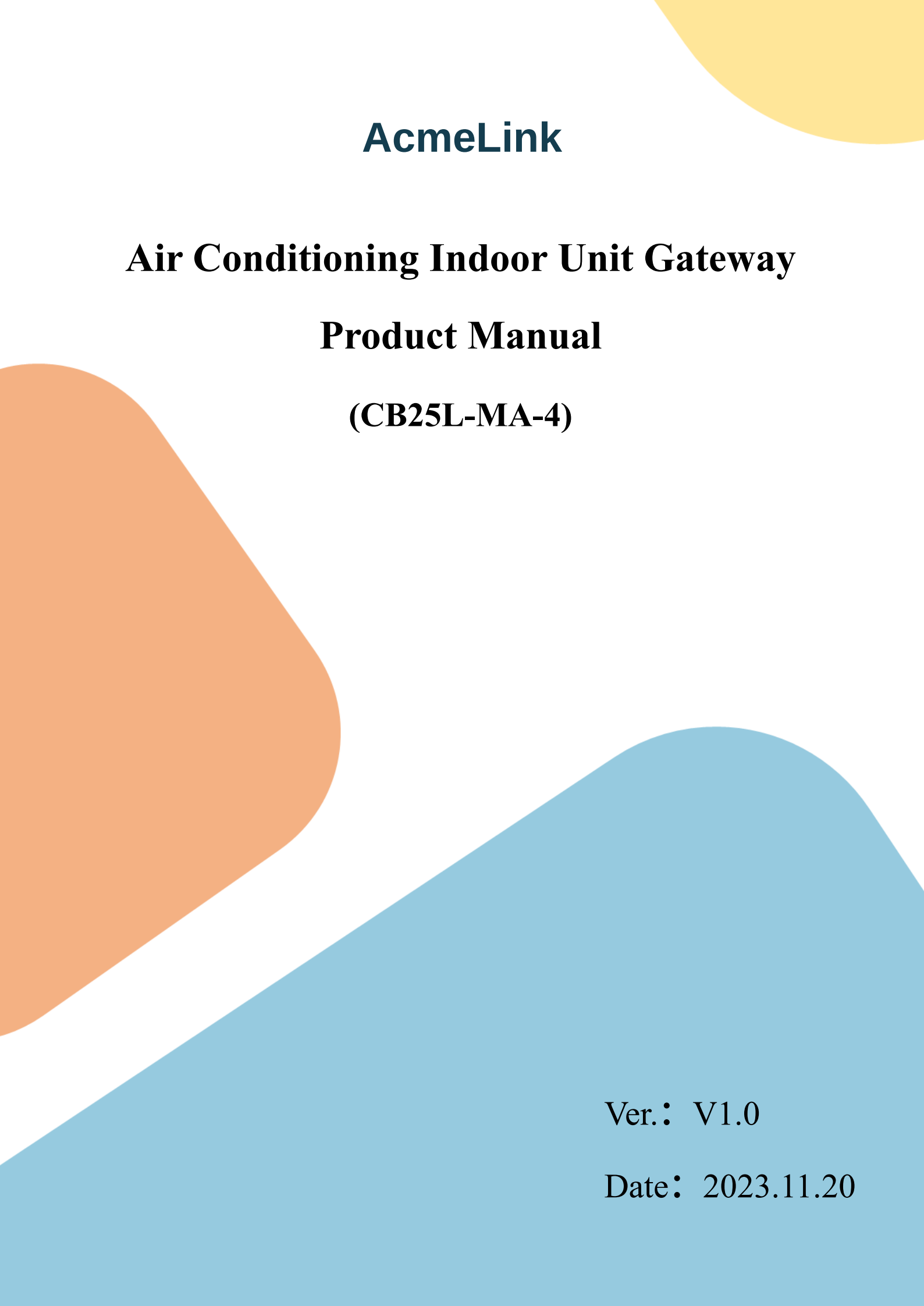




AcmeLink

Air Conditioning Indoor Unit Gateway

Product Manual

(CB25L-MA-4)

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Contents

1 Overview..... 1

 1.1 Product Introduction 1

2 Hardware Specifications2

 2.1 Product Appearance2

 2.2 Production Hardware Specifications.....2

3 Product Description3

 3.1 Product Composition3

 3.2 Button Function Description.....3

 3.3 LED Indicator Description.....3

4 Product Installation and Supported Brands.....5

 4.1 Preparation before installation5

 4.2 Installation Environment and Wiring Diagram.....5

 4.3 List and Description of Supported Brands.....5

4 Firmware Upgrade and Control Testing.....8

1 Overview

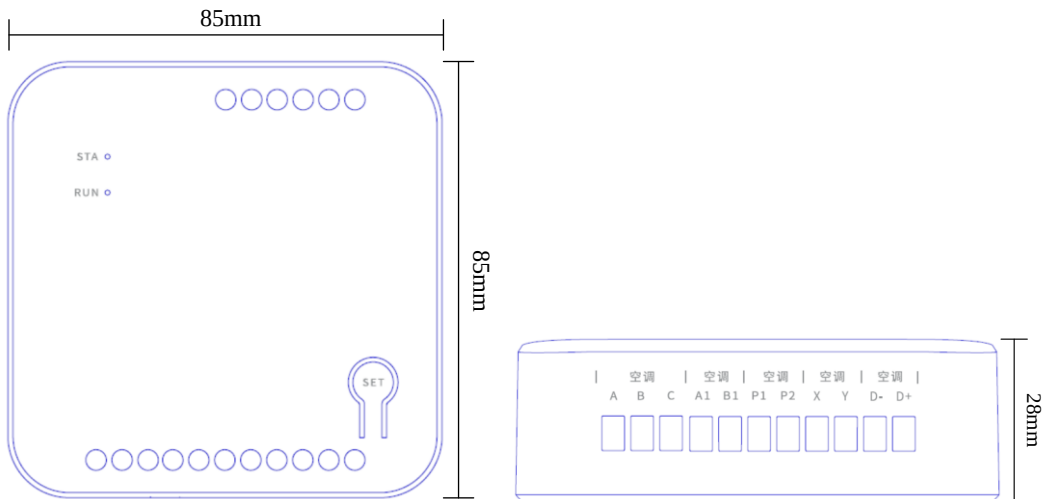
1.1 Product Introduction

1. Support the indoor unit of multiple brands of VRV/VRF or duct air conditioning systems, such as Daikin, Hitachi, Gree, Mitsubishi Heavy Industries, Midea, Hisense, Toshiba, York, Haier, etc.
2. It can provide various interfaces for smart home systems, such as RS485 and wireless module UART ports (which can be built-in with third-party WIFI/Zigbee/BLE modules).
3. It can be independently connected to air conditioning or coexist with the original panel.^① When coexisting with the original panel, master-slave adaptation does not require manual setting. It can also support to connect the third-party panel to replace original panel.
4. Support wired centralized control.
- 5 Equipped with Bluetooth upgrade function, firmware upgrade can be carried out according to on-site requirements.
6. Provide a dedicated Bluetooth mini program for air conditioning control testing, obtaining air conditioning operating parameters, fault codes etc.
7. Support remote fault diagnosis function, can quickly analyze and resolve problems, and fast service response.

***Note 1:** This function requires the air conditioning itself to support the master-slave panel.

2 Hardware Specifications

2.1 Product Appearance

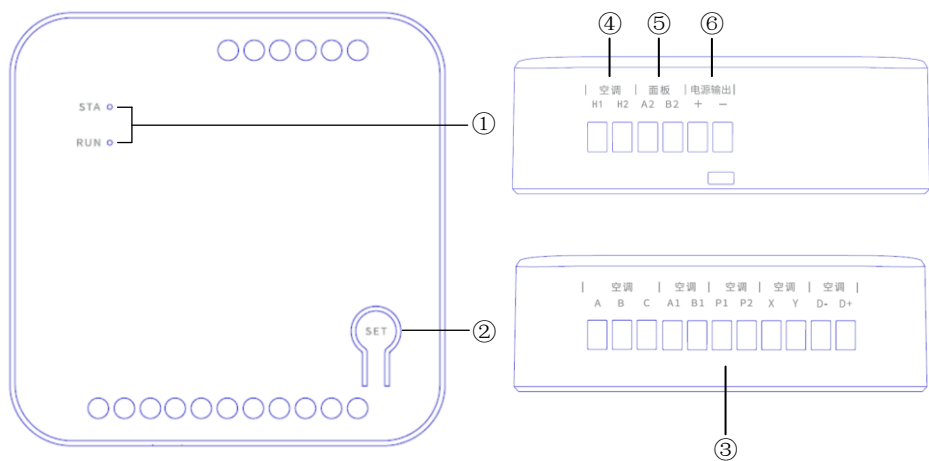


2.2 Production Hardware Specifications

Product Parameters	
Power supply	AC indoor unit
Average power consumption	0.5W
Dimension	85mm x 85mm x 28mm
Installation	AC maintenance port
Working environment	-20℃ - +60℃, 0-90%RH
Output power	DC8.5V, MAX 0.7W (If there is a built-in third-party module, the module power consumption needs to be subtracted)
Firmware Upgrade	WeChat Bluetooth Mini Program

3 Product Description

3.1 Product Composition



- ① LED indicator: Air conditioning and the product's working status indicator light. Please refer to the LED instructions for details.
- ② SET button: Different functions can be achieved through buttons. Please refer to the button instructions for details.
- ③ AC port: AC connection port.
- ④ AC port: AC connection port.
- ⑤ Panel port(A2 B2): The third-party panel connection port.
- ⑥ Power output port (- +): Provide power for third-party panel. The output power of this port is DC8.5V and MAX 0.7W (if there is a built-in third-party module, the module power consumption needs to be subtracted).

3.2 Button Function Description

Cooperate with third-party wireless modules for networking.

3.3 LED Indicator Description

Indicator flashes quickly: turn on for 0.25s and turn off for 0.25s.

Indicator flashes slowly: turn on for 0.5 seconds and turns off for 0.5 seconds.

Name	Status	Description
RUN	Constant light	Successfully found the air conditioning, operating normally
	Flash quickly	Searching the air conditioning
	Off	Air conditioning not found

STA	Constant light	Air conditioning on
	Flash quickly	Air conditioning abnormality
	Flash slowly	Third-party panel abnormality
	Off	Air conditioning off
RUN+STA	Flash quickly 3 times	Bluetooth connect successfully

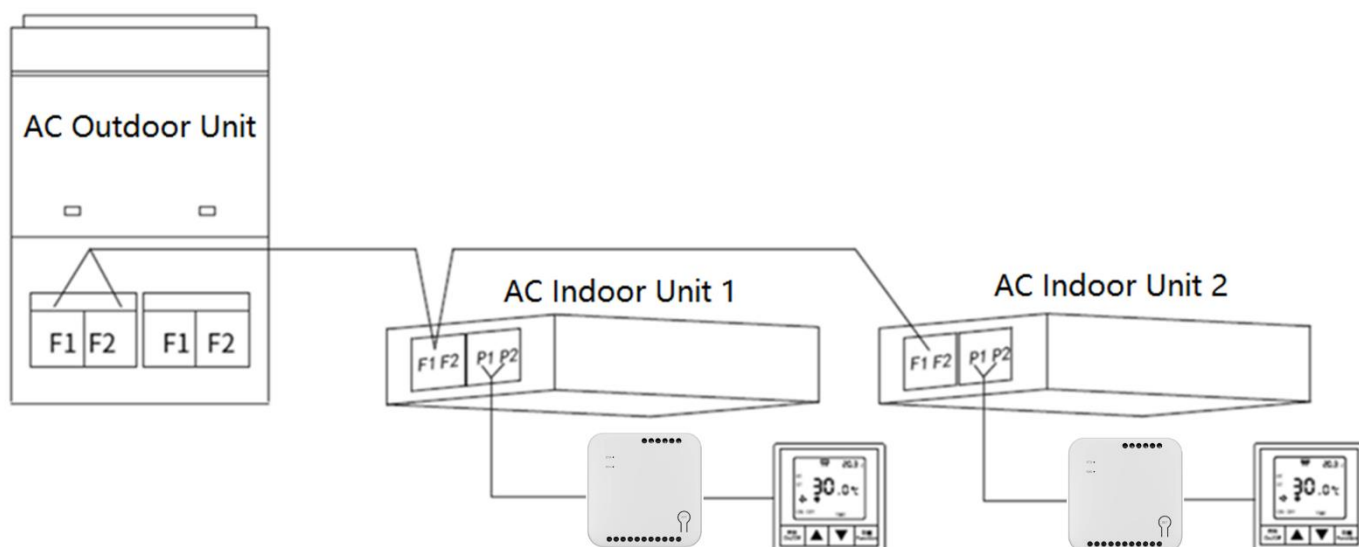
4 Product Installation and Supported Brands

4.1 Preparation before installation

- (1) Confirm all indoor and outdoor units are powered on.
- (2) Confirm that AC system has been debugged and operated successfully by the AC manufacturer without any alarm or abnormality.
- (3) Confirm that the air conditioning communication line has been connected to the corresponding port of this product.
- (4) Confirm that the third-party panel has been connected to the corresponding interface of this product (if necessary).

4.2 Installation Environment and Wiring Diagram

This product needs to be installed indoor, such as an AC indoor unit maintenance port or the smart control box.



4.3 List and Description of Supported Brands

The supported air conditioning brands and wiring are shown in the table below, and more brands are gradually supporting

Brand List (CHN A→Z)	Wiring Description		Polarity	Cable	Coexistence with original panel	Special communication line
	Gateway wiring Port	AC wiring Port				
DAIKIN MX Duct Unit (four-core)	A1, B1, D-, D+	S21	Y	4-core	N	Y
DAIKIN VRV (two-core)	P1, P2	P1, P2	N	2-core	Y	N
DAIKIN Duct Unit CN2 (five-core)	A1, B1, D-, D+	CN2	Y	4-core	N	Y
TOSHIBA VRV (two-core)	X, Y	A, B	N	2-core	Y	N
TOSHIBA Duct Unit (four-core)	A1, B1, D-, D+	CN21	Y	4-core	N	Y

FUJITSU Duct Unit (three-core)	A1 and B1 short circuit, D-, D+	CN14	Y	4-core	N	Y
GREE VRF (two-core)	P1, P2	H1, H2	N	2-core	Y	N
GREE Duct Unit (two-core)	H1, H2	COM_MANUAL 3, 2Pin	Y	2-core	Y	Y
GREE Duct Unit (four-core)	A1, B1, D-, D+	CN5 or CN6 (A, B, +12V, GND)	Y	4-core	N	Y
Guangzhou YORK VRF (four-core)	A1, B1, D-, D+	TB1 (A1, B1, 12V, 0)	Y	4-core	N	Y
Haier WIFI (four-core)	A1, B1, D-, D+	CN34/WIFI	Y	4-core	Y	Y
Haier VRF (three-core)	A, B, C	CN22 (A, B, C)	Y	3-core	Y	Y
Haier Duct Unit REMOTE (three-core)	A1 and B1 short circuit, D-, D+	CN4 REMOTE (SIG, +12V, GND)	Y	4-core	Y	Y
Haier Duct Unit (three-core)	A1 and B1 short circuit, D-, D+	CN1/CN2 CONTROLLER (C, B, A)	Y	4-core	N	Y
Hisense WIFI (four-core)	A1, B1, D-, D+	WIFI	Y	4-core	Y	Y
Hisense VRF (two-core)	P1, P2	A, B	N	2-core	Y	N
Carrier Duct Unit (four-core)	A1 and B1 short circuit, D-, D+	CN24 or CN26	Y	4-core	Y	Y
KELON WIFI (four-core)	A1, B1, D-, D+	WIFI	Y	4-core	Y	Y
Midea CN20 (five-core)	A1, B1, D-, D+	CN20 NET	Y	4-core	Y	Y
Midea CN40 (four-core)	A1, B1, D-, D+	CN40	Y	4-core	Y	Y
Midea COLMO (two-core)	A1, B1	CN24(W1, W2)	N	2-core	N	Y
Midea W1W2 (two-core)	A1, B1	CN24(W1, W2)	N	2-core	N	Y
Midea X1X2 (two-core)	A1, B1	X1, X2	N	2-core	Y	N
EK VRF (four-core)	A1, B1, D-, D+	SLM	Y	4-core	N	Y
EK Duct Unit (four-core)	A1, B1, D-, D+	Wired-X970	Y	4-core	N	Y
HITACHI VRF (two-core)	P1, P2	A, B	N	2-core	Not coexisting with the original infrared remote controller	N
HITACHI Duct Unit (four-core)	A1, B1, D-, D+	CN2	Y	4-core	N	Y
HITACHI Duct Unit (two-core)	P1, P2	A, B	N	2-core	Not coexisting with the original infrared remote controller	N
Mitsubishi Electric VRF (four-core)	A1, B1, D-, D+	CN105	Y	4-core	Y	Y
Mitsubishi Heavy VRF	P1, P2	CNB outer 2 pins	N	2-core	Y	Y

(two-core)						
Mitsubishi Heavy VRF (three-core)	A1 and B1 short circuit, D-, D+	CNB	Y	4-core	Y	Y
Panasonic wall-mounted HK (five core)	A1, B1, D- (XY connect to 5V power supply)	CN-CNT	Y	4-core	Y	Y
Panasonic VRF (two-core)	X, Y	A, B	N	2-core	Y	N
Panasonic Duct Unit (four-core)	A1, B1, D-, D+	CN-GMD	Y	4-core	N	Y
YORK VRF (two-core)	P1, P2	A, B	N	2-core	Y	N
YORK Duct Unit (four-core)	A1, B1, D-, D+	Wired-X970	Y	4-core	N	Y

Attentions for wiring operation:

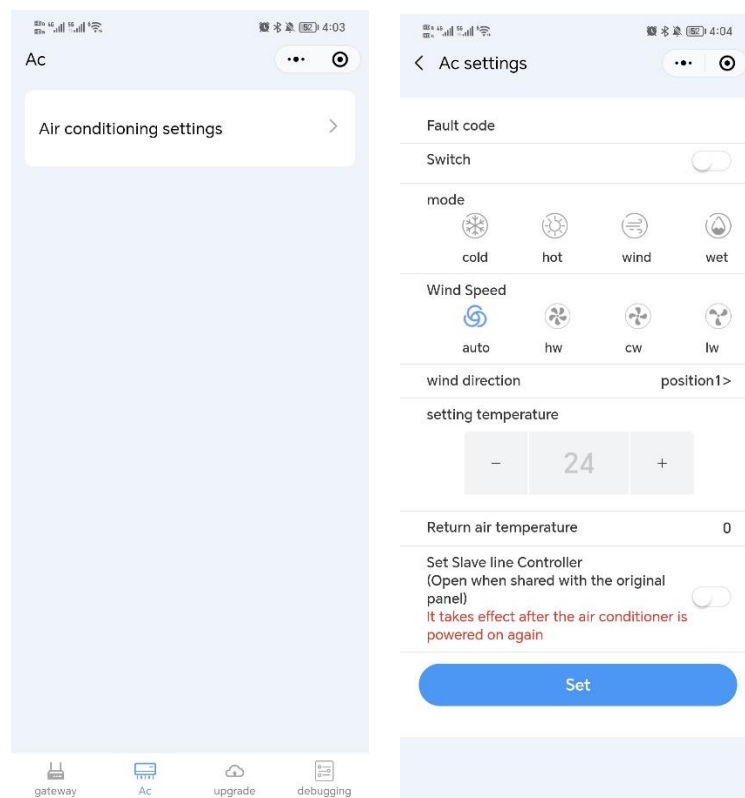
1. The polarity of different air conditioning communication interfaces may vary. If the polarity of the cable wiring is incorrect, the air conditioning equipment may not be found. At this time, it is necessary to change the cable sequence.
2. If the wiring is wrong, the product may be damaged.
3. It is necessary to cut off power supply of gateway and air conditioner during wiring operation, otherwise may cause damage.
4. Please pay attention to avoid parallel wiring between signal lines and power line, otherwise misoperation may occur due to mutual interference of signals.
5. If parallel wiring cannot be avoided, please keep the distance between the communication line related to gateway product and the communication line of AC system is at least 15cm, and other wiring distances at least 30cm. Or connect the cable into the iron protective tube and ground one end of the protective tube.
6. If the power line is connected to the signal terminal by misoperation, the fuse will be burned. If this happens, please contact the manufacturer. It is strictly prohibited to disassemble and repair without permission.

4 Firmware Upgrade and Control Testing

(1) Turn on the Bluetooth of your mobile phone, use WeChat to scan below figure and enter the mini program. Select the gateway device to be connected.



(2) In the following interface, you can select "Air Conditioning Settings" to achieve air conditioning control testing.



(3) Firmware upgrade: In the Upgrade interface, select needed integrator, air conditioning brand and panel type for firmware upgrade.

