# Adaptive Lighting over Matter - Accessory Requirements

Developer Preview 1.1

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Developer

# Contents

# 1. Introduction

## 1.1. Purpose and Scope

This document goes over the process for eligible Matter lights to be added to the list of Adaptive Lighting devices in the Home App.

## 1.2. Terminology

- Accessory: A Matter device containing one or more Nodes.

# 2. Overview

In iOS 18 and later, Adaptive Lighting configures supported Matter lights to automatically adjust the color temperature throughout the day. Wake up to warm colors, stay alert and focused midday with cooler ones, and wind down at night by removing blue light.

This document goes over the process for eligible Matter lights to be added to the list of Adaptive Lighting devices in the Home App.

# 3. Accessory Requirements

## 3.1 Hardware Requirements

An accessory supporting Adaptive Lighting over Matter:

• Must support and advertise a range for the Color Temperature of at least 200 (physicalMinMired) to 370 mired (physicalMaxMired) (equivalent to 2700-5000 Kelvin)

• Is recommended to support a range for the Color Temperature of at least 178 (physicalMinMired) to 500 mired (physicalMaxMired) (equivalent to 2000-5600 Kelvin)

## 3.2 Getting access to Adaptive Lighting over Matter

Adaptive Lighting over Matter is available via a profile that can be downloaded here. This profile must only be shared with your company employees for performing internal testing, as described in section 3.3 of this document. The profile must be discarded once testing is done and results have been approved.

We want to ensure that users are not running into a known issue with earlier implementations of Matter on the accessory side leading to excessive *TimeRemaining* attribute (Attribute 2) when Adaptive Lighting is enabled [fix available via https://github.com/project-chip/connectedhomeip/pull/31778/files]. So we implemented a mechanism to track a minimum version of the accessory FW that addresses the issue and provides a good user experience in a database on our end. We will need you to provide the minimum FW version (*Matter SoftwareVersion attribute*) to be added in the database prior to launch.

We also need you to share the *Matter SoftwareVersion* attribute value for the current accessory build(s) that we have access to for testing purposes.

Once you are done with testing, file a Feedback Assistant ticket capturing:

- Title including “Request for Adaptive Lighting over Matter for *Company name*”
- Products of interest, VID, PID
- Current Matter *SoftwareVersion* attribute for the accessory FW to support Adaptive Lighting

## 3.3 Adaptive Lighting Testing

To ensure a good user experience, we are asking you to run through the list of test cases below and address any issue you identify on your end:

# Adaptive Lighting Accessory Test Plan

| No | Test | Instructions | Expected Results | Notes |
|---|---|---|---|---|
| **1** | Validate TimeRemaining attribute (Attribue 2) reporting | 1. With Adaptive Lighting enabled, verify that the TimeRemaining Attribute (Attribute 2) is **NOT** reported more than **once** per minute. | 1. TimeRemaining attribute is only reported 1/minute. | This test is to verify that attribute 2 is not being reported excessively which can cause users to experience network (Wi-Fi + Thread) issues. |
| **2** | Color Shift - Configuration - Resident | 1. Add a Light that supports Adaptive Lighting feature via Home App<br>2. Add a resident that aligns with the iOS version that you are testing against<br>3. Background and then foreground the Home App | Upon adding a resident to a home, if the user has a light that supports the Color shift feature, the Home app shall present the user with the Color Shift swatch (under the accessory quick controls) within a reasonable amount of time. The subsequent launch of the Home app should present the user with onboarding. | |
| **3** | Color Shift - Configuration - New Bulb | 1. Add a resident that aligns with the iOS version that you are testing against<br>2. Add a Light that supports Adaptive Lighting feature via Home App<br>3. Background and then foreground the Home App | Upon adding a light to the Home that supports the Color Shift Feature, the Color Shift swatch shall be selected by default. The subsequent launch of the Home app shall present the user with onboarding. | |

| No | Test | Instructions | Expected Results | Notes |
|---|---|---|---|---|
| **4** | Color Shift - CT(ColorTemperature) -> Full Spectrum Color | 1. Add resident to Home App<br>2. Add supported light to Vendor App<br>3. Onboard Light to Home from Vendor App<br>4. Set CT in Home App<br>  **1. Accessory details -> Light Color -> Temperature**<br>5. In Vendor App, set color to value outside of CT parameters.<br>6. Return to Home App | 1. After step 5, the colorMode should be set to 0 or 1.<br>2. Check that the correct color from step 5 is reflected in the Home App in step 6 | 1. If the Vendor App supports XY colorMode, the accessory **must** maintain accurate mapping of XY -> HS values after changing the color in the Vendor App |
| **5** | Color Shift - HS (HueSaturation) -> Full Spectrum Color | 1. Add resident to Home App<br>2. Add supported light to Vendor App<br>3. Onboard Light to Home from Vendor App<br>4. Set HS Color in Home App<br>  **1. Accessory details -> Light Color -> Color**<br>5. Open Vendor App, set new color<br>6. Return to Home App | 1. After step 5, the colorMode should be set to 0 or 1.<br>2. Check that the correct color from step 5 is reflected in the Home App in step 6 | 1. If the Vendor App supports XY colorMode, the accessory **must** maintain accurate mapping of XY -> HS values after changing the color in the Vendor App |

Once you are done with testing, you need to do the following:

- Send us the results of the test suite through the Feedback Assistant ticket created earlier
- Add the *SoftwareVersion attribute* corresponding to the FW validated through the test plan and including any fix for Adaptive Lighting in *Feedback Assistant ticket*

## 3.4 Feedback to Apple

Report issues/bugs to Apple through Feedback Assistant. This will help in timely triage and feedback.

Include the following information when reporting issues to Apple:

### 3.4.1. Issue Description and Reproducibility

Please provide the details of the issue and list the steps to reproduce them.

### 3.4.2. Profiles

The following profiles must be installed on the iOS/tvOS devices. Follow the instructions provided in the respective profile instructions document on how to trigger sysdiagnose logs for iPhone, HomePod, HomePod mini, or Apple TV.

- HomeKit ：

  - This profile helps in capturing HomeKit layer logs for issues related to Matter on iOS/tvOS.

### 3.4.3. Logging

Ensure you attach logs from the accessory and iOS/tvOS devices and provide an approximate time stamp of the issue. Refer to the section on the profiles that must be installed on iOS and tvOS devices.

# 4. Revision History

**Revision History**

| Version | Date | Notes |
| --- | --- | --- |
| 1.0 | 2024-11-04 | Developer Preview 1.0 |
| 1.1 | 2025-3-28 | Added info on Color Temperature minimum and recommended ranges in 3.1 Hardware Requirements<br><br>Modified test cases 4 and 5 |

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