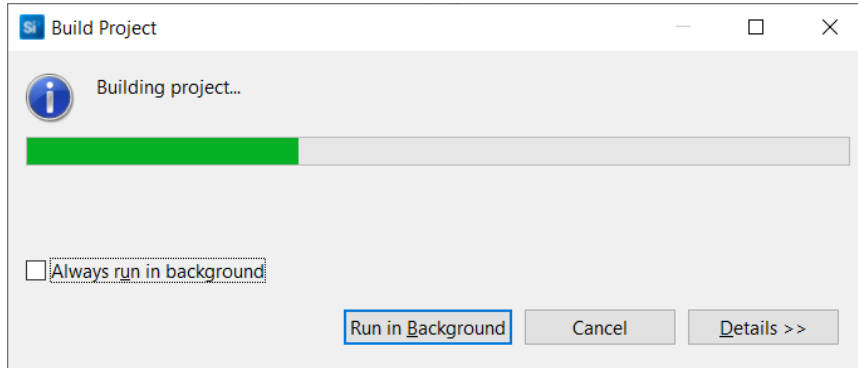


- Once the project has been downloaded to your Simplicity Studio it will look like this



- To compile it, right click on the project and select “Build Project”. Wait for the project to build

## Step 4: Compile & download lighting matter over Wi-Fi code onto MG24 (Part 7)

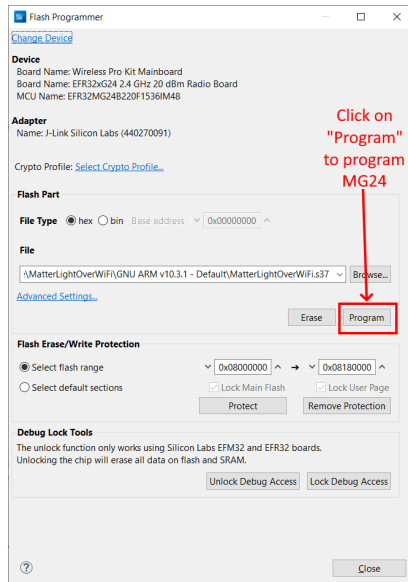
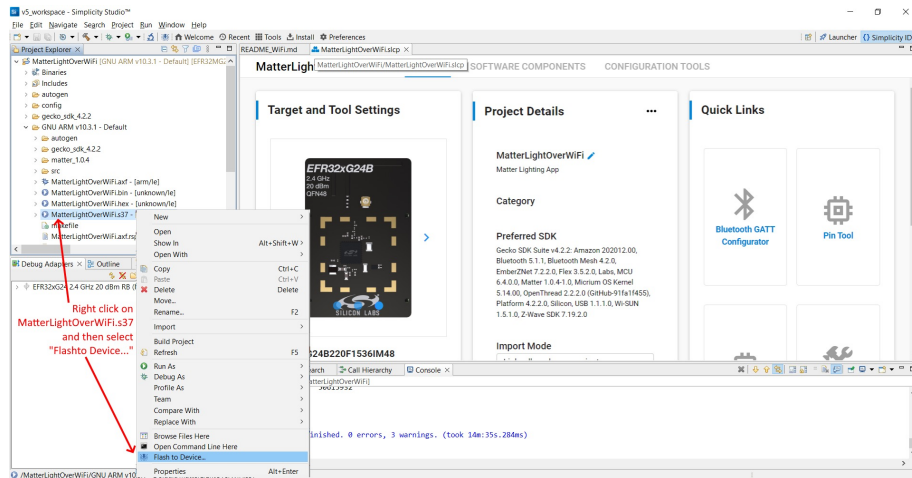


- You should see a pop-up screen showing the project building, as shown here.

- Once the project has finished building you should see a message similar to this.



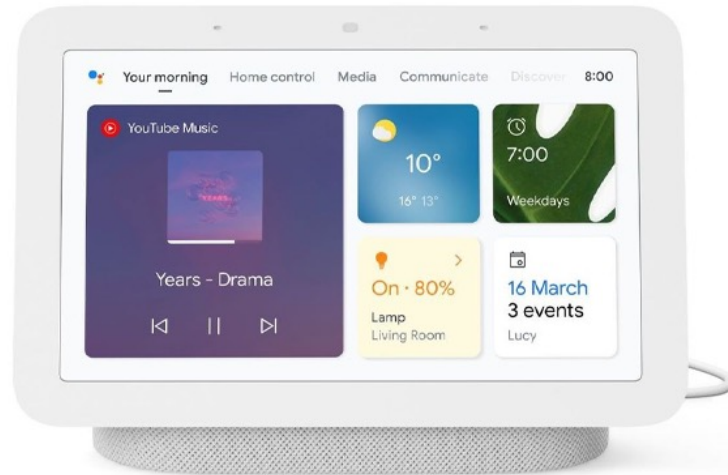
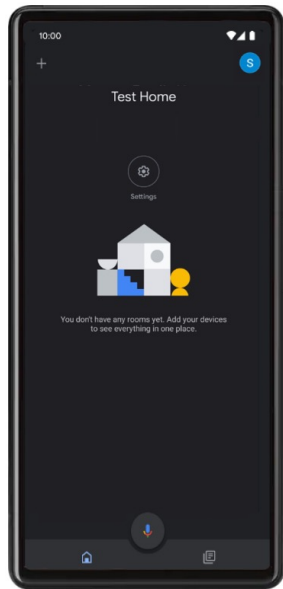
# Step 4: Compile & download lighting matter over Wi-Fi code onto MG24 (Part 8)



- In the project explorer, right click on “MatterLightOverWiFi.s37” under the “GNU ARM v10.3.1 – Default” folder and select “Flash to Device...” option

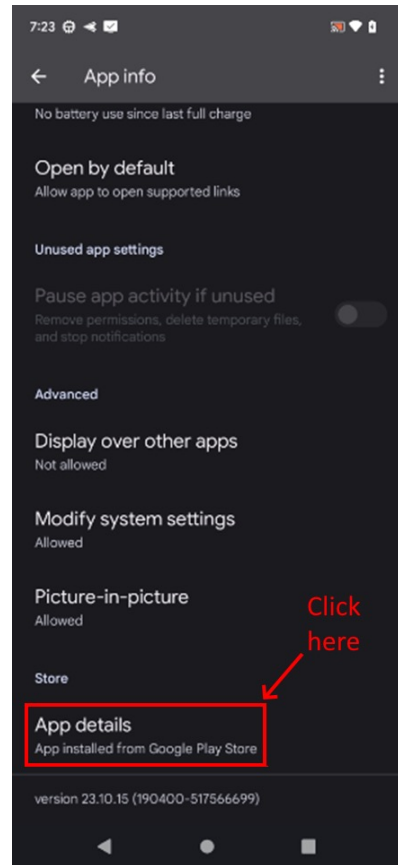
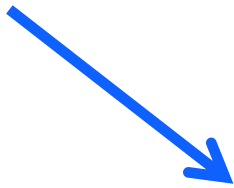
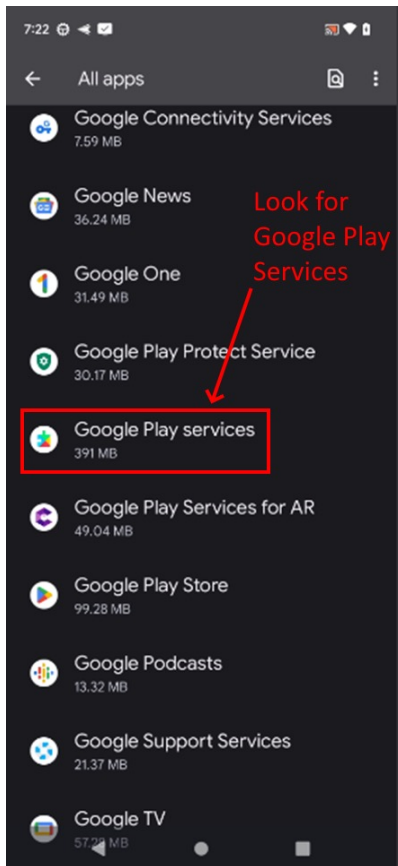
- Click on “Program” on the window that will pop up and wait for MG24 to be programmed with Matter over Wi-Fi lighting app binary

## Step 5: Setup Pixel 6 and Nest Hub setup (Part 1)



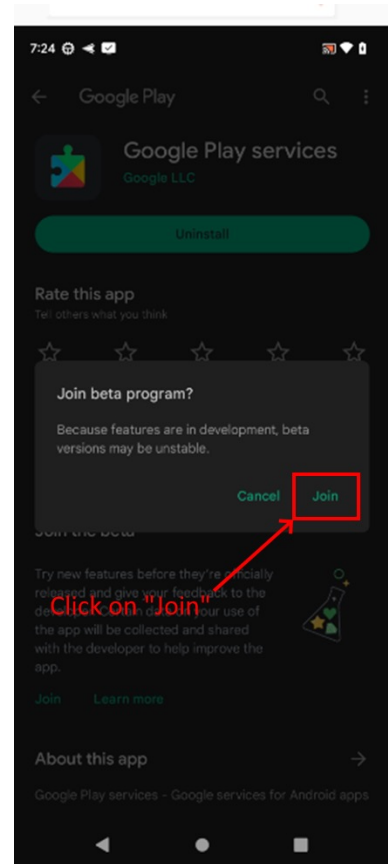
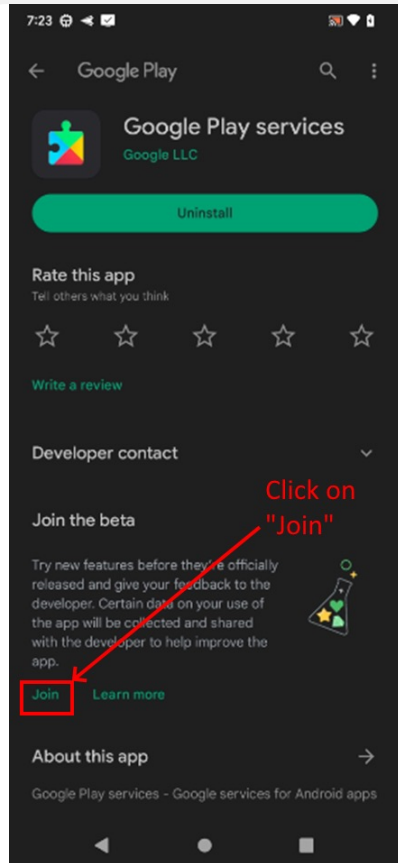
- **We will need to set up several things in order to get our Pixel 6 and Nest Hub Setup**
  - Set up a Google Home
  - Create a Matter Project and add a Matter Integration to it for Lighting Matter devices
  - Open a webpage with the matter lighting device QR code
- **Let's show this in the next few pages**

## Step 5: Setup Pixel 6 and Nest Hub setup (Part 2)



- Before doing anything, we will need to make sure that we are running the latest beta version of Google Play Services. To do so, in your phone in settings -> apps, look for Google Play Services as shown here.
- Once the page for the app is open, go to the bottom of it and click on “App details”

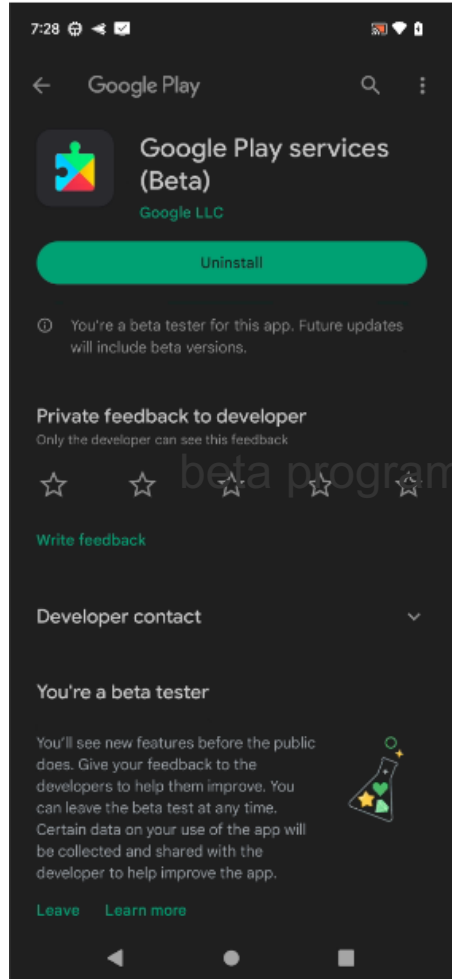
## Step 5: Setup Pixel 6 and Nest Hub setup (Part 3)



- In the next page, click on “Join” to Join the beta program.

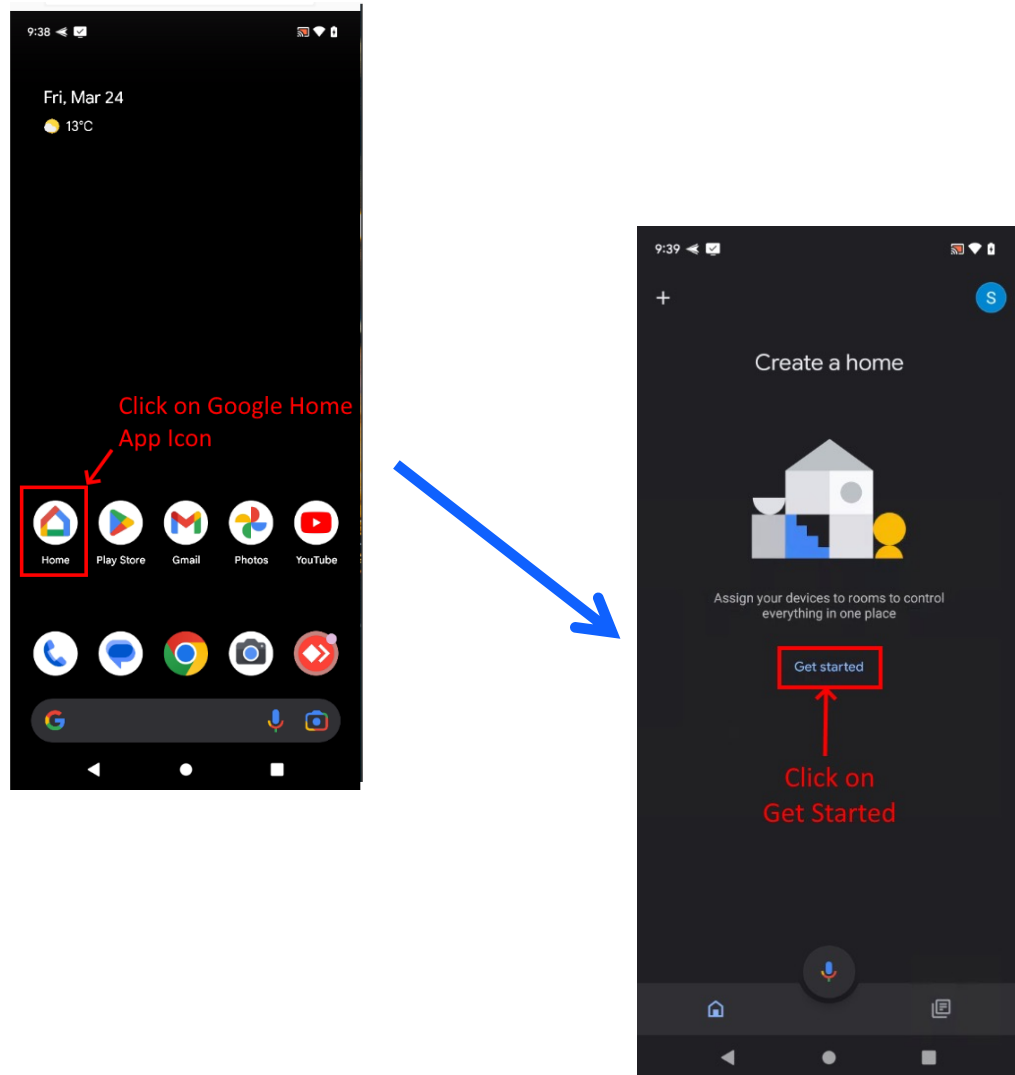
- Click on “Join” on the popup to accept joining the beta program

## Step 5: Setup Pixel 6 and Nest Hub setup (Part 4)



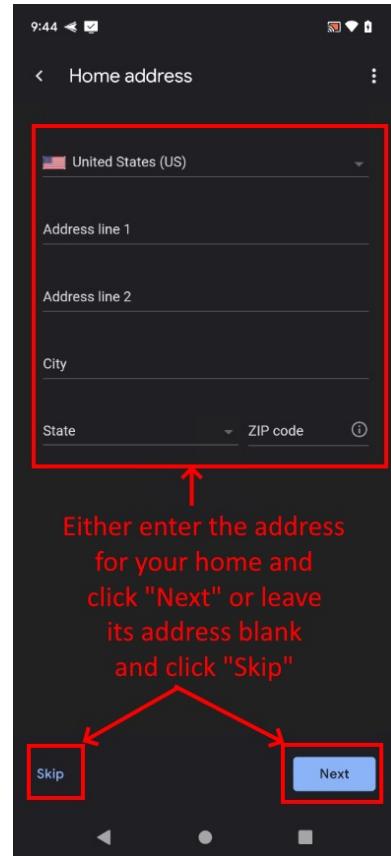
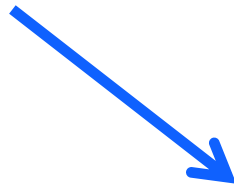
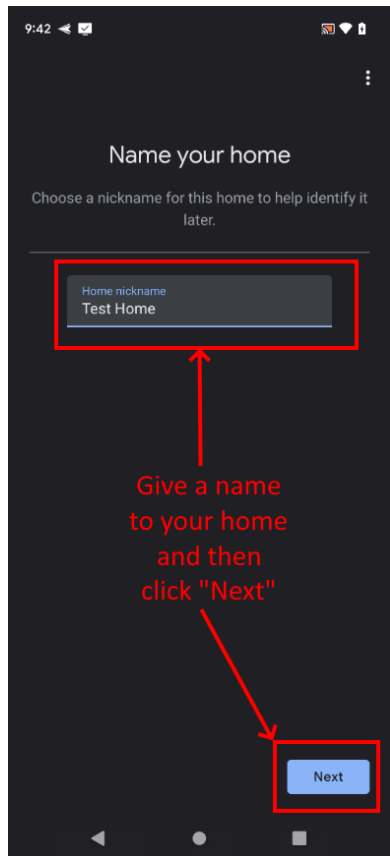
- Wait a few minutes to let the latest beta version of Google Play services to be installed and then close and reopen Google Play Services on settings->apps to check that it is now in beta version as shown in this screenshot.
  
- After verifying this, make sure to update the Google home app on your phone to the latest version

## Step 5: Setup Pixel 6 and Nest Hub setup (Part 5)



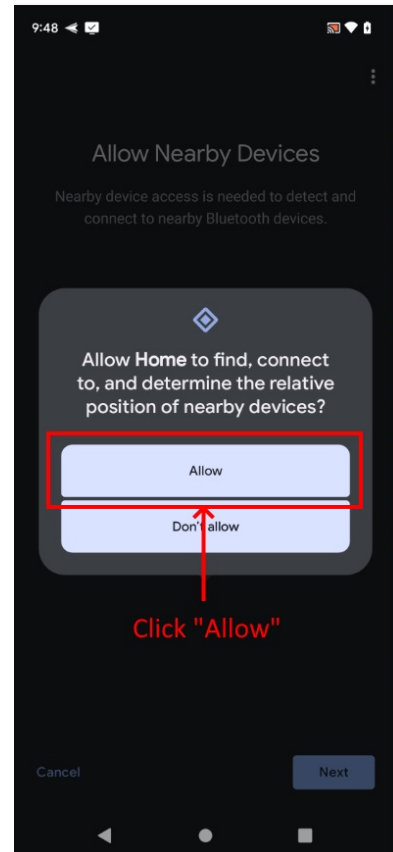
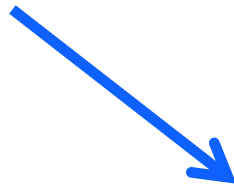
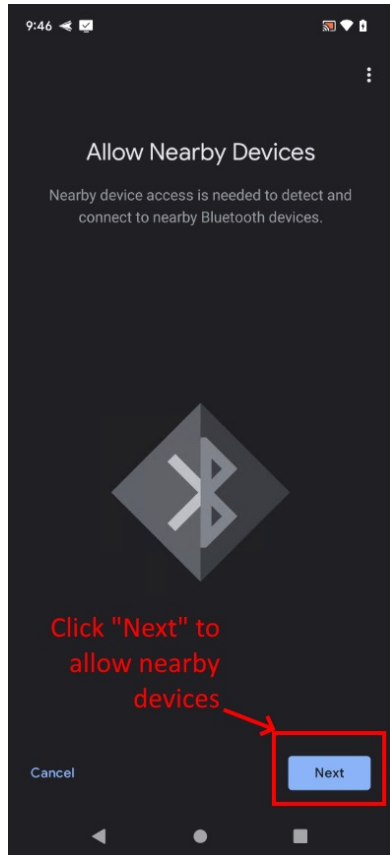
- Now that we have the latest Google Play services beta version and latest Google home app in your phone, lets create a new home in your Pixel 6
- To do so, first open the Google Home app by clicking on its icon on your phone
- After opening the app, click on “Get started”

## Step 5: Setup Pixel 6 and Nest Hub setup (Part 6)



- Now give a name to your home and click on “Next”
- Either enter the address for your home and click “Next” or leave its address blank and click “Skip”

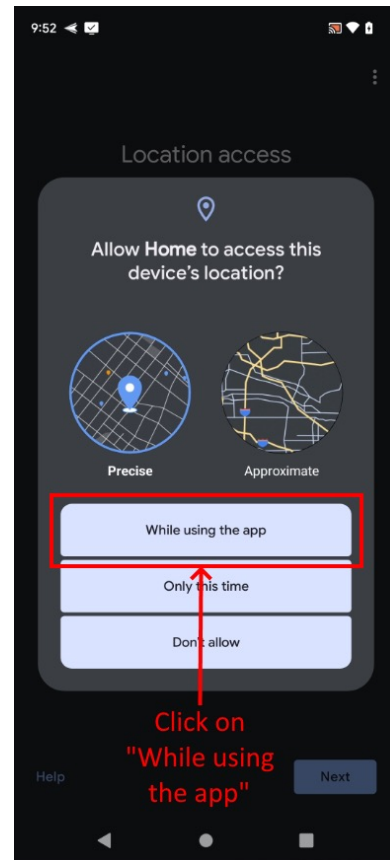
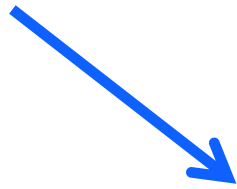
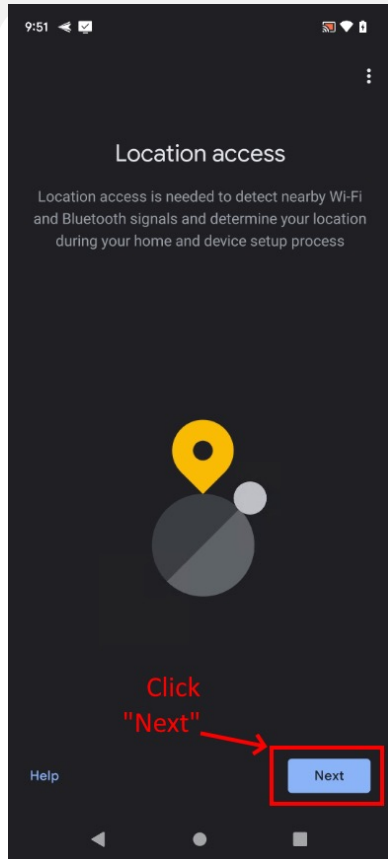
## Step 5: Setup Pixel 6 and Nest Hub setup (Part 7)



- Click “Next” to allow nearby devices
- Click “Allow” on the pop-up screen

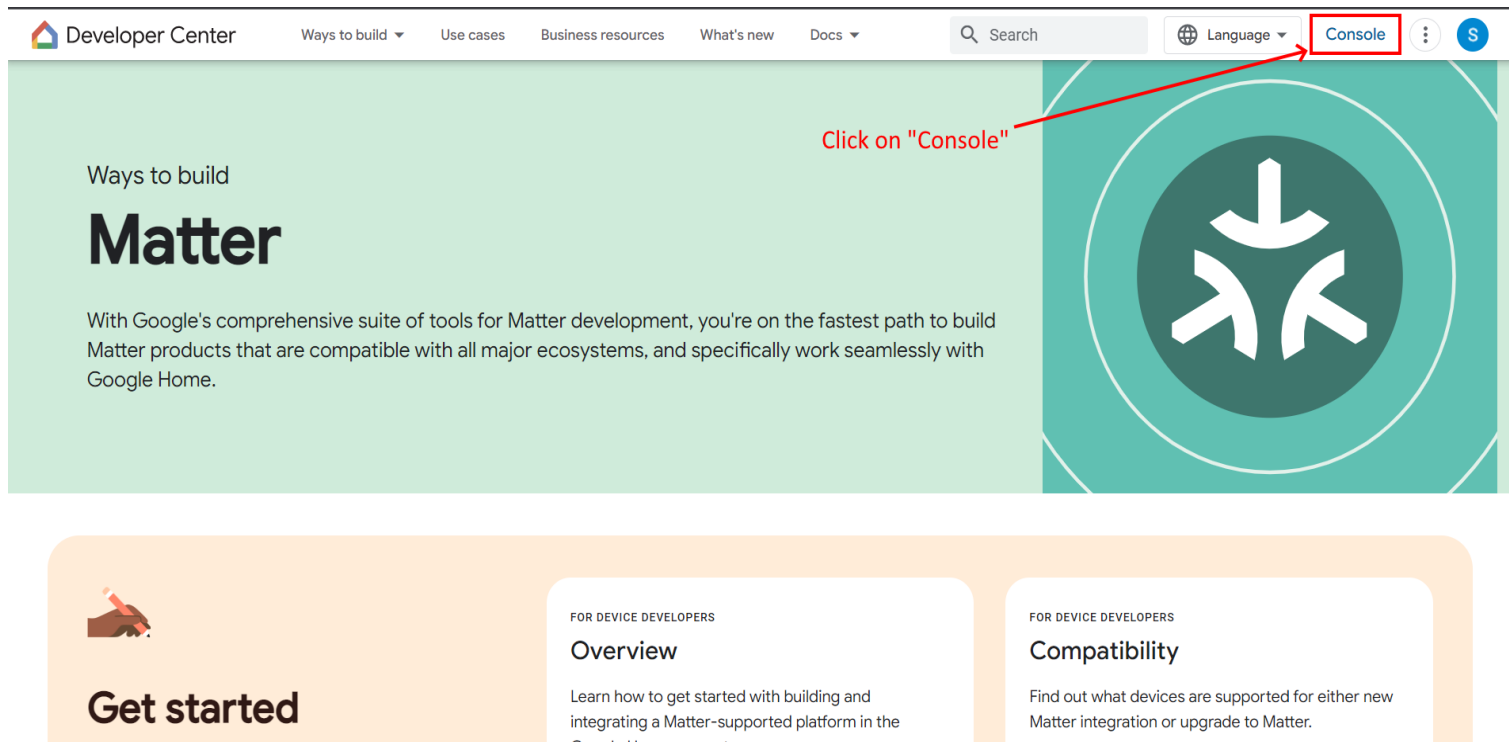


## Step 5: Setup Pixel 6 and Nest Hub setup (Part 8)



- Click "Next" to allow location access
- Click on "While using the app"

## Step 5: Setup Pixel 6 and Nest Hub setup (Part 9)



- Now that we have created a home in our Pixel phone, add your Nest Hub to that home
- After this, on a browser on your PC go to the following webpage to create a project:

<https://developers.home.google.com/matter>

- Then click on “Console” at the top of the page as shown here.

# Step 5: Setup Pixel 6 and Nest Hub setup (Part 10)

Developer Console

## Manage projects

View project details, add members, and more.

**Create a project** ← Click on "Create a project"

Projects

You don't have any projects yet. [Create a project.](#)

Developer Console

### Get started

Add to an existing project  
To ensure compatibility, build upon an existing Actions on Google or cloud project by importing it to this console.

Existing project\*  
Please select an item from the list

Import project

Or create a new project  
A project is a workspace for all your integration types.

Click on "Create Project" → [Create project](#)

- On the next page, click on “Create a Project”

- On the following screen, click on “Create project”

# Step 5: Setup Pixel 6 and Nest Hub setup (Part 11)

Developer Console

Create new project

Create a project for all of your integrations.

Project name

Project name\*

My Test Project

30 characters max

Create new project

Already have a Works with Assistant, cloud, or Local Home SDK project? [Import existing project.](#)

Give it a name and click on "Create new project"

Developer Console

Home

Matter

Analytics

## My Test Project

Project ID: my-test-project-180dd  
Created: Mar 24, 2023 • Last modified: Mar 24, 2023

Project details

Members

Matter

+ Add Matter integration

Click on "Add Matter integration"

Matter integrations that have been created show up here. You can have more than one integration per project.

Cloud-to-cloud

Add cloud integration

- Give your project a name and click on "Create a new project"

- Now that you have created your project, on the next page click on "Add Matter integration"

# Step 5: Setup Pixel 6 and Nest Hub setup (Part 12)

The screenshot shows the Google Developer Console interface. The top navigation bar includes the Developer Console logo and a 'My Test Project' tab. The main content area is titled 'Matter checklist' and contains a list of steps for setting up Matter. The 'Next: Develop' button is highlighted with a red box, and a red arrow points to it from the text 'Click on "Next: Develop"'. The 'Next: Setup' button is also highlighted with a red box, and a red arrow points to it from the text 'Click on "Next: Setup"'. The 'Back: Resources' button is visible to the left of the 'Next: Setup' button.

- On the next page click on “Next: Develop”

- Now click on “Next: Setup”

# Step 5: Setup Pixel 6 and Nest Hub setup (Part 13)

Developer Console

Home

Matter

Analytics

## Setup

Enter device information to begin development.

**Device information \*** \* Required

Product name\*  
Light

5/24

Device type\*  
Light

Vendor ID (VID) \*  
Use a CSA-issued vendor ID or test vendor ID with this integration.

CSA-issued vendor ID (to certify)  Test VID

**Learn more**  
Tips, tools, and docs

Add your Matter device and leverage the Google Smart Home ecosystem.

Enter device name and device type, then your vendor ID and the product ID of your Matter device.

Then attach your Matter certificate so Google can connect to your device.

[Getting Started with Matter](#)

[What are Product and Vendor IDs?](#)

Set these fields as shown here

Developer Console

Home

Matter

Analytics

Select the test VID that matches the VID used in your device build.

Test VID\*  
0xFFFF1

Note: A test VID can be used in development but a CSA-issued vendor ID is required to certify your integration.

Product ID (PID) \*  
Enter a unique PID for your product in hex value. Make sure it starts with 0x.

Product ID\*  
0x8005  
Use any number in hexadecimal format.

Enter fields with shown values, then click on "Save & continue"

Back Save & continue

## Setup the fields on this page as shown below:

- Product name: Light
- Device type: light
- Vendor ID (VID) Test VID
- Test VID: 0xFFFF1
- Product ID (PID) 0x8005

As shown in these screens

Product ID options for matter devices are as follows:

Light-Switch: 0x8004,

Light: 0x8005,

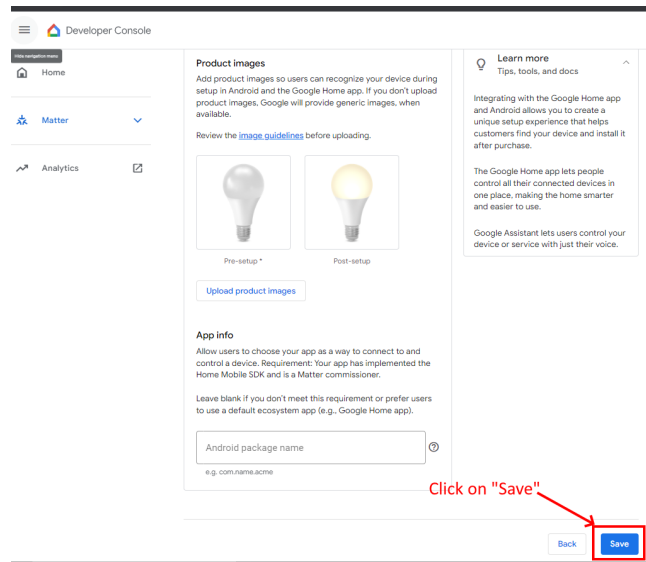
Lock: 0x8006,

Thermostat: 0x800E

Window Covering: 0x8010

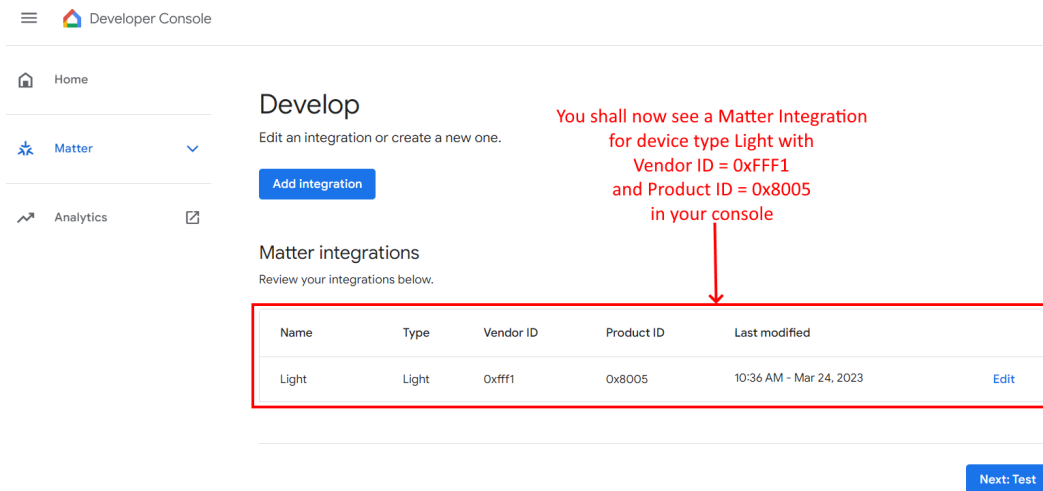
- After this, click on “Save & Continue”

# Step 5: Setup Pixel 6 and Nest Hub setup (Part 14)

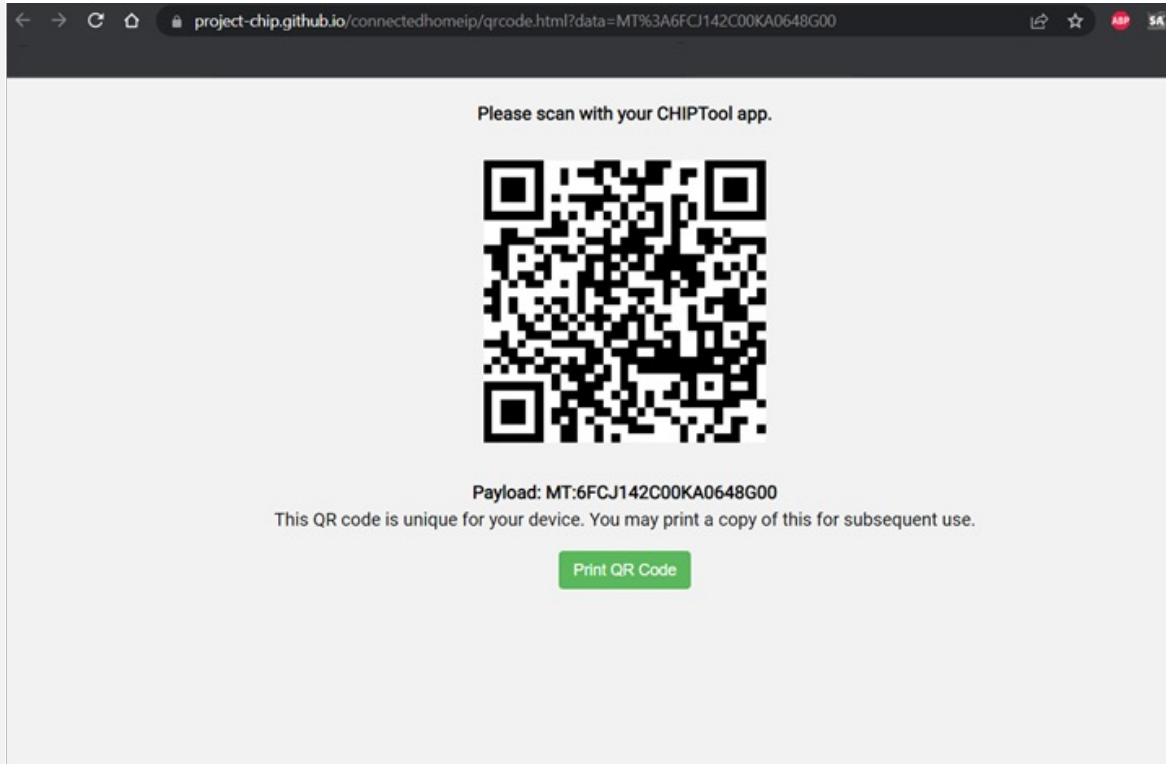


- Click on “Save” on the next page

- You shall now see a Matter integration for device type light in your console as shown here



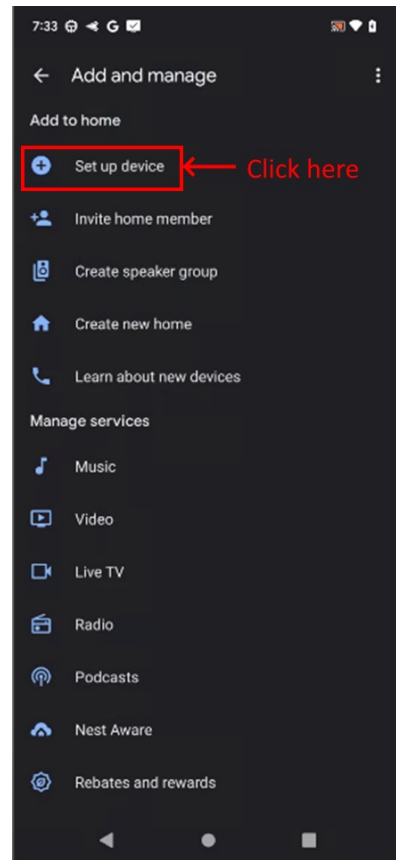
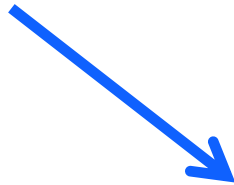
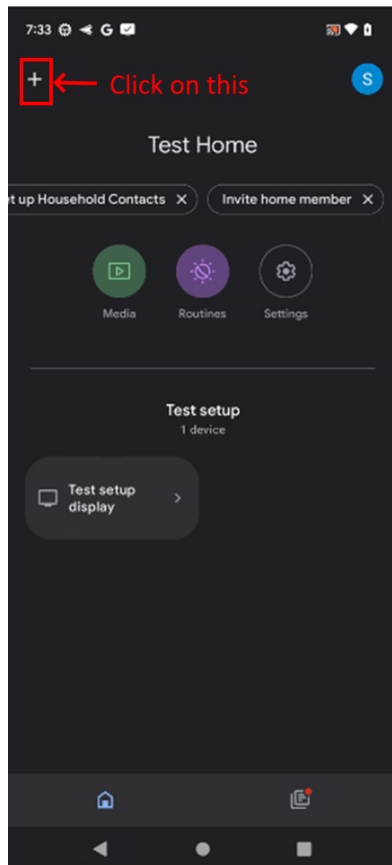
## Step 5: Setup Pixel 6 and Nest Hub setup (Part 15)



- **Now that you have completed setting up the following:**
  - Your home in the Google home app in your Pixel 6
  - A project in your Google developer console
  - A matter integration for the light device type
- **Having finished the above, the only step left to have your setup ready is to open a QR code webpage for the light device type in your PC**
- **This QR code webpage will be used to commission your light device**
- **To open it, simply open the following URL:**  
<https://project-chip.github.io/connectedhomeip/qrcode.html?data=MT%3A6FCJ142C00KA0648G00>

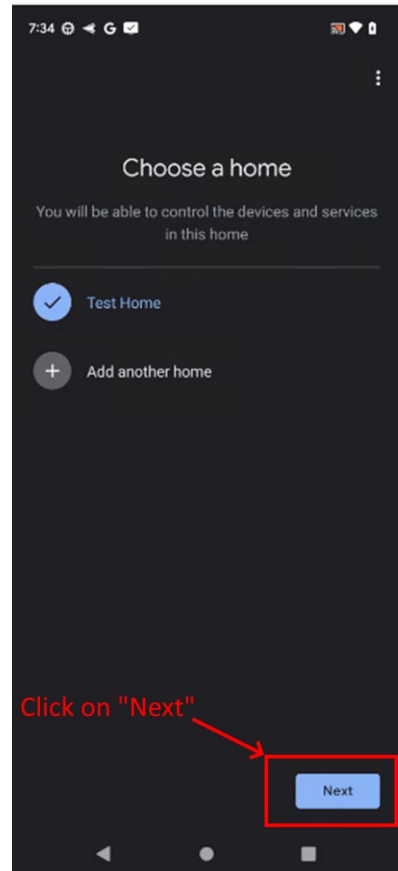
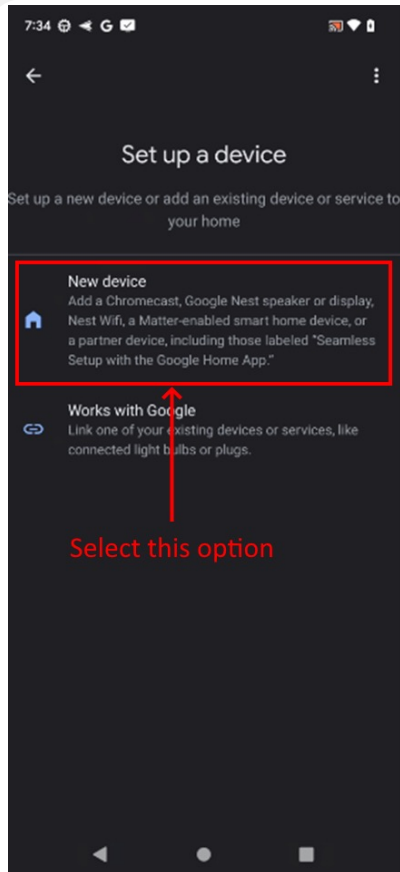


# Step 6: Commission MG24 + SiWx917 matter device with Google Home (Part 1)



- Power on your SiWx917 + MG24 setup and open the Google home app on your phone
- In it, click on the “+” sign at the top right corner
- In the next screen, click to select the “Set up device” option

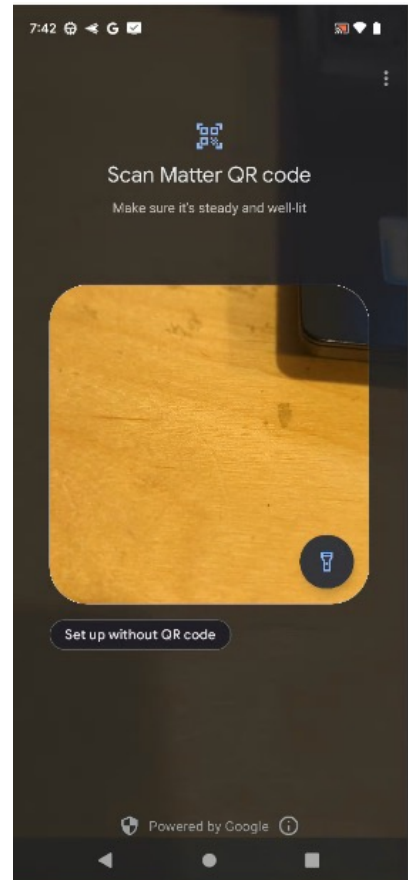
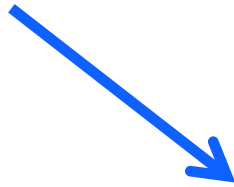
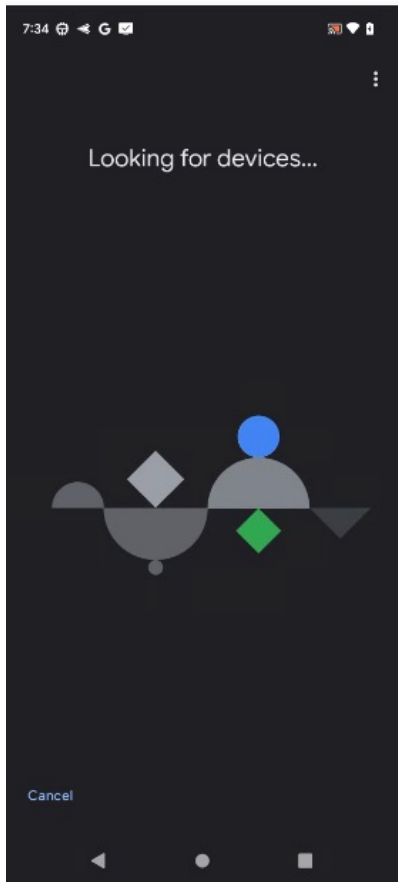
## Step 6: Commission MG24 + SiWx917 matter device with Google Home (Part 2)



- Now select the “New device” option

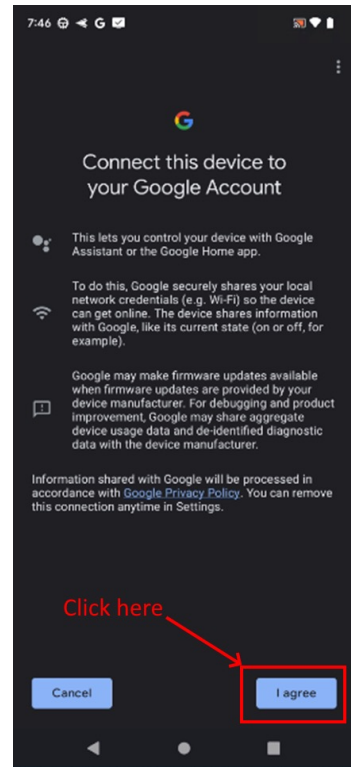
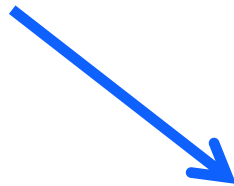
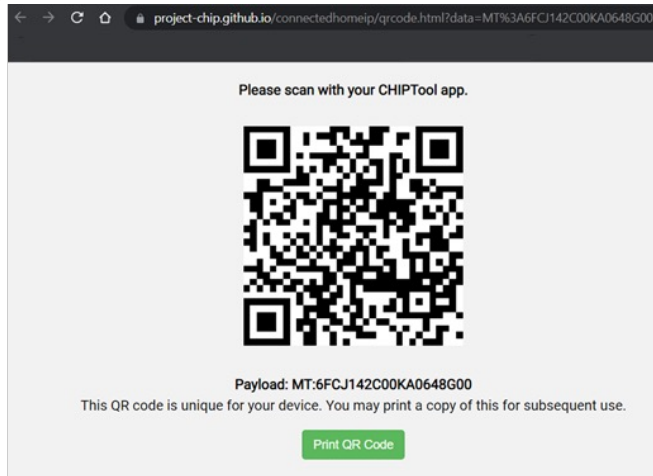
- In the next screen make sure your home is selected and click on “Next”

## Step 6: Commission MG24 + SiWx917 matter device with Google Home (Part 3)



- Your Pixel 6 will now search for the SiWx917 + MG24 light device
- Once it has found it, it will ask you to scan its QR code as shown here

## Step 6: Commission MG24 + SiWx917 matter device with Google Home (Part 4)

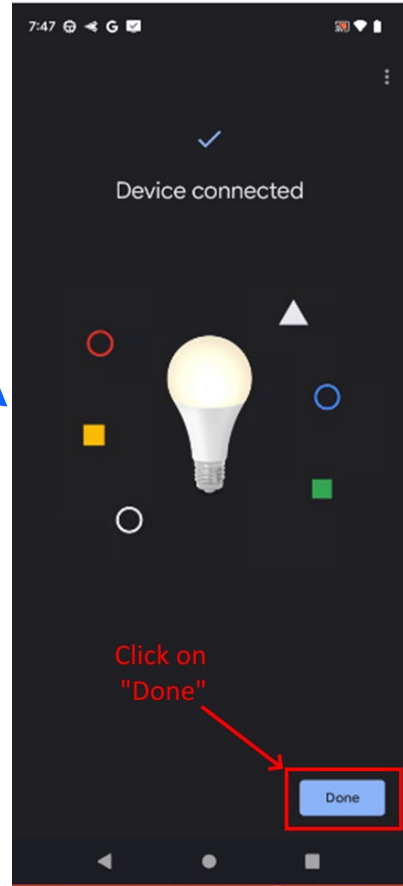
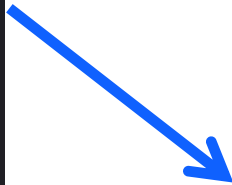
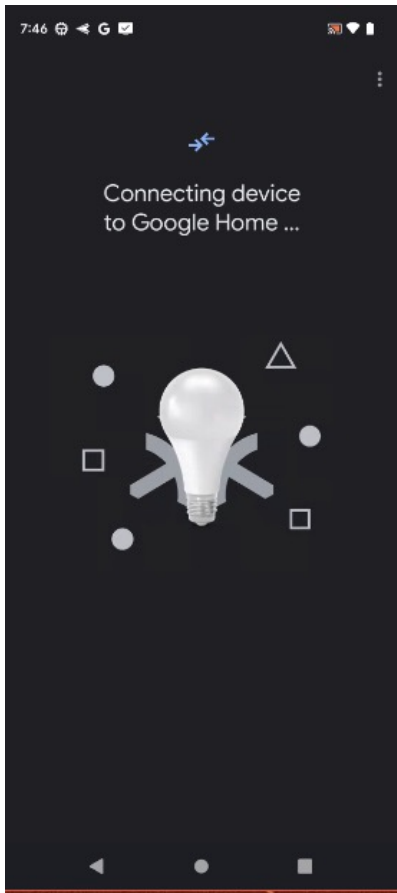


- Open the following URL on a browser on your PC and it will display this QR code:

<https://project-chip.github.io/connectedhomeip/qrcode.html?data=MT%3A6FCJ142C00KA0648G00>

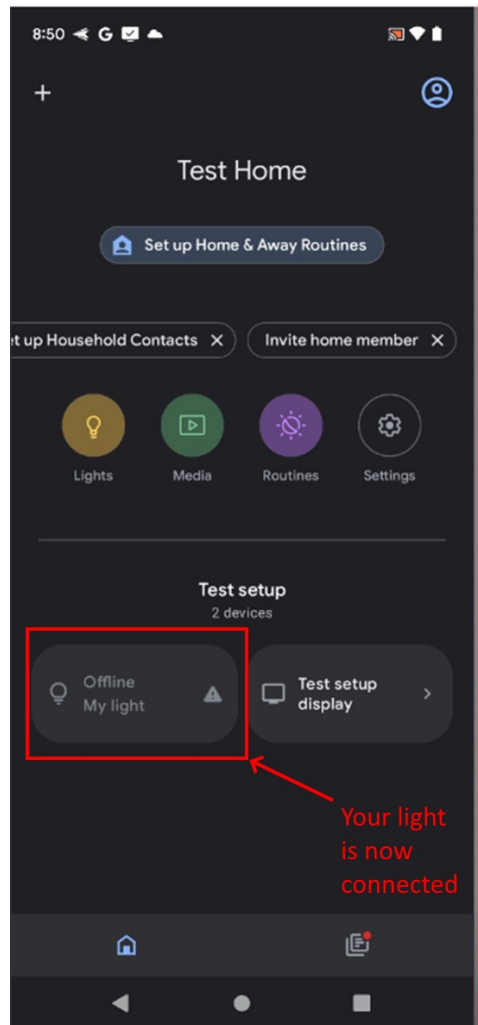
- The Google Home app will now ask you if you want to connect this device to your Google account. Click on "I agree"

## Step 6: Commission MG24 + SiWx917 matter device with Google Home (Part 5)



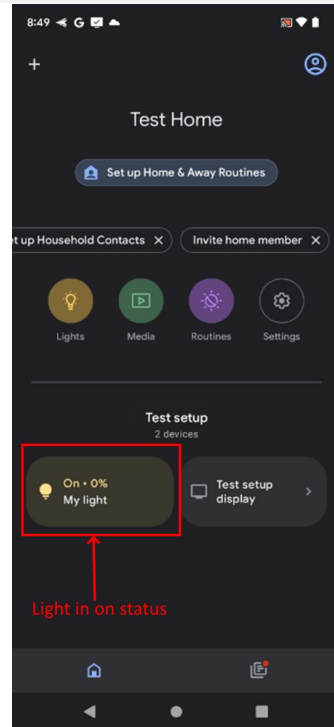
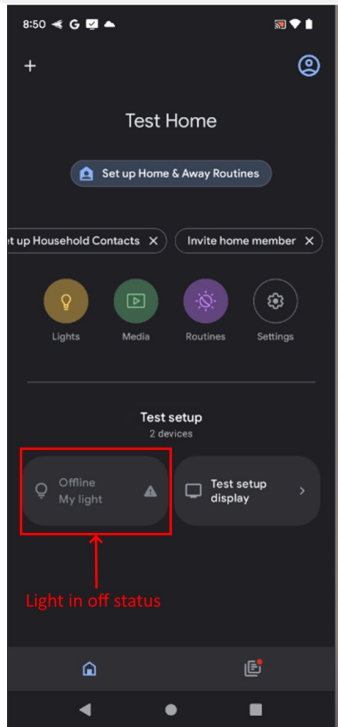
- Google Home will now commission the device via BLE.
  
- Once you see the message stating that the device has been connected click on “Done”

## Step 6: Commission MG24 + SiWx917 matter device with Google Home (Part 6)



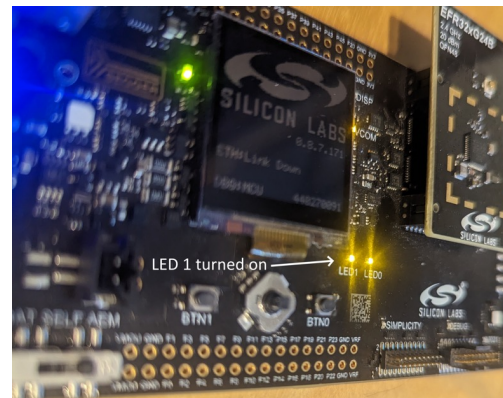
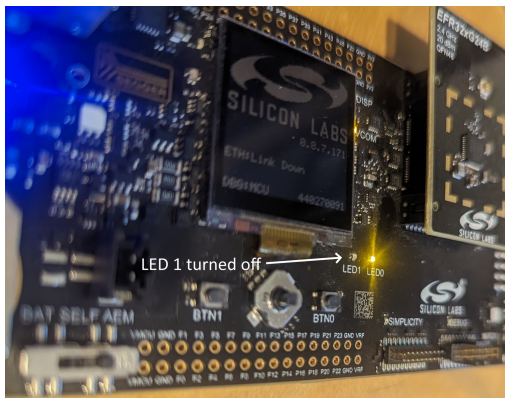
- You will now see your light shown as being connected to your Google account

# Step 7: Control LED on MG24 eval board from Google Home via Matter over Wi-Fi



- In the Google Home app you will now be able to click on your light to turn it off and on:

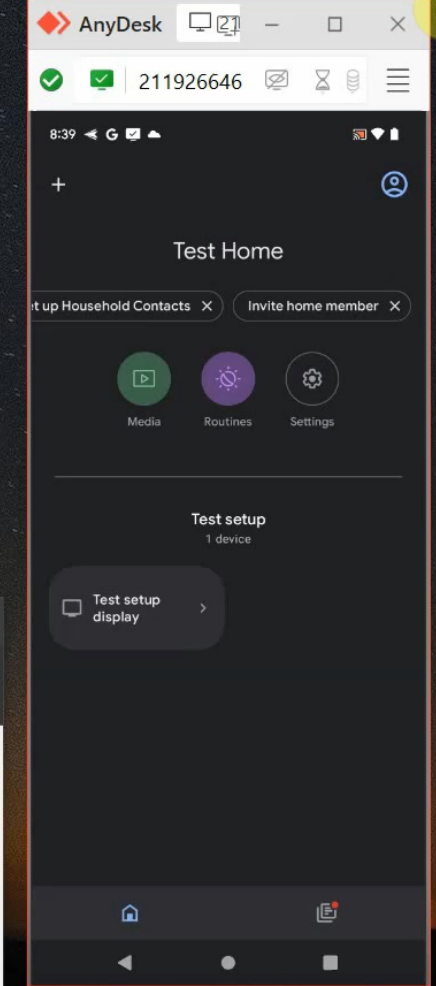
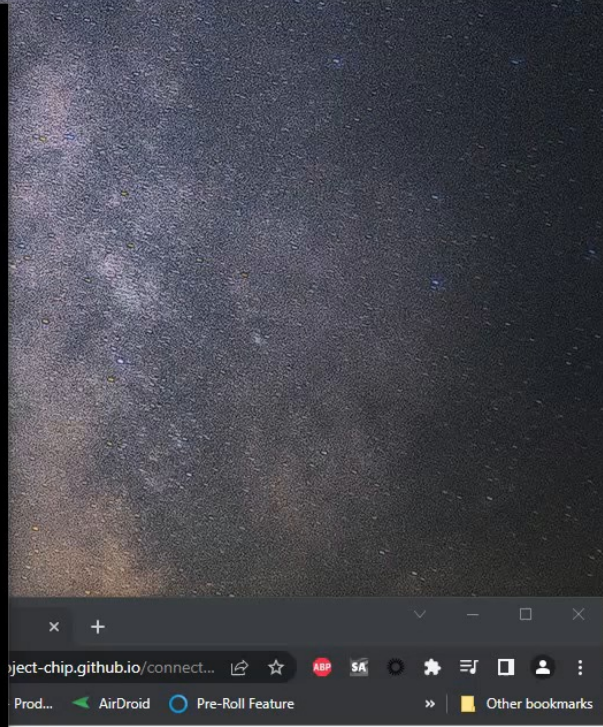
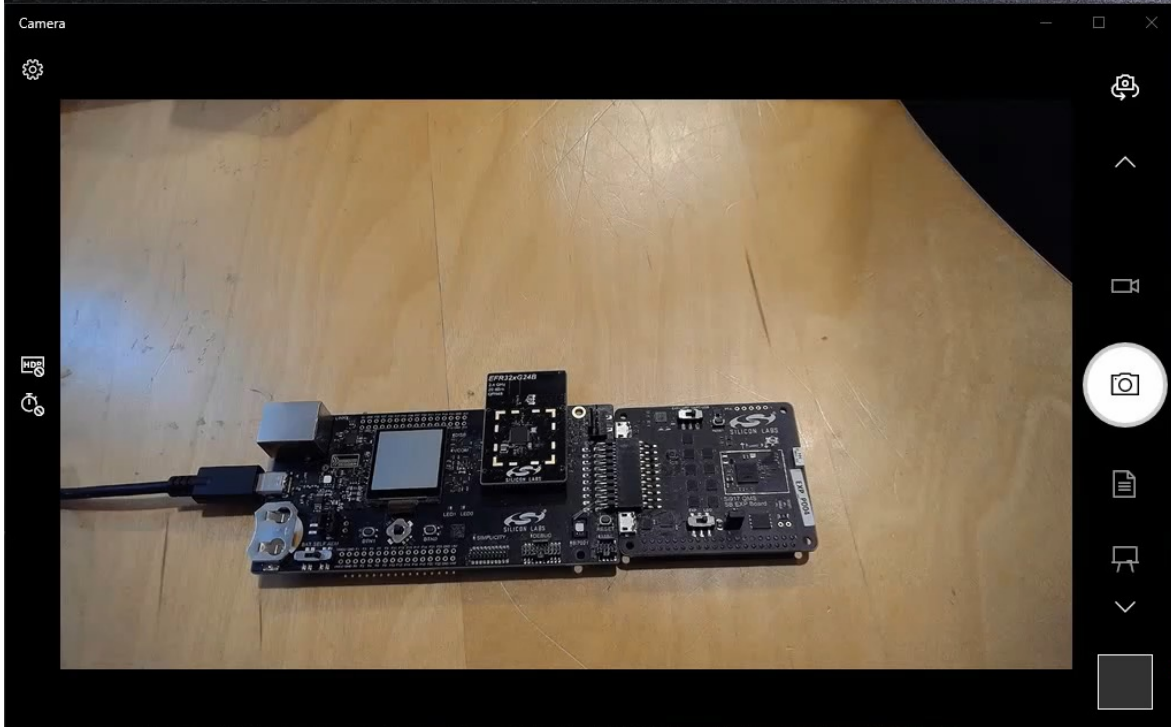
- You shall see the LED labeled LED1 on your MG24 dev board turn on or off depending on the command you enter




---

# Demo Execution





Please scan with your CHIPTool app.



Payload: MT:6FCJ142C00KA0648G00  
This QR code is unique for your device. You may print a copy of this for subsequent use.

[Print QR Code](#)

This QR code is generated using [qrcodejs](#)

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# Silicon Labs Matter Over Wi-Fi Portfolio

# Silicon Labs' Wi-Fi SoC Portfolio Summary

## Features

### WF200



### RS9116



### SiWx917



	WF200	RS9116	SiWx917
Wi-Fi (2.4 GHz)	Wi-Fi 4	Wi-Fi 4	Wi-Fi 6
BT Low Energy (LE)		✓	✓
BT Classic (Audio)		✓	
Low Power Modes	PS-POLL	PS-POLL, Listen Interval	PS-POLL, Listen Interval, TWT
Wi-Fi Features	OFDM	OFDM	OFDM, OFDMA, MU-MIMO
Wi-Fi WPA3 Security	✓	✓	✓
ARM® Apps MCU (SoC Mode)			✓
ML Accelerator, PSRAM Interface, MCU Security (PSA-L2)			✓
Ultra Low Power		✓	✓
Matter	✓	✓	✓

# Silicon Labs Matter Solutions – More Than Just Silicon

THREAD

Bluetooth®

WiFi®



## HARDWARE

- Field-proven SoCs and modules for Thread and Wi-Fi with Bluetooth
- Robust and reliable wireless foundation for Matter devices



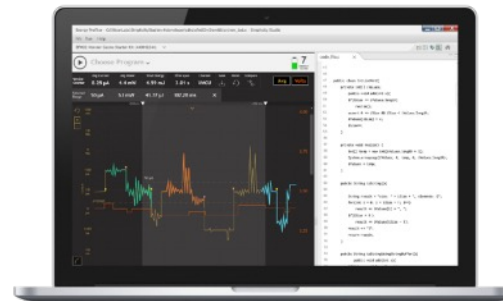
matter



## CERTIFICATION

- Support for Wi-Fi and 802.15.4 end product certification
- Participation in all CSA Matter test events
- Matter certification

14  
Simplicity  
Silicon  
Studio 5



## TOOLS

- Advanced development hardware, reference designs, and tools
- Simplifies development and speeds time-to-market



## SOFTWARE

- Support for all Matter devices including border routers, and bridges
- The largest semiconductor contributor to Matter GitHub

# Q&A



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2023



# Thank You



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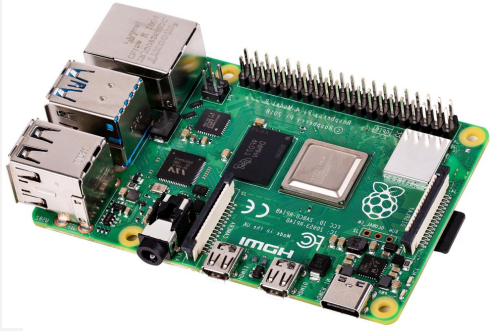
[silabs.com/training](https://silabs.com/training)

---

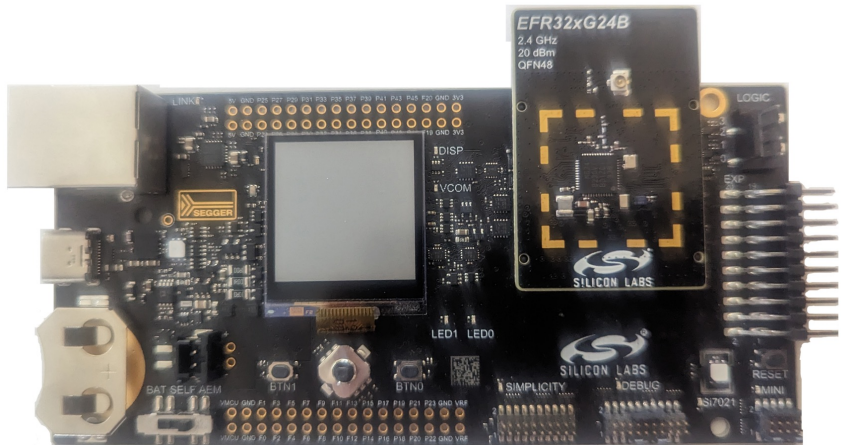
# Commissioning with Raspberry Pi



# Hardware Prerequisites

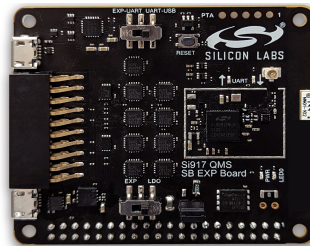


Raspberry Pi 4



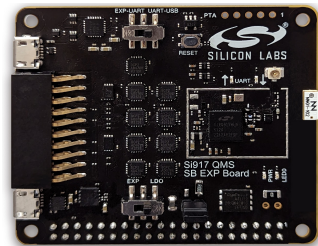
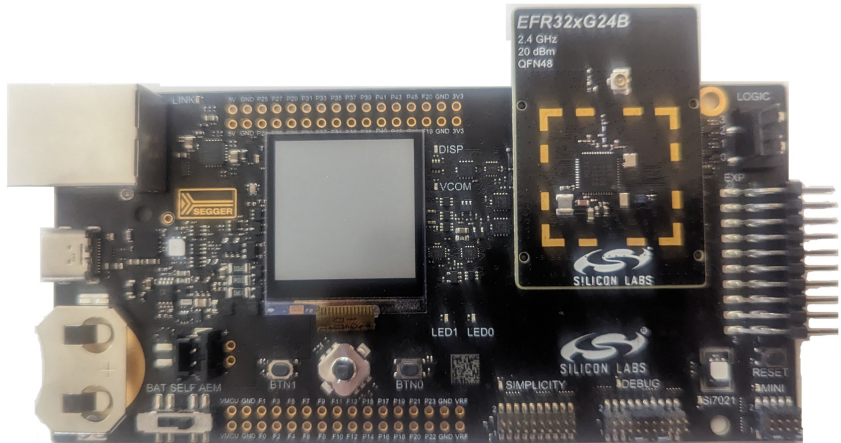
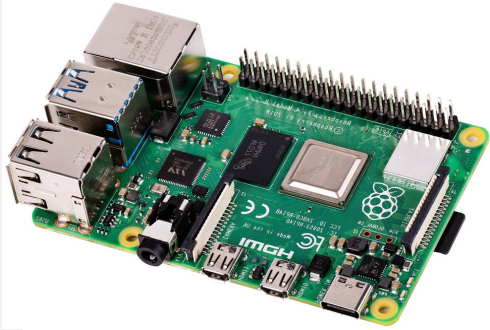
BRD4002A dev kit baseboard with  
BRD4187C MG24 daughterboard

SiWx917 EXP Board



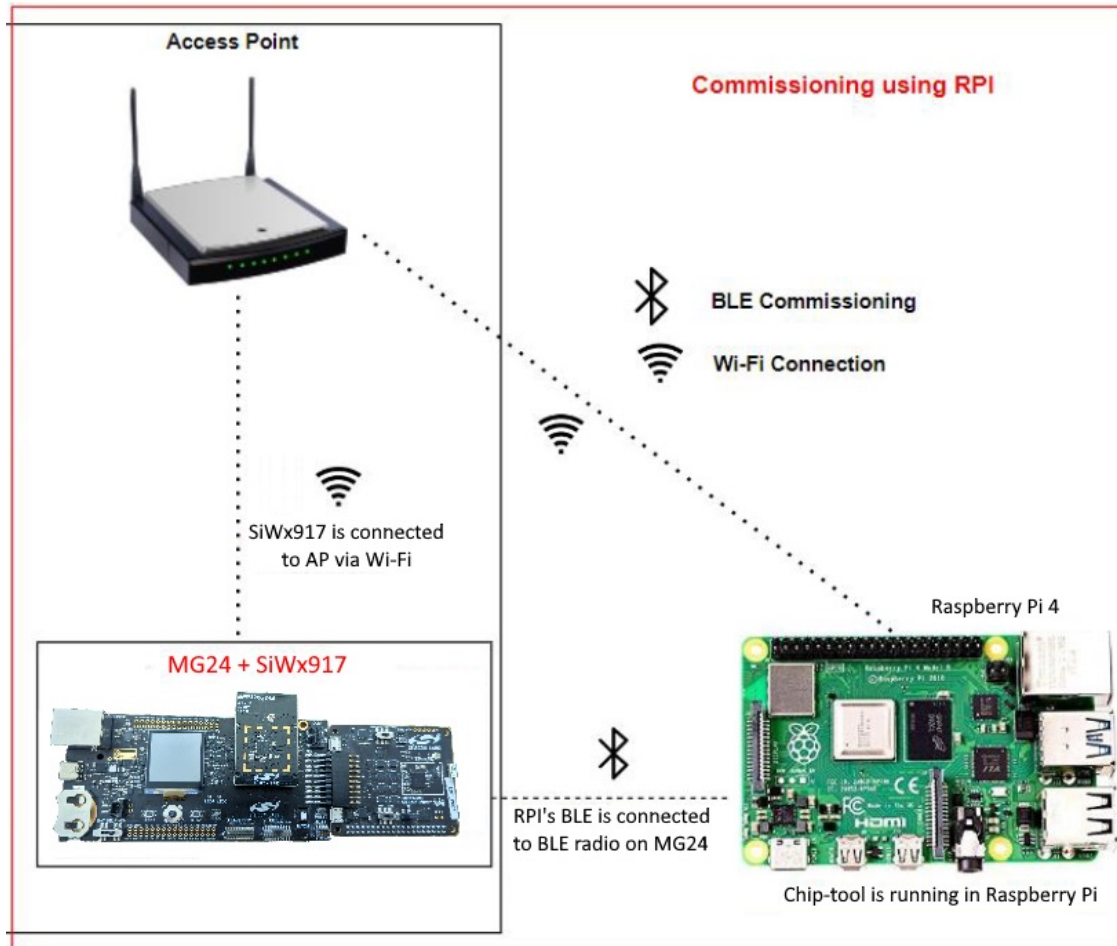
- In order to execute matter over Wi-Fi code examples on an SiWx917 you will need the following hardware if using a Raspberry Pi:
  - Raspberry Pi 4
    - Raspberry Pi will be used either with keyboard, mouse and monitor or through remote connection via Putty
  - 64 GB or larger microSD card
  - Silicon Labs BRD4002A dev kit baseboard
  - Silicon Labs BRD4187C MG24 (EFR32xG24B) daughterboard
  - Silicon Labs SiWx917 QMS SB EXP Board
  - Windows-based PC with available USB port
  - Dual-band Wi-Fi access point

# Software Prerequisites



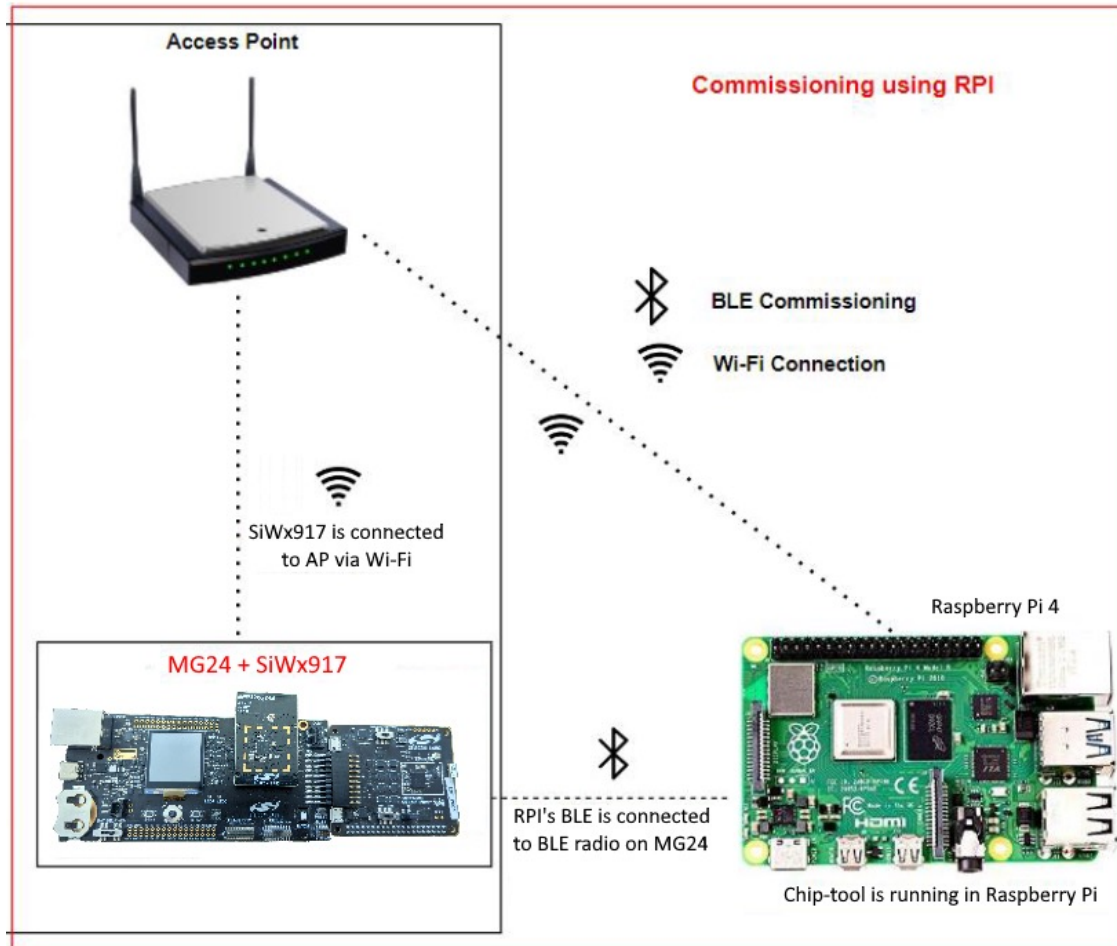
- In order to execute matter over Wi-Fi code examples on an SiWx917 you will need the following software:
  - SSH Client (Putty, terminal or similar)
    - For Putty download: <https://www.putty.org/>
  - Raspberry Pi Disk Imager
    - <https://www.raspberrypi.com/software/>
  - Silicon Labs Simplicity Studio v5.6.3.0 or later
    - <https://www.silabs.com/developers/simplicity-studio>

# Steps to set up and run the Matter over Wi-Fi lighting demo



- In today's presentation we will show you how to build and run the lighting matter over Wi-Fi demo
- This is one of the matter over Wi-Fi demos available to you within Simplicity Studio, some others are:
  - Lock over Wi-Fi
  - Window Cover over Wi-Fi
  - Thermostat over Wi-Fi
  - Light Switch over Wi-Fi
- The lighting matter over Wi-Fi demo will perform the following functions
  - Commissioning over BLE from Chip-Tool in Raspberry Pi
  - Associating to Wi-Fi network configured through commissioning
  - Control of LED on MG24 dev board through matter over Wi-Fi
- We will describe its setup in the next slides

# Steps to set up and run the Matter over Wi-Fi lighting demo



## • The following steps will be followed to set up the Matter over Wi-Fi lighting demo:

- Step 1: Load firmware onto SiWx917 module
- Step 2: Connect MG24 evaluation board to SiWx917 expansion board
- Step 3: Load bootloader binary image into MG24
- Step 4: Compile and download lighting matter over Wi-Fi code onto the MG24
- Step 5: Set up Raspberry Pi 4 with Chip-Tool
- Step 6: Use Chip-Tool to commission MG24 + SiWx917 matter device to your AP
- Step 7: Control LED on MG24 eval board from Chip-Tool using matter over Wi-Fi

# Step 5: Set up Raspberry Pi 4 to run Chip-Tool in it (Part 1)

- **The Raspberry Pi 4 will be used to run the Chip-Tool which will allow the following to be done:**
  - Commissioning of the SiWx917 to the Wi-Fi network to be used
  - Controlling via matter over Wi-Fi the LEDs on the SiWx917 development board
- **In order to set up your Raspberry Pi 4, you will need to download the Raspberry Pi Image available in the following link:**  
[https://github.com/SiliconLabs/matter/blob/release\\_1.1.0-1.1/docs/silabs/general/ARTIFACTS.md](https://github.com/SiliconLabs/matter/blob/release_1.1.0-1.1/docs/silabs/general/ARTIFACTS.md)
- A screenshot showing the file to be downloaded is shown below:

## Matter Software Artifacts

This page provides links to pre-built software image "artifacts" that can be used to set up the Matter Demo for the Thread and Wi-Fi use cases.

## Matter Hub Raspberry Pi Image

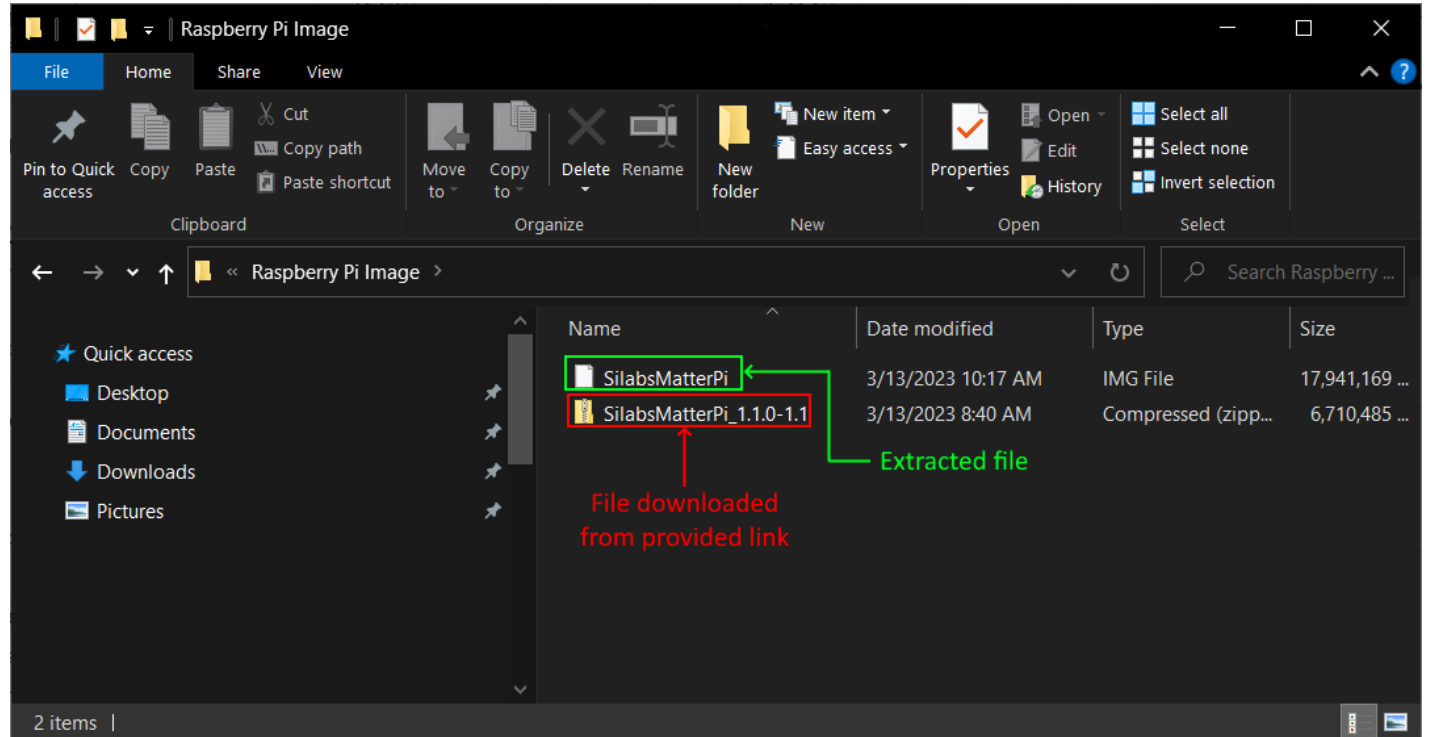
The Matter Hub image is intended to be flashed onto an SD card for a Raspberry Pi. The Matter Hub Image provides both an Open Thread Border Router and the Matter chip-tool. Note the image is ~10GB in size so depending on your internet connection this download may take some time. Start the Matter Hub Raspberry Pi image download here:

[https://www.silabs.com/documents/public/software/SilabsMatterPi\\_1.1.0-1.1.zip](https://www.silabs.com/documents/public/software/SilabsMatterPi_1.1.0-1.1.zip)

Download this image  
from provided link

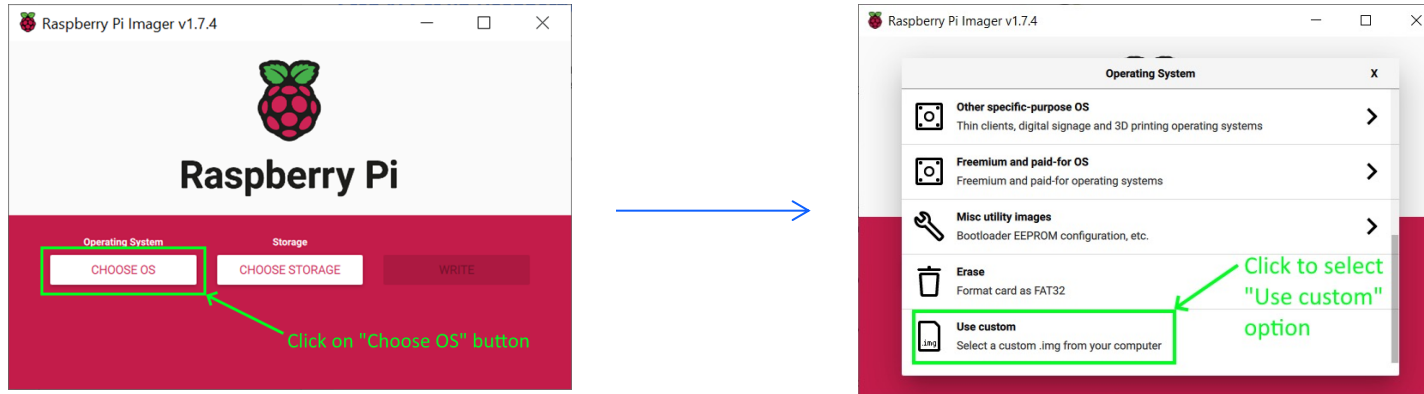
## Step 5: Set up Raspberry Pi 4 to run Chip-Tool in it (Part 2)

- Once you have downloaded the Raspberry Pi image from the link provided by the previous slide, uncompress it in your PC as shown below:
  - File in Red is the one downloaded from site
  - File highlighted in green is the uncompressed
  - file obtained from it. This is the Raspberry Pi
  - image we will use.

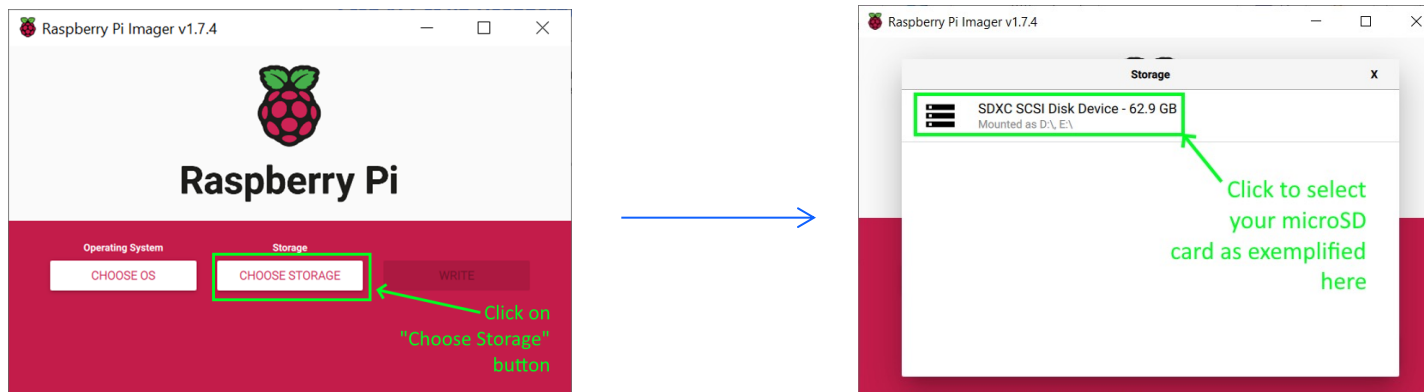


# Step 5: Set up Raspberry Pi 4 to run Chip-Tool in it (Part 3)

- Run the Raspberry Pi Imaging Tool, and, on it click on the “Choose OS” button and then select the “Use custom” option, as shown below:

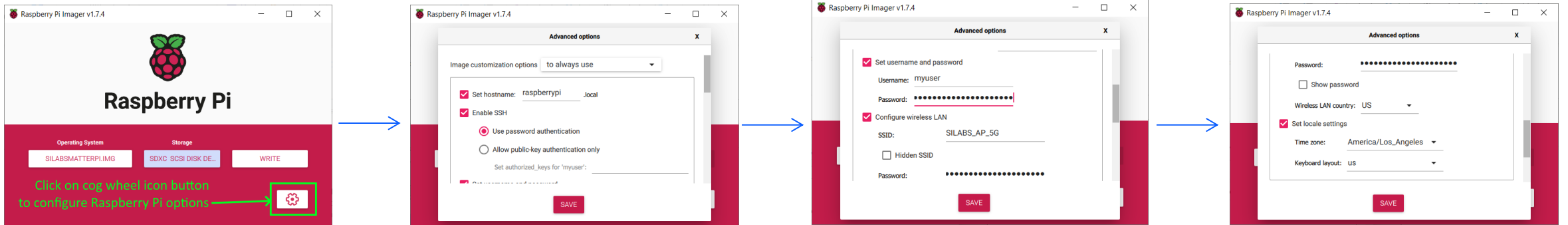


- After selecting “Use custom”, click on “Choose Storage” and then pick your microSD card, as exemplified below



# Step 5: Set up Raspberry Pi 4 to run Chip-Tool in it (Part 4)

- Click on cog wheel icon to select desired Raspberry Pi options, including username, password and SSID and password of AP that you want your Raspberry Pi to associate to:



The settings used for this example were as follows:

- hostname = “raspberrypi.local”; Enable SSH; Use password authentication
- Username = “myuser”; Password = “1234567890”
- SSID = “SILABS\_AP\_5G”; Password = “1234567890”;
- Wireless LAN country = “US”
- Finally, click on “Write” as shown here. This will write and verify the Raspberry Pi image with your selected settings onto your microSD card





## Step 5: Set up Raspberry Pi 4 to run Chip-Tool in it (Part 5)

- Now plug the microSD card into your Raspberry Pi 4 board and power on your Raspberry Pi.
- You should see it associate to your access point.
- Verify MAC address and IP address it obtained from your access point and note it down.
- In our example, they were the following:

- MAC address: E4:5F:01:35:00:36
- IP Address: 192.168.10.251

Internet	Icon	Clients Name	Client IP address	Clients MAC Address	Interface	Tx Rate (Mbps)	Rx Rate (Mbps)	Access time
		E8:6A:64:3C:CF:EE	192.168.10.2 <small>Static</small>	E8:6A:64:3C:CF:EE		-	-	
		raspberrypi	192.168.10.251 <small>Manual</small>	E4:5F:01:3F:00:36		433.3	390	00:47:53

Export

Raspberry PI MAC address and IP address it obtained from the AP

- It might be a good idea to set a static DHCP list on your AP in order for your Raspberry Pi to preserve this IP address as shown in the screenshot below:

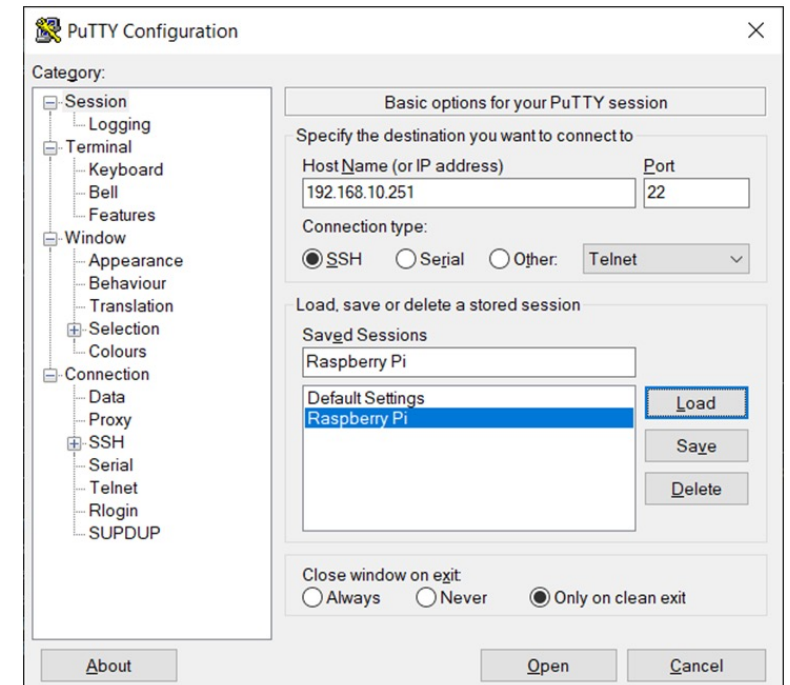
Client Name (MAC Address)	IP Address	DNS Server (Optional)	Add / Delete
ex: F0:2F:74:9B:2E:ED			
raspberrypi E4:5F:01:3F:00:36	192.168.10.251	Default	

Apply

Statically assigned IP address for Raspberry Pi 4

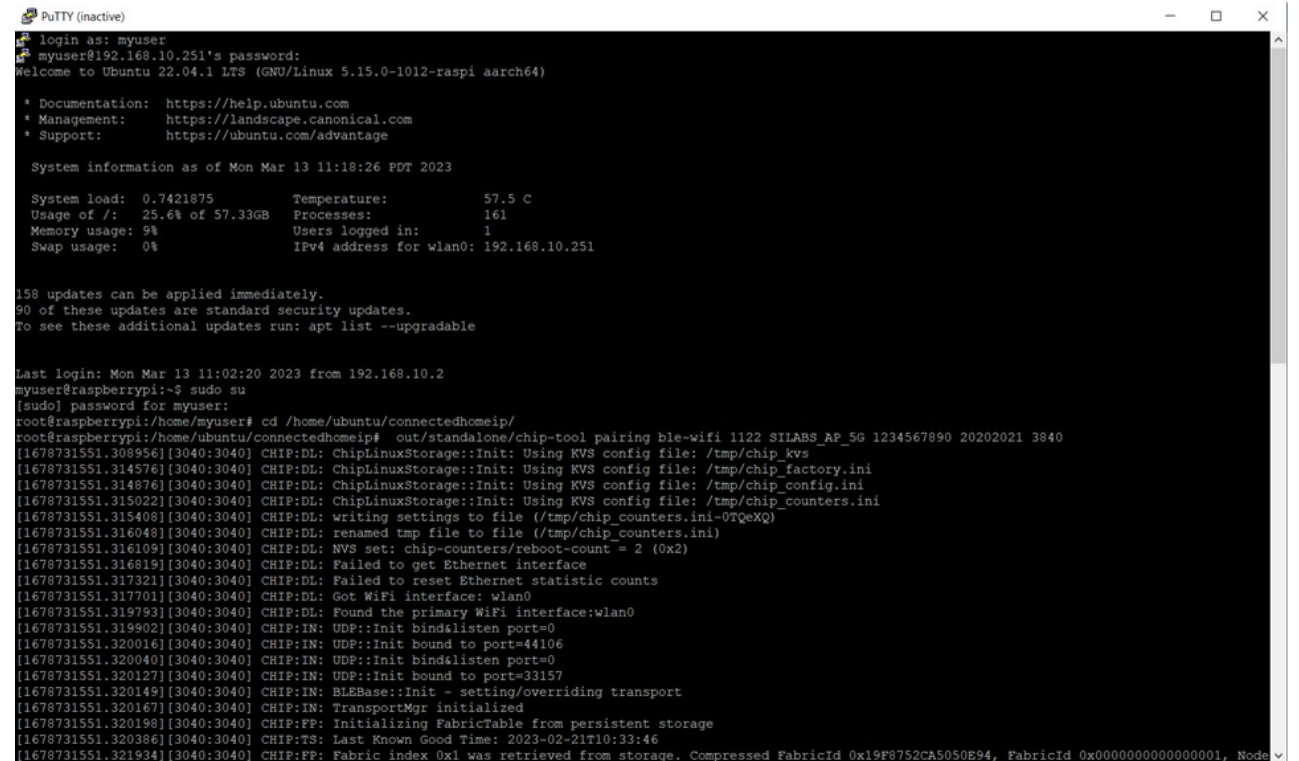
## Step 5: Set up Raspberry Pi 4 to run Chip-Tool in it (Part 6)

- On your PC, open putty and use the following settings to connect to the Raspberry Pi:
  - Host name (or IP address): IP address of your Raspberry Pi (192.168.10.251 in our example)
  - Port: 22
  - Connection Type: SSH
- 
- After your settings look similar to this screenshot, click the “Open” button:



## Step 5: Set up Raspberry Pi 4 to run Chip-Tool in it (Part 7)

- After establishing the connection to your Raspberry Pi, issue the following commands to verify that the Chip-Tool is installed in it and running properly:
  - `sudo su`
  - `cd /home/ubuntu/connectedhomeip`
  - `out/standalone/chip-tool pairing ble-wifi 1122 SILABS_AP_5G 1234567890 20202021 3840`
- You should see something similar to the following screenshot:



```
login as: myuser
myuser@192.168.10.251's password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-1012-raspi aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Mon Mar 13 11:18:26 PDT 2023

System load:  0.7421875      Temperature:    57.5 C
Usage of /:   25.6% of 57.3GB Processes:      161
Memory usage: 9%           Users logged in: 1
Swap usage:  0%           IPv4 address for wlan0: 192.168.10.251

158 updates can be applied immediately.
90 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

Last login: Mon Mar 13 11:02:20 2023 from 192.168.10.2
myuser@raspberrypi:~$ sudo su
[sudo] password for myuser:
root@raspberrypi:/home/myuser# cd /home/ubuntu/connectedhomeip/
root@raspberrypi:/home/ubuntu/connectedhomeip# out/standalone/chip-tool pairing ble-wifi 1122 SILABS_AP_5G 1234567890 20202021 3840
[[1678731551.308956][3040:3040] CHIP:DL: ChipLinuxStorage::Init: Using KVS config file: /tmp/chip_kvs
[[1678731551.314576][3040:3040] CHIP:DL: ChipLinuxStorage::Init: Using KVS config file: /tmp/chip_factory.ini
[[1678731551.314876][3040:3040] CHIP:DL: ChipLinuxStorage::Init: Using KVS config file: /tmp/chip_config.ini
[[1678731551.315022][3040:3040] CHIP:DL: ChipLinuxStorage::Init: Using KVS config file: /tmp/chip_counters.ini
[[1678731551.315408][3040:3040] CHIP:DL: writing settings to file (/tmp/chip_counters.ini-0TqXQ)
[[1678731551.316048][3040:3040] CHIP:DL: renamed tmp file to file (/tmp/chip_counters.ini)
[[1678731551.316109][3040:3040] CHIP:DL: NVS set: chip-counters/reboot-count = 2 (0x2)
[[1678731551.316819][3040:3040] CHIP:DL: Failed to get Ethernet interface
[[1678731551.317321][3040:3040] CHIP:DL: Failed to reset Ethernet statistic counts
[[1678731551.317701][3040:3040] CHIP:DL: Got WiFi interface: wlan0
[[1678731551.319793][3040:3040] CHIP:DL: Found the primary WiFi interface:wlan0
[[1678731551.319902][3040:3040] CHIP:IN: UDP::Init bind&listen port=0
[[1678731551.320016][3040:3040] CHIP:IN: UDP::Init bound to port=44106
[[1678731551.320040][3040:3040] CHIP:IN: UDP::Init bind&listen port=0
[[1678731551.320127][3040:3040] CHIP:IN: UDP::Init bound to port=33157
[[1678731551.320149][3040:3040] CHIP:IN: BLEBase::Init - setting/overriding transport
[[1678731551.320167][3040:3040] CHIP:IN: TransportMgr initialized
[[1678731551.320198][3040:3040] CHIP:FP: Initializing FabricTable from persistent storage
[[1678731551.320386][3040:3040] CHIP:TS: Last Known Good Time: 2023-02-21T10:33:46
[[1678731551.321934][3040:3040] CHIP:FP: Fabric index 0x1 was retrieved from storage. Compressed FabricId 0x19F8752CA5050E94, FabricId 0x0000000000000001, Node
```

# Step 6: Use Chip-Tool to Commission MG24 + SiWx917 matter device (Part 1)

```
root@raspberrypi: /home/ubuntu/connectedhomeip
login as: myuser
myuser@192.168.10.251's password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-1025-raspi aarch64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

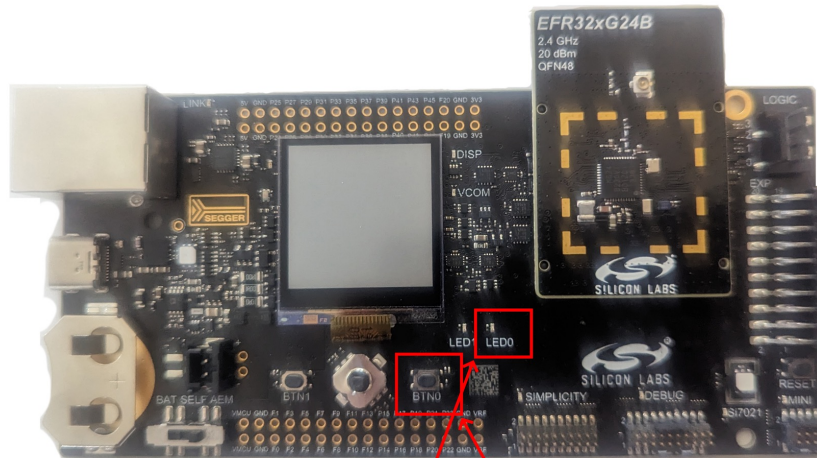
System information as of Fri Mar 17 10:44:28 PDT 2023

System load:  0.72119140625   Temperature:   54.0 C
Usage of /:   27.5% of 57.3GB   Processes:    162
Memory usage: 7%             Users logged in: 1
Swap usage:  0%              IPv4 address for wlan0: 192.168.10.251

* Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
  just raised the bar for easy, resilient and secure K8s cluster deployment.
  https://ubuntu.com/engage/secure-kubernetes-at-the-edge

73 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Last login: Thu Mar 16 09:45:13 2023 from 192.168.10.2
myuser@raspberrypi:~$ sudo su
[sudo] password for myuser:
root@raspberrypi: /home/myuser# cd /home/ubuntu/connectedhomeip/
root@raspberrypi: /home/ubuntu/connectedhomeip#
```



You shall see LED0 blinking after doing so

Push button "BTN0" for 8 seconds

- Connect to your Raspberry Pi and issue the following commands
  - `sudo su`
  - `cd /home/ubuntu/connectedhomeip/`
- 
- Disconnect your MG24 setup from your PC and connect it again. After doing so, press its BTN0 button for 8 seconds to reset its settings back to default. You shall see LED0 blinking after doing so

# Step 6: Use Chip-Tool to Commission MG24 + SiWx917 matter device (Part 2)

```
root@raspberrypi:/home/ubuntu/connectedhomeip
login as: myuser
myuser@192.168.10.251's password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-1025-raspi aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Fri Mar 17 10:44:28 PDT 2023

System load:  0.7211914025   Temperature:   54.0 C
Usage of /:   27.5% of 57.3GB   Processes:    162
Memory usage: 7%           Users logged in: 1
Swap usage:  0%             IPv4 address for wlan0: 192.168.10.251

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

73 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Last login: Thu Mar 16 09:45:13 2023 from 192.168.10.2
myuser@raspberrypi:~$ sudo su
[sudo] password for myuser:
root@raspberrypi:/home/myuser# cd /home/ubuntu/connectedhomeip/
root@raspberrypi:/home/ubuntu/connectedhomeip# out/standalone/chip-tool pairing ble-wifi 1122 SILABS_AP 1234567890 20202021 3840
```

```
root@raspberrypi:/home/ubuntu/connectedhomeip
[1679076474.947260][46528:46530] CHIP:BLE: Auto-closing end point's BLE connection.
[1679076474.947278][46528:46530] CHIP:DL: Closing BLE GATT connection (con 0xffff980552a0)
[1679076474.947308][46528:46530] CHIP:IN: SecureSession[0xffff90010c00]: MarkForEviction Type:1 LSID:8906
[1679076474.947331][46528:46530] CHIP:SC: SecureSession[0xffff90010c00]: Moving from state 'kActive' --> 'kPendingEviction'
[1679076474.947385][46528:46530] CHIP:IN: SecureSession[0xffff90010c00]: Released - Type:1 LSID:8906
[1679076474.947412][46528:46530] CHIP:DL: Successfully finished commissioning step 'Cleanup'
[1679076474.947437][46528:46530] CHIP:TOO: Device commissioning completed with success
[1679076474.947495][46528:46530] CHIP:DMG: ICR moving to [AwaitingP]
[1679076474.947529][46528:46529] CHIP:DL: BluezDisconnect peer=00:0D:6F:5C:F9:92
[1679076474.947603][46528:46530] CHIP:EM: <<< [E:58951 M:209102886 (Ack:111686227)] (S) Msg TX to 1:0000000000000462 [00AF] --- Type 0000:10 (SecureCh
nnel:StandaloneACK)
[1679076474.947639][46528:46530] CHIP:IN: (G) Sending msg 209102886 on secure session with LSID: 8907
[1679076474.947773][46528:46530] CHIP:EM: Flushed pending ack for MessageCounter:111686227 on exchange 58951
[1679076474.948082][46528:46528] CHIP:CTL: Shutting down the commissioner
[1679076474.948117][46528:46528] CHIP:CTL: Stopping commissioning discovery over DNS-SD
[1679076474.948228][46528:46528] CHIP:CTL: Shutting down the controller
[1679076474.948253][46528:46528] CHIP:IN: Expiring all sessions for fabric 0x1!!
[1679076474.948272][46528:46528] CHIP:IN: SecureSession[0xffff9001ad60]: MarkForEviction Type:2 LSID:8907
[1679076474.948292][46528:46528] CHIP:SC: SecureSession[0xffff9001ad60]: Moving from state 'kActive' --> 'kPendingEviction'
[1679076474.948342][46528:46528] CHIP:IN: SecureSession[0xffff9001ad60]: Released - Type:2 LSID:8907
[1679076474.948386][46528:46528] CHIP:FP: Forgetting Fabric 0x1
[1679076474.948417][46528:46528] CHIP:TS: Pending Last Known Good Time: 2023-02-21T10:33:46
[1679076474.948586][46528:46528] CHIP:TS: Previous Last Known Good Time: 2023-02-21T10:33:46
[1679076474.948608][46528:46528] CHIP:TS: Reverted Last Known Good Time to previous value
[1679076474.948653][46528:46528] CHIP:CTL: Shutting down the commissioner
[1679076474.948704][46528:46528] CHIP:CTL: Stopping commissioning discovery over DNS-SD
[1679076474.948842][46528:46528] CHIP:CTL: Shutting down the controller
[1679076474.948900][46528:46528] CHIP:CTL: Shutting down the System State, this will teardown the CHIP Stack
[1679076474.949079][46528:46528] CHIP:DMG: IM WH moving to [Uninitialized]
[1679076474.949151][46528:46528] CHIP:DMG: IM WH moving to [Uninitialized]
[1679076474.949133][46528:46528] CHIP:DMG: IM WH moving to [Uninitialized]
[1679076474.949149][46528:46528] CHIP:DMG: IM WH moving to [Uninitialized]
[1679076474.949169][46528:46528] CHIP:DMG: All ReadHandler-s are clean, clear GlobalDirtySet
[1679076474.949250][46528:46528] CHIP:BLE: BleConnectionDelegate::CancelConnection is not implemented.
[1679076474.949310][46528:46528] CHIP:FP: Shutting down FabricTable
[1679076474.949336][46528:46528] CHIP:TS: Pending Last Known Good Time: 2023-02-21T10:33:46
[1679076474.949430][46528:46528] CHIP:TS: Reverted Last Known Good Time: 2023-02-21T10:33:46
[1679076474.949451][46528:46528] CHIP:TS: Previous Last Known Good Time: 2023-02-21T10:33:46
[1679076474.949692][46528:46528] CHIP:DL: writing settings to file (/tmp/chip_counters.ini-MtsJqo)
[1679076474.950359][46528:46528] CHIP:DL: renamed tmp file to file (/tmp/chip_counters.ini)
[1679076474.950438][46528:46528] CHIP:DL: NVS set: chip-counters/total-operational-hours = 0 (0x0)
[1679076474.950494][46528:46528] CHIP:DL: Inet Layer shutdown
[1679076474.950538][46528:46528] CHIP:DL: BLE shutdown
[1679076474.951855][46528:46528] CHIP:DL: System Layer shutdown
root@raspberrypi:/home/ubuntu/connectedhomeip#
```

- Issue the following command to the Raspberry Pi:  
out/standalone/chip-tool pairing ble-wifi 1122 \$SSID \$PWD 20202021 3840
- Where:
  - \$SSID is the SSID of the AP
  - \$PWD is the password of the AP
- In our setup, for example, our AP's 2.4 GHz SSID and password are:
  - SSID = SILABS\_AP
  - Password = 1234567890
- So our command is as follows:

out/standalone/chip-tool pairing ble-wifi 1122 SILABS\_AP 1234567890 20202021 3840

- After issuing the above command, you shall see your MG24 + SiWx917 setup be commissioned via BLE by the Chip tool to obtain the AP's credentials and then connect to the AP via Wi-Fi





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# Thank You



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