

# Functions of Buspro Gateway (HomeKit Version)

Product Name: Buspro Gateway

Product Number: MGWIP.430

The background of the top half of the page is an aerial photograph of a city, likely New York City, showing a river (the Hudson River) and several bridges. The image is overlaid with a semi-transparent purple filter. The word "CONTENTS" is centered in the middle of this image in a large, white, sans-serif font.

# CONTENTS

01

HomeKit  
Introduction

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The background of the slide features a low-angle photograph of several modern skyscrapers with glass facades, reaching towards the sky. The image is overlaid with a semi-transparent purple filter, creating a monochromatic effect.

# Part 01

## HomeKit Introduction

# 1.1 What is HomeKit



**HomeKit is a smart home platform released by Apple in 2014.**

"Apple Dictionary" defines it as a set of software development tools launched by Apple. Apps created with HomeKit allow you to control connected accessories in your home (such as lights, locks, or heating and cooling) from Apple devices.

This definition indicates that the essence of HomeKit is actually a "development kit". It contains many parts that are often referred to as HomeKit, including:

- HomeKit framework on iOS and other systems

- HomeKit Access Protocol (hereinafter referred to as HAP protocol) adopted by smart home devices

- HomeKit Accessory Development Kit

# 1.1 What is HomeKit

Multiple HomeKit related sections listed on the Apple developer website



## Developing with HomeKit

Whether you're an app developer, smart home enthusiast, or manufacturer, you can learn how to use HomeKit to create apps and accessories for the home.

### Apps

Learn how iOS, iPadOS, tvOS, and watchOS apps seamlessly integrate with HomeKit accessories.

- [HomeKit Framework](#)
- [Human Interface Guidelines](#)
- [HomeKit Videos](#)
- [HomeKit Forums](#)

### Accessories

Learn and explore how to create accessories for your home using the HomeKit Accessory Protocol.

- [HomeKit Open Source ADK](#)  
To prototype noncommercial accessories
- [HomeKit Accessory Protocol Specification](#)  
Noncommercial version\*
- [HomeKit Accessory FAQs](#)

With the above definition, it is not difficult to understand the true meaning of the official certification of "Works with Apple HomeKit", indicating that this device is compatible with HomeKit and can interact with other HomeKit compatible software and hardware.

## 1.2 How HomeKit Home Hub Works



HomeKit home hub is another very special presence of HomeKit——

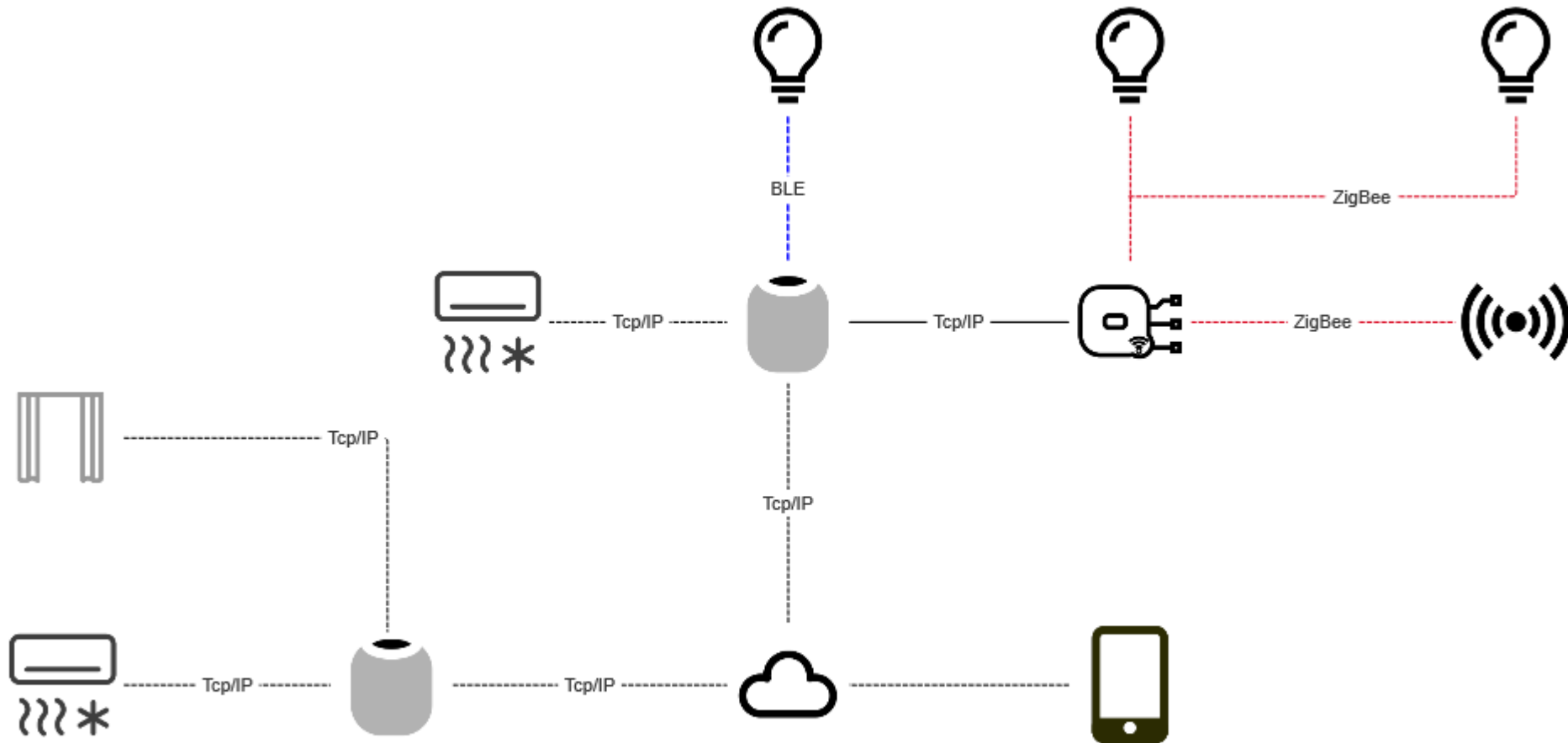
In other smart home platforms, servers or gateways are commonly used to assume functions such as automation and remote access.

Cloud automation features are flexible, but they rely heavily on Internet access, and may pose security and privacy risks;

Although the Internet of Things gateway is located locally , its performance is limited. It is difficult to bear complex logic, and it often does not support parallel processing of multiple automation, easily becoming a "bottleneck" in automation performance.

HomeKit has innovatively adopted a "Home Hub" as an automation device. The home hub is located within the same LAN, and HTTP requests have only millisecond level latency. Even the A8 chip a few years ago still has crushing performance compared to chips used in other smart home devices, without worrying about parallel and complex logic issues. As the operation system has the same chip, the HomeKit home hub even supports highly free automation solutions such as "Shortcuts."

## 1.2 How HomeKit Home Hub Works



## 1.2 How HomeKit Home Hub Works

The Home Hub is also the "Internet gateway" for all HomeKit devices. If personal terminals such as iPhones are not in the same LAN, they will first connect to the Home Hub through iCloud and remotely access them through the Home Hub. Point-to-point encryption sessions are established between Home Hubs and HomeKit devices, as well as between Home Hubs and personal terminals. Although iCloud may perform secondary encryption, it cannot obtain the truly transmitted information, which can be said to be a design that maximizes security.


Devices involved: HomePod mini, HomePod, Apple TV (fourth generation or later)

Ipad (no longer supported on iOS 16 systems)



**HomePod mini**



The background of the slide features a low-angle photograph of a city skyline with several tall skyscrapers. The image is overlaid with a semi-transparent purple filter, creating a monochromatic purple effect across the entire background.

# Part 02

## Functions

## 2.1 Project Backgroud



In order to access the company's wired buspro system to the Apple ecosystem, and then use the iPhone's "Home" app and Siri to control system devices.

Functions originally applied for certification: lighting, curtain motor, air conditioning control.

Apple want to obtain real-time air conditioning status and temperature feedback from our Buspro air conditioning module(MAC01.431) . However , it is a controller, so it does not have such functions . Then, we only used dimmers and curtains as sub device function authentication.

Functions currently supported by certification: switch, dimming, CCT, RGB, curtain motor, curtain panel (Apple only support open and close )

Support commissioning software startup function: air conditioning

# 2.2 Production Description



No.	Name	Parameter	Protocol	Model No.	Product ID
1	Buspro Gateway	Support HomeKit	Buspro	MGWIP.430	309010375



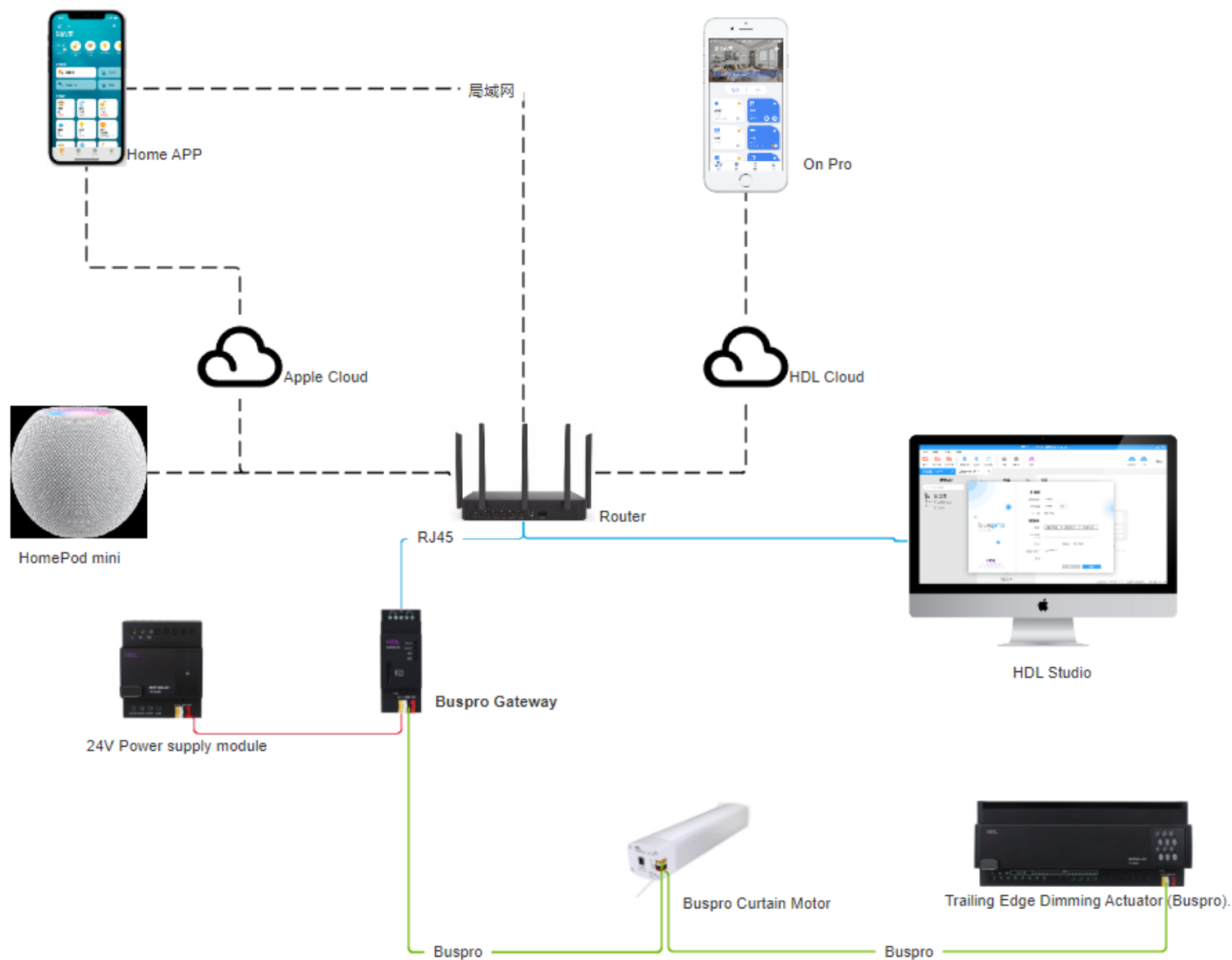
## 2.3 Product Certification Peripheral Description



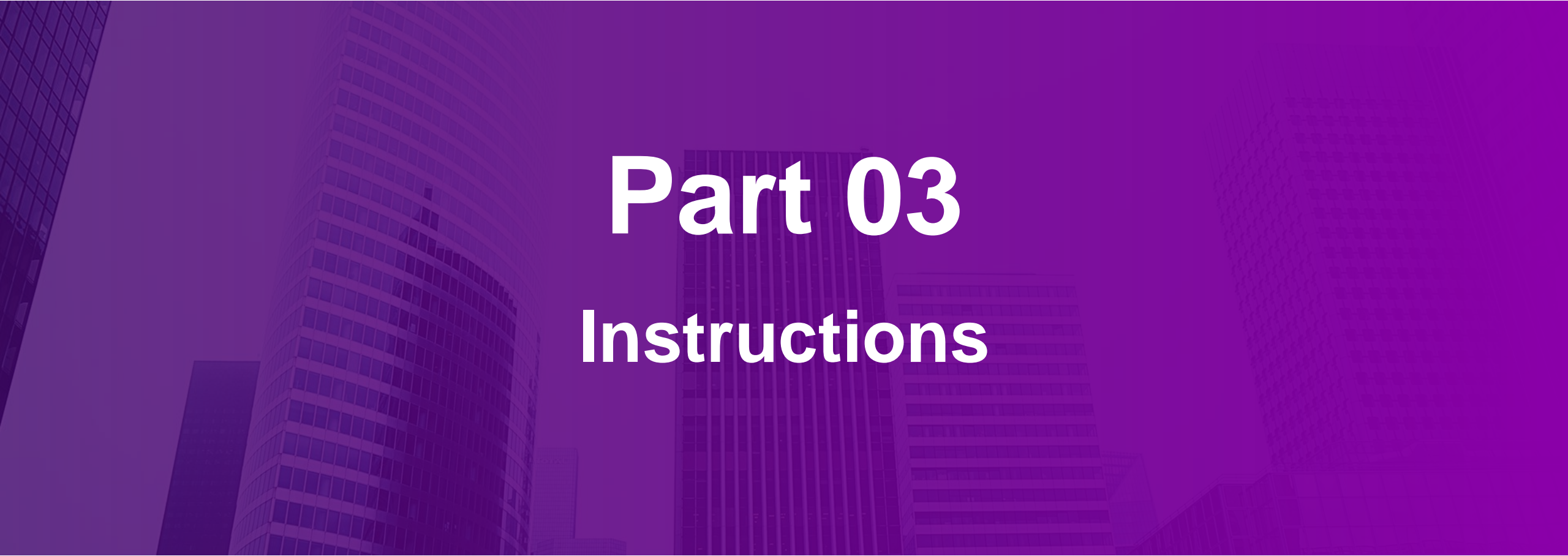
No.	Name	version	Protocal	Model No.	Product ID
1	6CH 1A Trailing Edge Dimming Actuator	V04.14U_1911 21	Buspro	HDL- MDT0601.433	305020010
2	Buspro Curtain Motor (220V AC_with adapter)	V04.01U_2005 06	Buspro	HDL- MWM65B.20	307010027



## 2.4 Topology



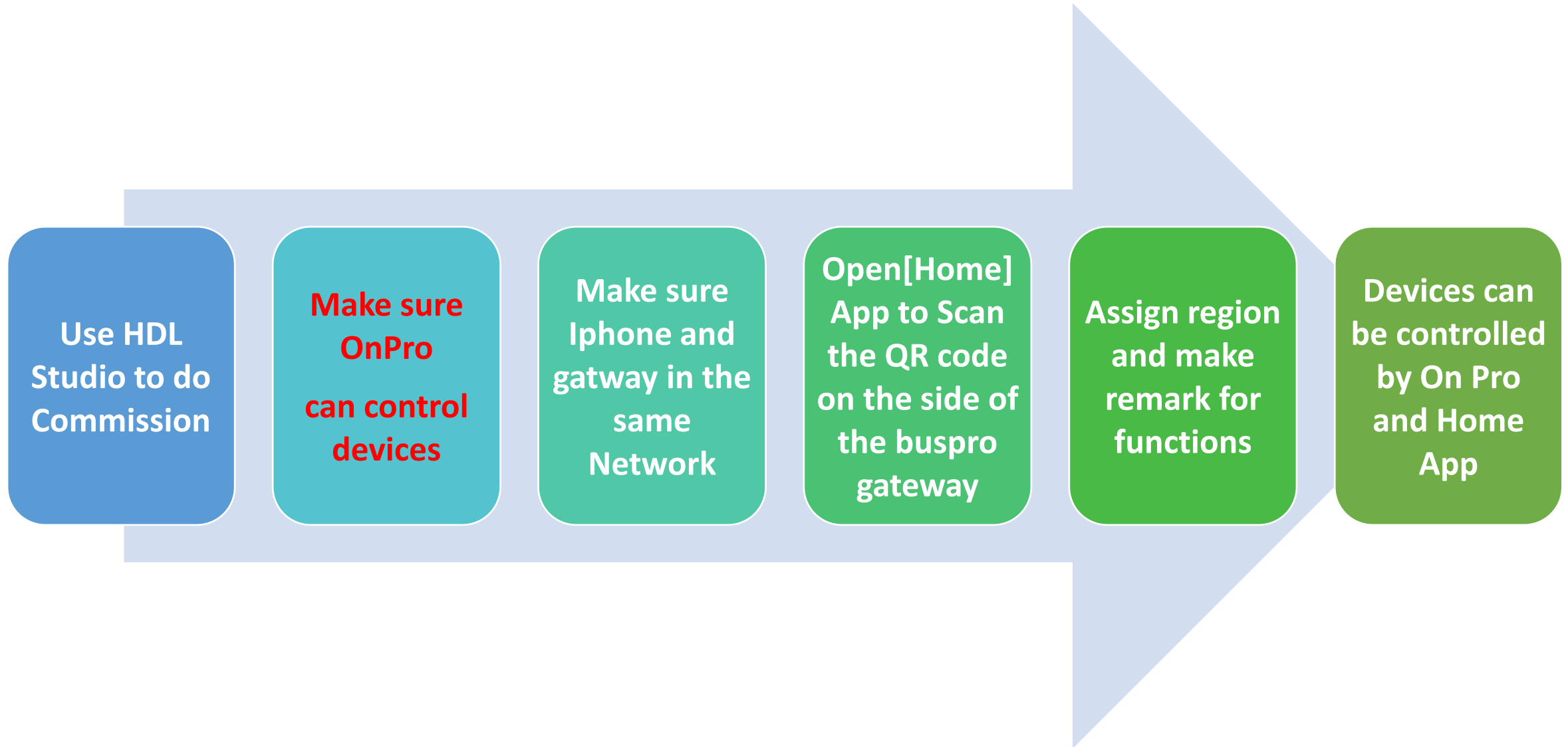


The background of the slide is a purple-tinted image of a city skyline with several skyscrapers. The buildings are rendered in a semi-transparent style, allowing the purple color to dominate the background.

# Part 03

## Instructions

## 3.1 How to use it



## 3.1 Enable AC Function in Studio

HomeKit2023

Device overview Function overview 1 10-0(MGWIP.430) Search device X

IP: 192.168.1.100

MGWIP.430 Model No.  
Buspro gateway Device name  
0C.81.1F.08.C8.39.2E.D1 MAC

OTA/Download Licence Local driver Data refresh time:2023/4/3 8:59:50 Read

Driver list

No.	Driver code	Driver name	Driver version	Status	Enable	Config
1	023331F0	HDL-LINK	LD_MGWIP.430_V03.02.00_220922_b_ALLWINER-H3_LINK	Normal	<input checked="" type="checkbox"/>	N/A
2	02616322	485test	LD_MGWIP.430_V01.00.00_211213_ALLWINNER-H3_485test	Normal	<input checked="" type="checkbox"/>	N/A
3	011F1E09	RDBG	LD_MGWIP.430_V01.01.02_220725_ALLWINNER-H3_RDBG	Normal	<input checked="" type="checkbox"/>	N/A
4	029B9988	buspro	LD_MGWIP.430_V02.06.11_220922_ALLWINNER-H3_buspro	Normal	<input checked="" type="checkbox"/>	N/A
5	3 02B1B372	HomeKit	LD_MGWIP.430_V01.01.00_230105_ALLWINNER-H3_HomeKit	Normal	<input checked="" type="checkbox"/>	4 Driver config QR

# 3.1 Enable AC Function in Studio



File

Tool

Help

Search

IP Config.

Floor And Room

User scene Automation

Security

Device catalogue

Save Data To Device

Upload

HomeKit2023

Device overview

Function overview

10-0(MGWIP.430)

Search device

IP: 192.168.1.100

HomeKit2023(13/13)

Unassigned electrical box(13/13)

Gateways(1/1)

Wait 10-0(MGWIP.430)

Dimmers(2/2)

Switches(1/1)

Shading(1/1)

Control panels(1/1)

Sensors(1/1)

Dry contact(1/1)

IR(1/1)

AC Module(1/1)

System Devices(2/2)

Not supported(1/1)

Basic setting

Functions

Drivers

Device scene

User scene

Automation

Security

OTA/Download

Licence

Driver config

Driver list

No.	Driver co	Driver name	Driver model	Status	Enable	Config
1	023331F0					
2	02616322					
3	011F1E09					
4	029B9988	buspro	LD_MGWIP.430_V02.06.11_220922_ALLWINNER-H3_buspro	Normal	<input checked="" type="checkbox"/>	N/A
5	02B1B372	HomeKit	LD_MGWIP.430_V01.01.00_230105_ALLWINNER-H3_HomeKit	Normal	<input checked="" type="checkbox"/>	<div>Driver config</div> <div>QR</div>

MGWIP.430

Model No.

Buspro gateway

Device name

0C.81.1F.08.C8.39.2E.D1

MAC

Data refresh time:2023/4/3 8:59:50

Read

Which Homekit services need to be enabled by the driver, please check the ones you need

☒ Curtain

☒ Dimming

5 ☒ HVAC

6

Cancel

Save

# 3.1View QR Code in Studio



FileToolHelp

Search

IP Config.

Floor And Room

User scene Automation

Security

Device catalogue

Save Data To Device

Upload

HomeKit2023

Device overview

Function overview

1 10-0(MGWIP.430)

Search device

IP: 192.168.1.100

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Shading(1/1)

Control panels(1/1)

Sensors(1/1)

Dry contact(1/1)

IR(1/1)

AC Module(1/1)

System Devices(2/2)

Not supported(1/1)

Basic setting

Functions

2 Drivers

Device scene

User scene

Automation

Security

oad

Licence

Local driver

MGWIP.430

Model No.

Buspro gateway

Device name

0C.81.1F.08.C8.39.2E.D1

MAC

Read

Save

Data refresh time:2023/4/3 8:59:50

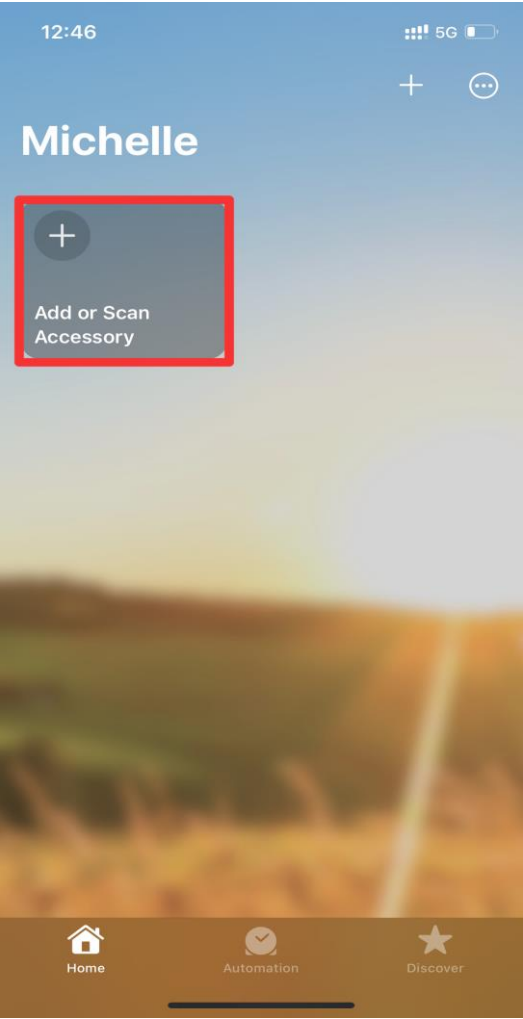
Notes

9939

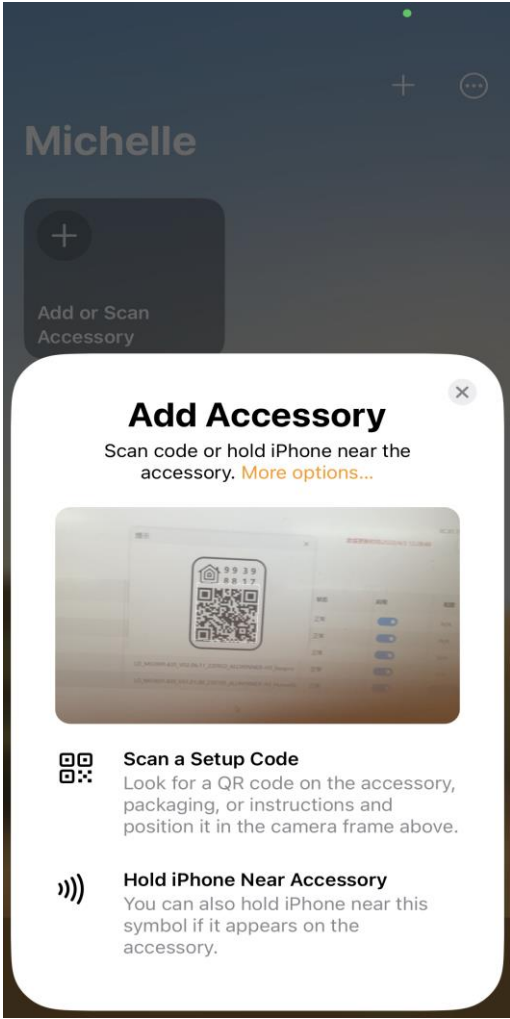
Driver code	Driver name	Status	Enable	Config
023331F0	HDL-LINK	-H3_LINK	Normal	N/A
02616322	485test	H3_485test	Normal	N/A
011F1E09	RDBG	H3_RDBG	Normal	N/A
3 029B9988	buspro	LD_MGWIP.430_V02.00.11_220922_ALLWINNER-H3_buspro	Normal	N/A
02B1B372	HomeKit	LD_MGWIP.430_V01.01.00_230105_ALLWINNER-H3_HomeKit	Normal	Driver config4 QR Code



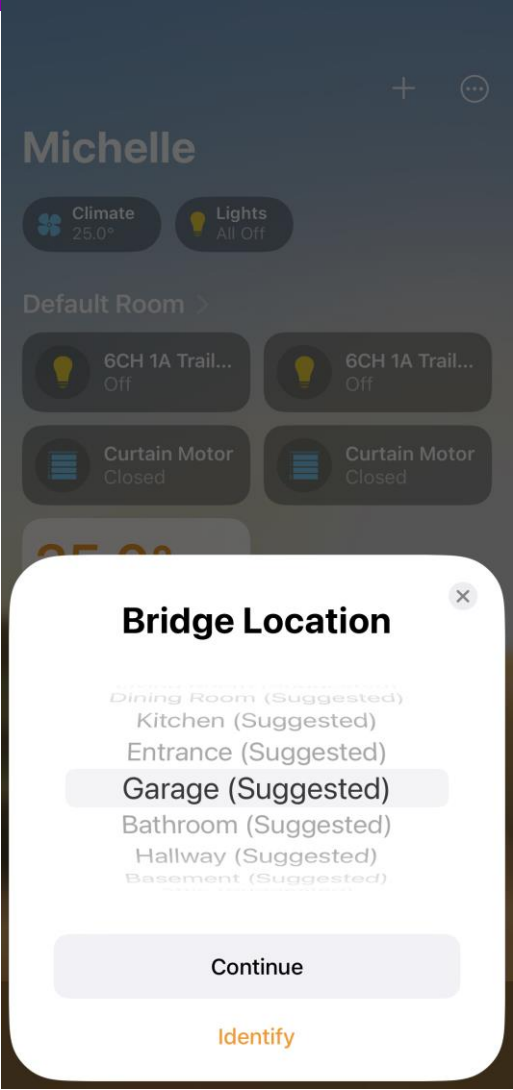
# 3.3 Home APP



Add or Accessory

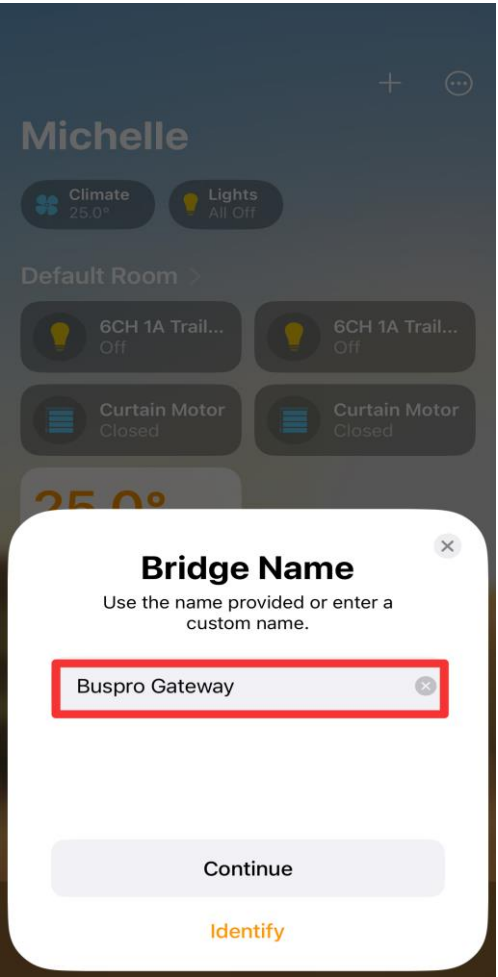


Scan QR Code

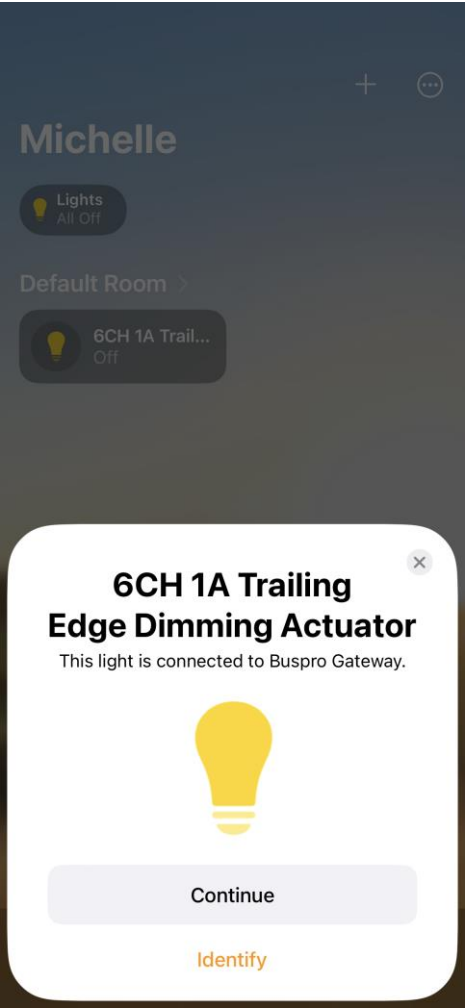


Locate the device

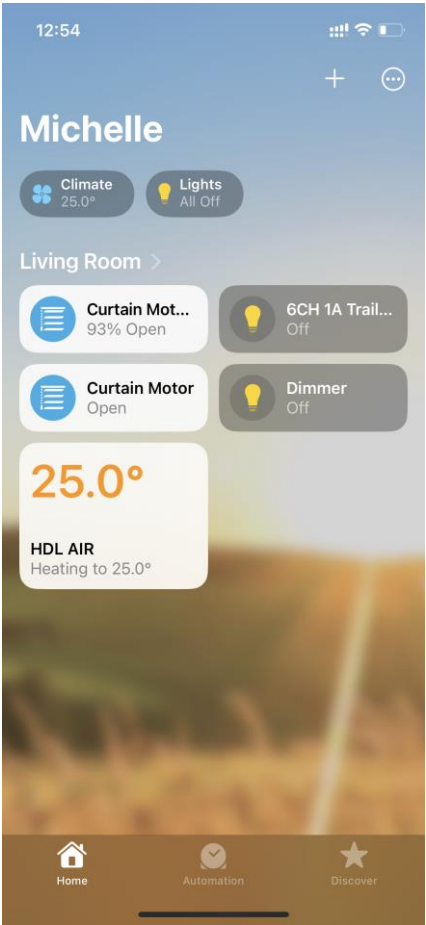
# 3.3 Home APP



Name Device

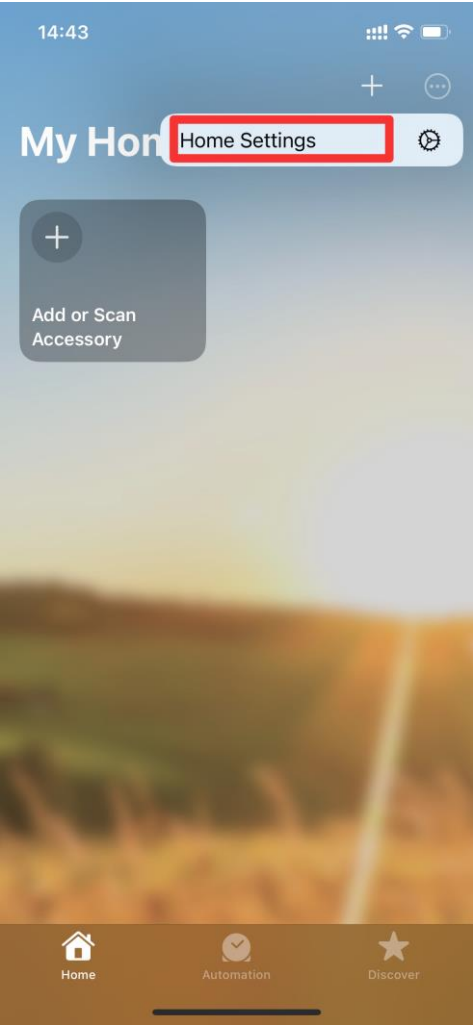


Devices will Appear

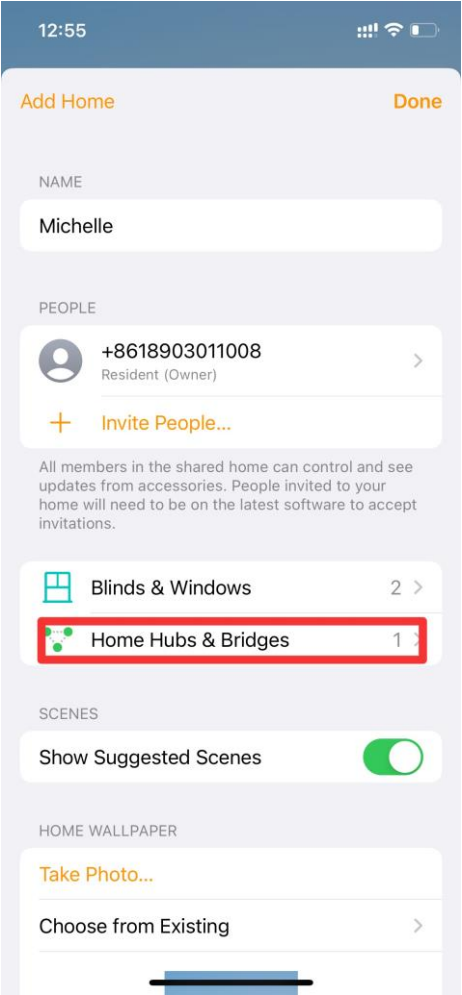


UI

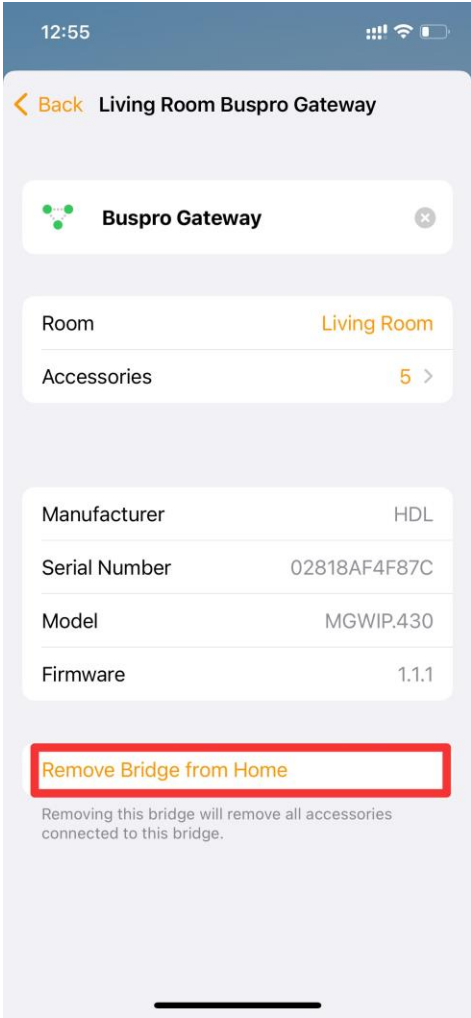
# 3.4 Home APP



Enter Home Settings



Enter Home Hubs  
& Bridges



Remove Bridge from Home

## 3.5 Notifications



1. Home APP and Buspro gateway should be added in the same LAN for the first time
2. If you need the remote control function of Home app, you need to have Apple's home hub device, HomePod mini
3. Buspro gateway currently only supports dimming devices and Shading devices on the HomeKit system, as well as HDL Studio to enable the air conditioning function
4. When adding a home app, the dimming will be displayed as 6CH 1A Trailing Edge Dimming Actuator, Curtains will display Curtain Motor, and air conditioners will display HDL AIR, which can be modified by yourself.
5. The device supports control of Dali channel ,color temperature , RGB.
6. The device supports the curtain module, but the Home app has no pause button and can only be fully opened and closed

## 3.5 Notifications



7. The device supports cross protocol control, but the Buspro gateway must be the master gateway
8. Adding a new device requires only to program in HDL Studio . After programming is completed and upgraded to On pro successfully it will automatically appear in Home App.
9. Each Buspro gateway (HomeKit version) will have a unique code. Buspro Gateway does not support installing HomeKit Driver.
10. HomeKit QR code is Displayed in HDL Studio.
11. After the HomeKit driver is uninstalled, the original QR code will become invalid. But HDL Studio prohibits uninstalling the driver.
12. unbinding of the device and HomeKit: Press and hold prog for 5-8s, that is, the unbinding is successful. Press prog again to make Prog indicator to turn green , and then can scan the code normally.
- 13. Currently, the driver version 1.1.0 supports a maximum of 100 channels. (Next version 250 channels)**



The background of the slide is a photograph of a modern building with a glass and metal facade, viewed from a low angle. The entire image is overlaid with a semi-transparent purple filter. The word "THANKS" is centered in the middle of the image in a large, white, sans-serif font.

**THANKS**