

Matter Over Thread Demo Quick Start Guide

1. Description

An application showing the use of Matter on BDE 2.4GHz modules. The result should resemble this high-level block diagram:



2. Get Ready

2.1. Software and Tools

- CHIPTool APP
- QR Code

2.2. Hardware

- > 1 x Android Phone
- > 1 x <u>BDE-RFM207</u> module
- > 1 x BDE-MP2652R7A module
- 1 x <u>BeagleBone Black</u>
- > 2 x Evaluation boards of <u>BDE-EVB07</u>
- 1 x Ethernet cable

Based on BDE Thread Module

Quick Start Guide



3. Running Demo

It is assumed that these devices are all on the same network (e.g. this can be accomplished by connecting all to a single Wi-Fi Router): Border Router and Matter controller (Android phone).

7.1. Install the CHIPTool APP

Install the CHIPTool APP on your Android phone. The installation package is CHIPTool.apk in the folder.

7.2. Power on the Border Router

Power on the Border Router. After one minute, the Border Router starts working, then proceed to the next step.

7.3. Device pairing

Open the CHIPTool APP, click "PROVISON CHIP DEVICE WITH THREAD" and scan the QR code in this link: https://projectchip.github.io/connectedhomeip/grcode.html?data=MT%3A6FCJ142C00KA0648G00

Based on BDE Thread Module



| CHIPTool |
|---|
| SCAN QR CODE |
| PROVISION CHIP DEVICE WITH WI-FI |
| PROVISION CHIP DEVICE WITH THREAD |
| PROVISION CHIP DEVICE WITH CUSTOM FLOW |
| LIGHT ON/OFF & LEVEL CLUSTER |
| SENSOR CLUSTERS |
| MULTI-ADMIN CLUSTER |
| OPERATIONAL CREDENTIALS CLUSTER |
| BASIC CLUSTER |
| WILDCARD |
| CLUSTER INTERACTION TOOL |
| |
| |

After the scan, the following will show (If the APP exits abnormally, reopen the APP and scan the QR code again):

| CHIPTool |
|---|
| Enter credentials of the Thread network that you want to put your CHIP device on. |
| Channel: |
| 15 |
| PAN ID: |
| 1234 |
| Extended PAN ID: 11:11:11:11:22:22:22:22 |
| Master Key: |
| 00:11:22:33:44:55:66:77:88:99:AA BB:CC:DD:EE:FF |
| SAVE NETWORK |
| |
| |
| |

Power on the Matter device (BDE-MP2652R7A). After ten seconds or so, it will start to work. Press and hold the right button labeled BTN-2 on BDE-EVB07 for more than 1 second. Bluetooth LE will advertise.



Based on BDE Thread Module



> Click **"SAVE NETWORK"** to enter the pairing mode:

| CHIPTool |
|---|
| Enter credentials of the Thread network that you want to put your CHIP device on. |
| Channel: |
| 15 |
| PAN ID: |
| 1234 |
| Extended PAN ID: |
| 11:11:11:11:22:22:22:22 |
| Master Key: |
| 00:11:22:33:44:55:66:77:88:99:AA: BB:CC:DD:EE:FF |
| SAVE NETWORK |
| |

> The following message will pop up when the device is successfully paired:

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| Commissioning completed with result: 0 |
|--|
| SLAN WK CUDE |
| PROVISION CHIP DEVICE WITH WI-FI |
| PROVISION CHIP DEVICE WITH THREAD |
| PROVISION CHIP DEVICE WITH CUSTOM FLOW |

You can click "LIGHT ON/OFF & LEVEL CLUSTER" to enter the operation view and control the Matter device (BDE-MP2652R7A).

| CHIPTool |
|---|
| SCAN QR CODE |
| PROVISION CHIP DEVICE WITH WI-FI |
| PROVISION CHIP DEVICE WITH THREAD |
| PROVISION CHIP DEVICE WITH CUSTOM FLOW |
| LIGHT ON/OFF & LEVEL CLUSTER |
| SENSOR CLUSTERS |
| MULTI-ADMIN CLUSTER |
| OPERATIONAL CREDENTIALS CLUSTER |
| BASIC CLUSTER |
| WILDCARD |
| CLUSTER INTERACTION TOOL |
| |
| |



Based on BDE Thread Module

| CHIPTO | ol | |
|--------|--------------------------|-----|
| b5c657 | 49d73edfe & 4 | |
| On | Toggle | Off |
| Read | Subscribe | |
| | • | |
| ON com | mand success | |

- On: Switch on the Red LED
- Off: Switch off the Red LED
- Toggle: Toggle the status of Red LED
- Read: Read the current status of the Red LED

By now, you should run the lighting-app demo successfully.

4. Revision History

| Revision | Date | Description |
|----------|----------------|----------------------------|
| V0.1 | 11-August-2023 | Preliminary version, draft |

You can find the latest documentations with this Link.



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