

SAMSUNG

ASSY Wi-Fi Kit 2.0

Model Name : MIM-H04EN
MIM-H04RN
MIM-H04N
MIM-H04UN
MIM-H04NDZ
MIM-H04AN
MIM-H04CN
MIM-H05UN

SERVICE *Manual*

ASSY Wi-Fi Kit 2.0



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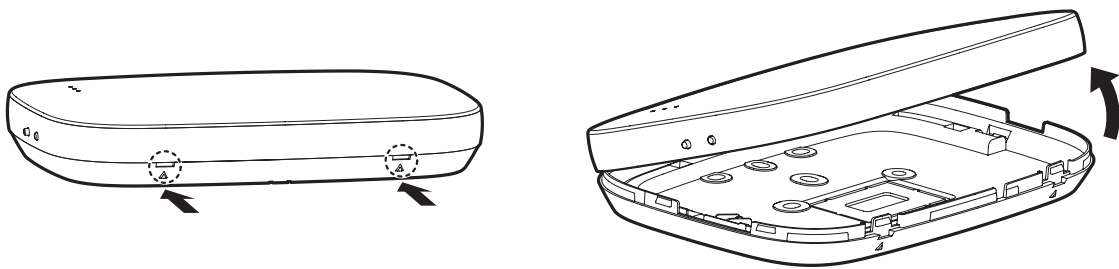
1. Wi-Fi Kit 2.0 Installation

1-1 Wi-Fi Kit installation



- To ensure smooth operation, there should be no obstacle between the Wi-Fi Kit and wireless router that may interfere with communication. When the Wi-Fi Kit is too far from a router or there are potentially interfering elements between them, it may cause problems with the performance of the Wi-Fi Kit that cannot be resolved by customer services.
- Place the Wi-Fi Kit in an area where you can easily press the AP button for device verification.
- Do not install the Wi-Fi Kit in an area where it may be exposed to moisture or impact.
- Operating temperature: 0 ~ 40 °C (32 ~ 104 °F), Operating humidity: 30-90 % (relative)

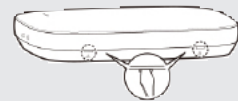
1. Use a flathead screwdriver to turn each of the square holes at the lower part of the Wi-Fi Kit and remove the back cover.



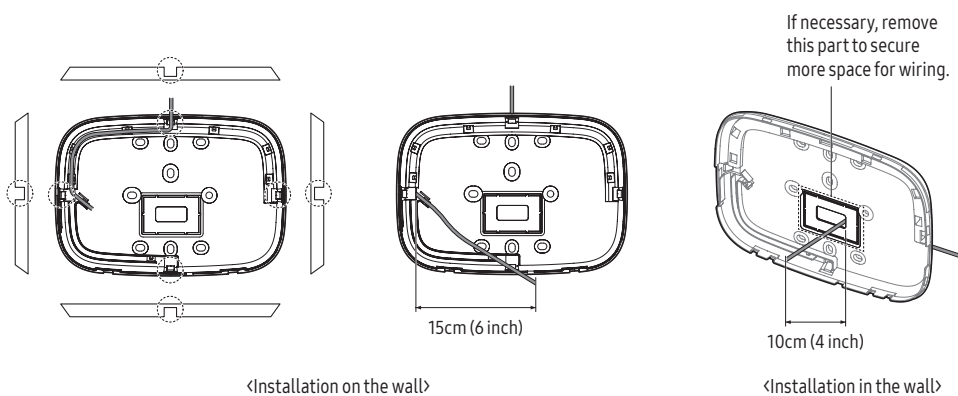
※ Push both latches at the same time.



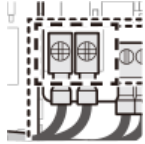
- Use a flathead screwdriver to turn the square hole at the upper part of the fixing hook for easy removal.



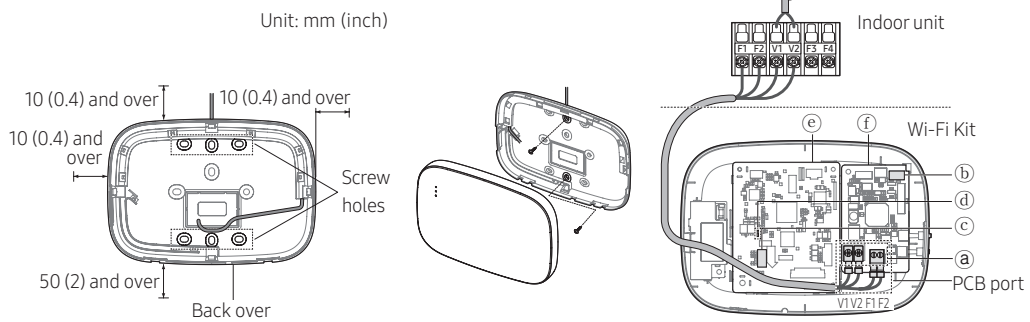
2. Arrange the power and communication cables along the back cover.



3. Use two or more screws to fix the back cover to the wall. Connect the power cables (V1, V2) and communication cables (F1, F2) to the terminals on the back of the front cover with adjusting to a suitable length.
4. When connecting the power cables to V1 and V2, fasten the PCB terminal screws (CN5) to a torque of 6 N·cm or less.
Screw size: M3 x 6



NOTE • You can connect up to 16 indoor units to a Wi-Fi Kit.



※ Be sure to secure space of at least 10 (0.4 inch) mm (up/right/left) and 50 (2 inch) mm (down) around the back cover before fixing the back cover on the wall.

※ Fix the screws to the screw holes.

※ Do not over-tighten the PCB terminal.

Item	Contents	Item	Contents
Ⓐ	Power/communication terminals	Ⓓ	LED
Ⓑ	Tracking/Reset button	Ⓔ	Network PBA
Ⓒ	Micro SD card slot	Ⓕ	Interface module PBA

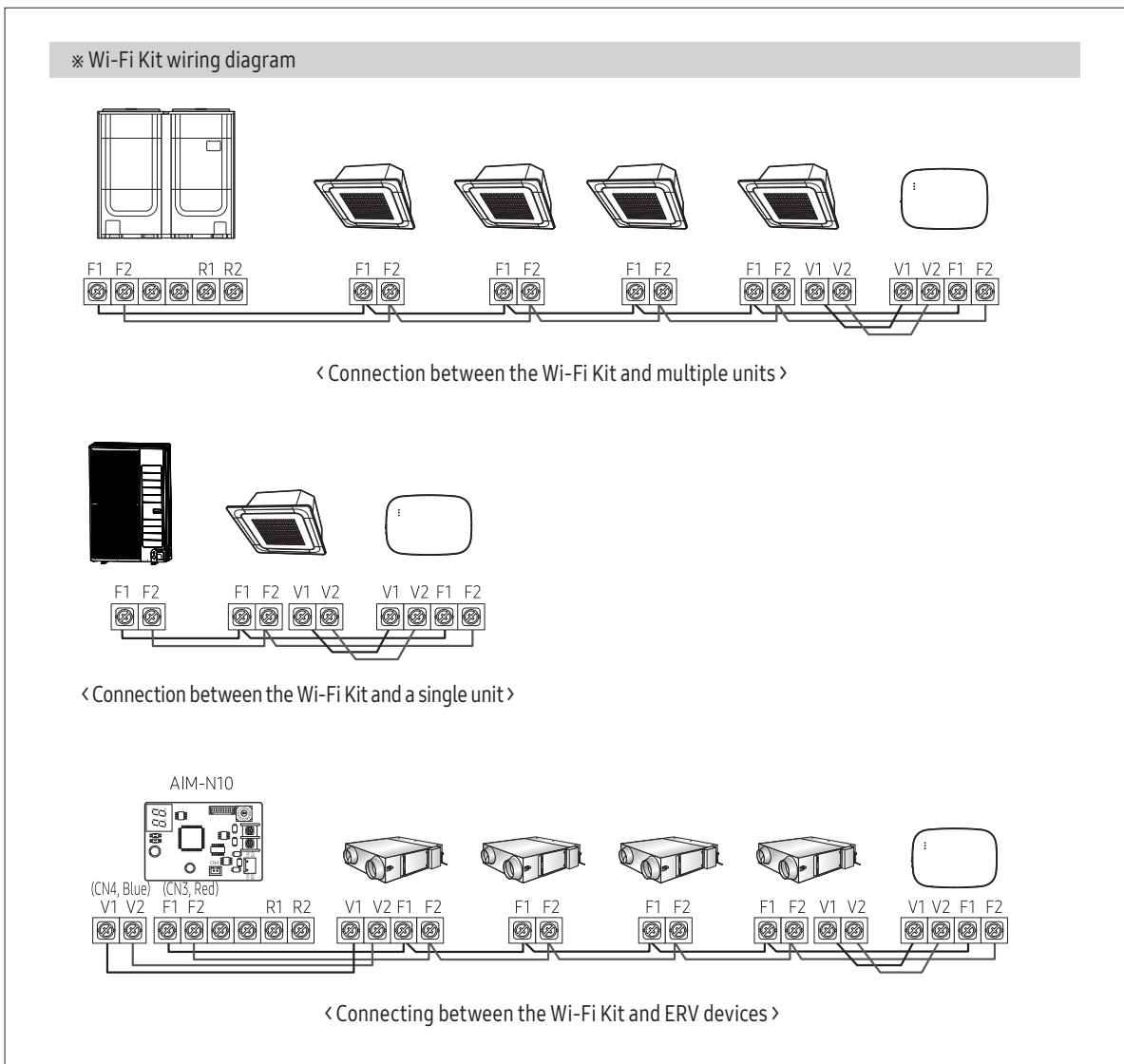
5. Assemble the Wi-Fi Kit again.



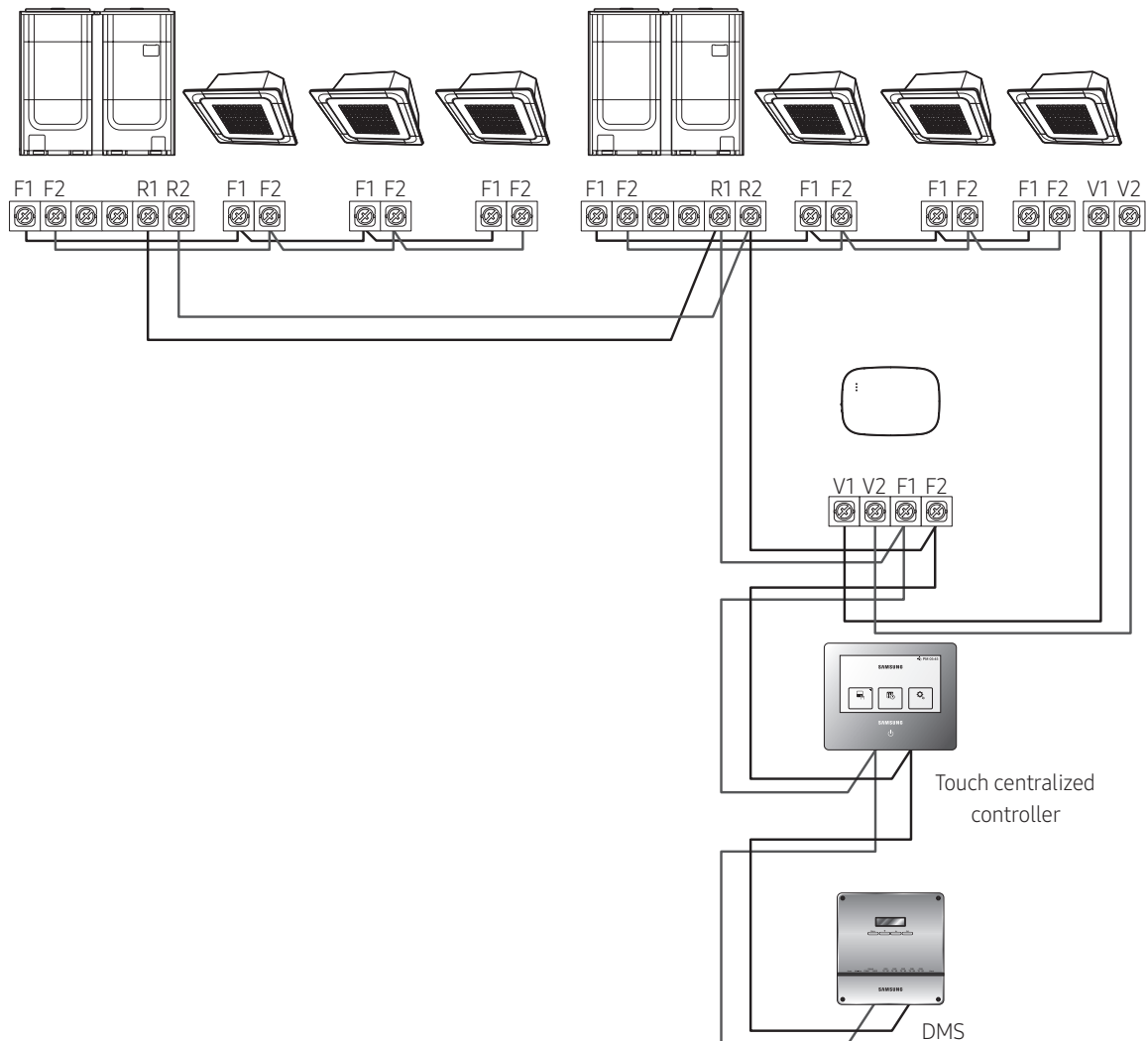
- Insert the front cover to the upper grooves as shown in the figure. After assembly, make sure that there is no gap between the covers.



1) Connecting to a single outdoor unit (F1-F2)



2) Connecting to multiple outdoor units (R1-R2)

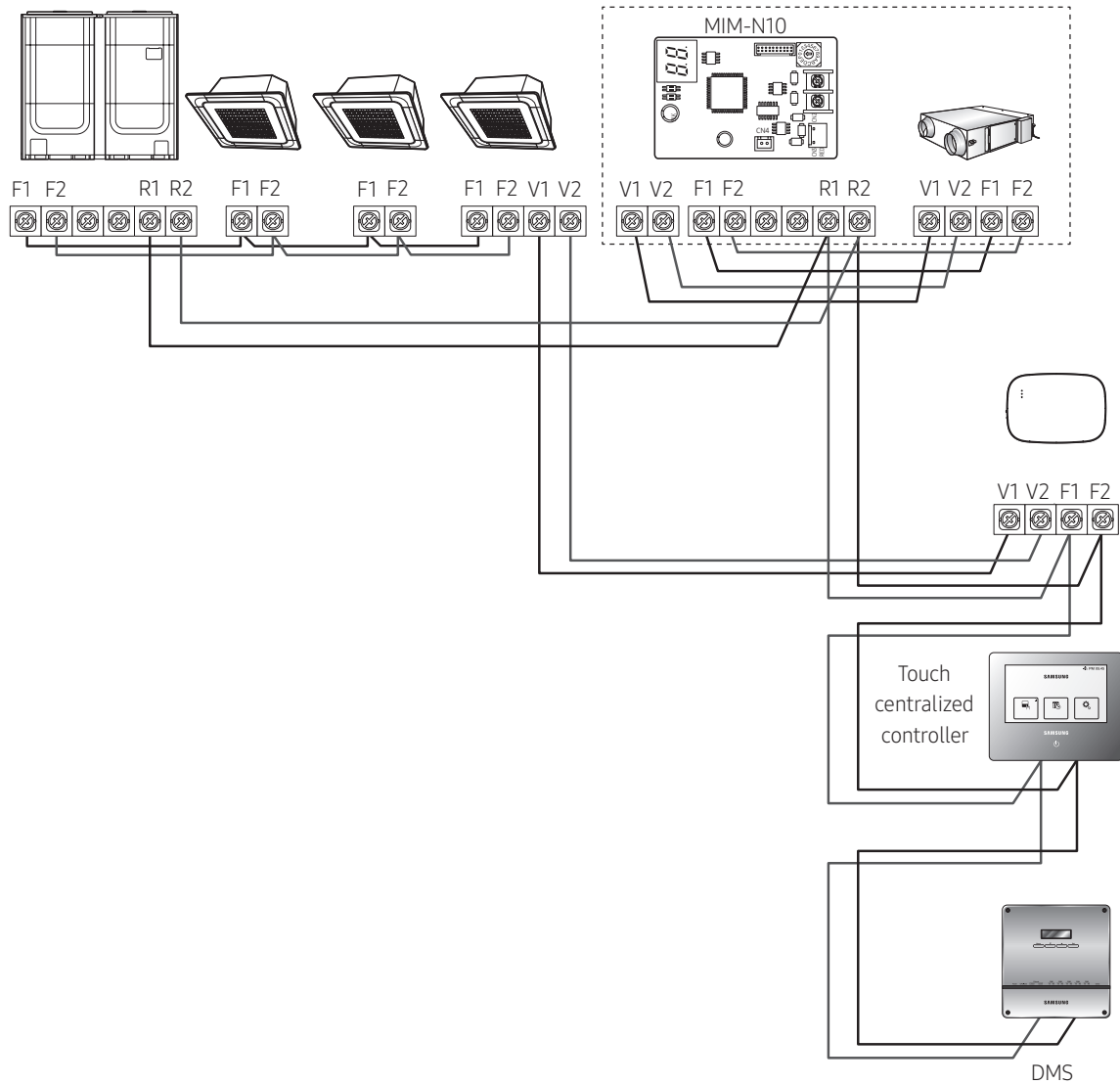


- Connect R1 and R2 on the outdoor unit to F1 and F2 of the Wi-Fi Kit.
- Connect the power cables to V1 and V2 of the indoor unit.
- Other controllers (e.g. touch centralized controller, DMS) can be installed together.



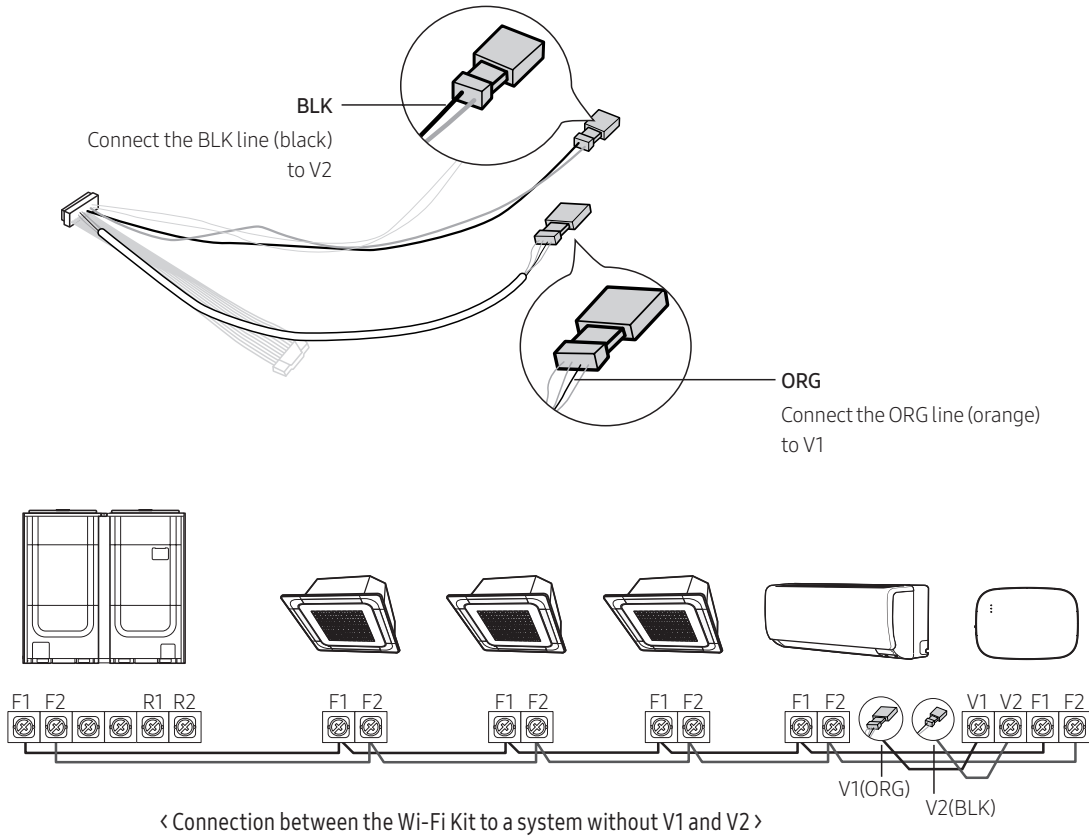
- You can connect up to 16 indoor and outdoor units

3) Connecting the Wi-Fi Kit and the ERV together (R1-R2)

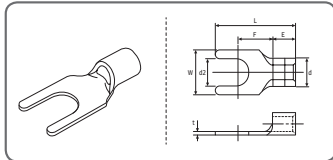


- Connect R1 and R2 on the outdoor unit to F1 and F2 of the Wi-Fi Kit.
- Connect the power cable to V1 and V2 of the indoor unit or ERV.
- Other controllers (e.g. touch centralized controller, DMS) can be installed together.

※ For indoor units with no V1 and V2, use the external control line 2 for SUB PBA (inside the indoor unit) for power supply.



- When installing the Wi-Fi Kit on a wall, use proper electrical cables considering the size of the wiring hole on the wall.
- Upon wiring, use the provided U-type terminals (#16-22). When there are no terminals provided or #24 is used, you can use any U-type terminals that meet the specifications.
- Wi-Fi Kit communication and power cables
 - When installing the Wi-Fi Kit in a wall, follow the wiring specifications for the U-type terminal.
 - When installing the Wi-Fi Kit with a 4-wire PVC cable, first peel off the PVC edge (approx. 30 cm (11.8 inch)). (AWG22 recommended)
- U-type terminal specifications for the Wi-Fi Kit PCB



Cable range		Rated size	Stud size	Default size [mm (inch)]					
AWG	mm ² (inch ²)	mm ² (inch ²)	mm (inch)	t	d	E	F	W	L
24 - 16	0.25 - 1.65 (0.0003 - 0.0025)	1.5 (0.0023)	3 - 3.2 (0.1181 - 0.1259)	0.6 - 0.8 (0.0236 - 0.0314)	12 - 25 (0.472 - 0.984)	4 - 6 (0.1574 - 0.2362)	5 - 9 (0.1968 - 0.3543)	5 - 7 (0.1968 - 0.2755)	12 - 21.2 (0.4724 - 0.8346)

Max. length for communication/power cables: 50 m (164 ft)


- Fasten the PCB terminal with fixing screws to a torque of 6 N•cm or less. When you fasten the screw to a torque over 6 N•cm, it may cause damage to the screw thread.

6. Activate the Wi-Fi Kit.

- When power is supplied, all indicators on the Wi-Fi Kit illuminate until the system boots completely.
- After the system operates, tracking is performed automatically.

7. Tracking

※ Tracking: Detects indoor units that are connected to the Wi-Fi Kit. The indoor unit detects the connection to the Wi-Fi Kit. Tracking is required to monitor or control the system air conditioner by using the Wi-Fi Kit.

- The Wi-Fi Kit automatically performs tracking when activated. The (⏻) (📶) indicators on the Wi-Fi Kit blink while in tracking.
- When no indoor unit is detected by tracking, the (⏻) indicator blinks for 10 seconds and the Wi-Fi Kit attempts the tracking again. In this case, make sure that the communication cables between the indoor and outdoor units are connected properly.
- When there happens any change in the installation of indoor and outdoor units, manually run the tracking by pressing the (SW3, ) button inside the Wi-Fi Kit.

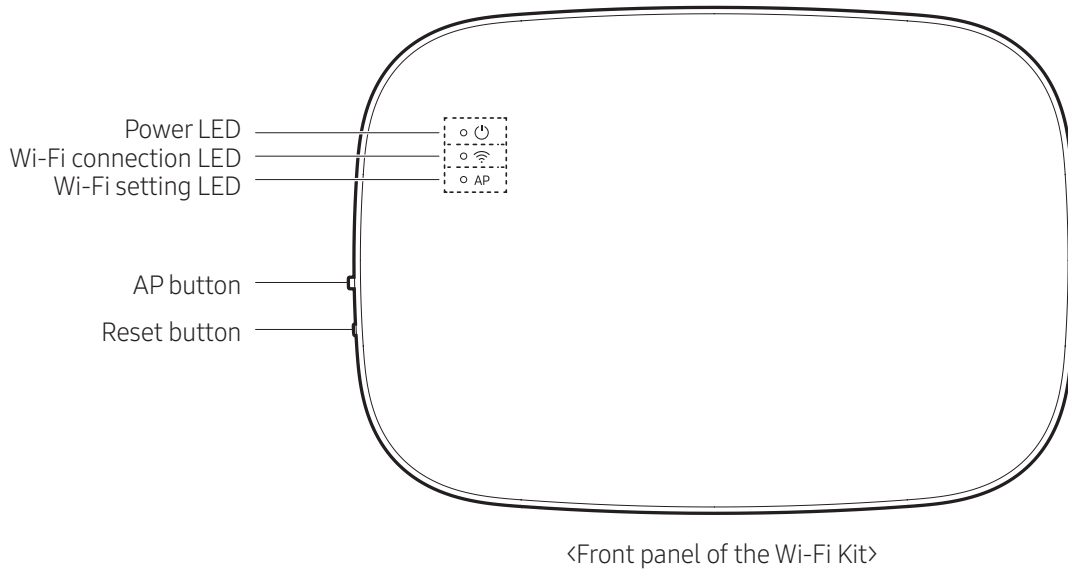


- When the tracking is completed but all the connected indoor units have the central control option disabled, the (📶) indicator illuminates for 10 seconds and the (⏻) indicator blinks. Then the Wi-Fi Kit attempts the tracking again. In this case, check and change the the central control option for indoor units. When the central control option is disabled, you cannot control indoor units via the Wi-Fi Kit.



- To control indoor units by using a mobile phone, wait until the tracking is completed and then connect the Wi-Fi Kit to a wireless router.
- The (⏻) indicator does not turn off until the Wi-Fi Kit is connected to a wireless router after tracking.

■ Checking the Wi-Fi Kit



Items on the LED display

Item	LED indication	Power supply	Wi-Fi connection	Wi-Fi setting
1	Initialized	On	On	On
2	General	On	On	Off
3	AP connected, Internet connection incomplete	On	Blinking	Off
4	Tracking completed, AP connection incomplete	On	Off	Off
5	Wi-Fi modem malfunctioning	Blinking	Blinking	Blinking
6	Searching AP (AP mode)	On	Off	On
7	Tracking units	Blinking	Blinking	Off
8	No unit tracked	Blinking	Off	Off
9	Inspection of the network PBA required	On	Blinking	Blinking
10	User authentication required (AP mode)	On	Off	Blinking
11	Downloading	Off	On	Off
12	Rescue mode	Blinking	On	Blinking

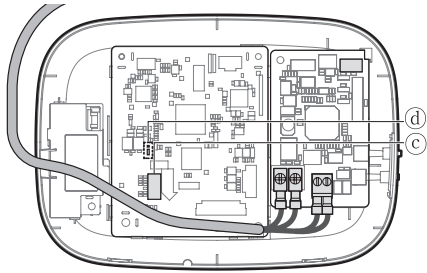
*If you see “Rescue mode” LED when you service :

- Please press “AP” button for 5 seconds. Then, Wi-Fi Kit will be do “Factory Reset”
- After “Factory Reset”, please guide user to do add device through smartthings app again.

■ Initializing the user data

- To initialize the user data on a Wi-Fi Kit, press the (SW3) button inside the Wi-Fi Kit for 5 seconds. All the indicators illuminate and the user data is deleted.

■ Updating with the Micro SD card



Type	Capacity	File system
Micro SD	Max 4GB	FAT16
Micro SDHC	Max 32GB	FAT32

1. Create a folder named "update" in the Micro SD card. Copy the latest software image and paste it into the folder created in the Micro SD card.






• Be sure to format the Micro SD card using FAT16 or FAT32 before creating the "update" folder.

2. Insert the Micro SD card into the slot of the Wi-Fi Kit.
3. Press the [Reset] button on the side of the Wi-Fi Kit.
4. The indicator (ⓐ) on the Wi-Fi Kit blinks every 2 seconds during update.
 - Once the update has been successful, the indicator promptly turns on and then turns off longer. (On: 0.2 second, Off: 2 seconds)
 - The indicator blinks every 0.2 second when the update is completed abnormally.
5. When the update is completed normally, remove the Micro SD card and then press the [Reset] button.
6. Restarting the Wi-Fi Kit after an update failure will restore the software to the previous version. When the update failure persists, follow the instructions below:
 - File checking: Change the update image (file).
 - Micro SD card checking: Replace the Micro SD card.
 - PBA checking: Replace the network PBA.

2. Troubleshooting


2-1 Summary

Check the following before requesting a service from the Service Centre.

Symptom		Measure
The installed SmartThings app cannot access the air conditioner.		<ul style="list-style-type: none"> Make sure you have connected the air conditioner to a wireless router.
I cannot log in with my Samsung account.		<ul style="list-style-type: none"> Try recovering your ID and password from the Samsung account page.
Adding device(s)	A failure message appears while adding devices..	<ul style="list-style-type: none"> This may fail temporarily due to the distance from the router or some interferences. Try again later.
	I found a failure message in 0 to 1 percent of device addition process.	<ul style="list-style-type: none"> You can add device units only in AP search state. Check that both the power LED and Wi-Fi setup LED are turned on. Otherwise, press and hold the AP button for over 5 seconds to activate the AP search. You cannot add any device without deleting it once the device has already been added to the SmartThings app. To add the connected device again, first remove it and then proceed with the process.
	I found a failure message in 99 percent of device addition process.	<ul style="list-style-type: none"> If you are using a Samsung smartphone, the server may not be connected temporarily. Turn off and on the power of the Wi-Fi Kit, launch the SmartThings app again, and then try adding a device again. If your phone is not a Samsung product, check that you have entered a wrong Wi-Fi password. Try adding devices again.
	The app displays an authorization failure before pressing the user agreement button.	<ul style="list-style-type: none"> Check whether there are any Wi-Fi Kits already added to the SmartThings app. When there are devices added, first remove them and try again.
	The app displays an authorization failure on the user agreement screen.	<ul style="list-style-type: none"> You must press the AP button within 1 minute. Try adding devices again.
	The screen requests to initialize the user account.	<ul style="list-style-type: none"> This happens when the user has already added devices. Follow the instructions provided in the SmartThings app.
The power LED and Wi-Fi connection LED are blinking.		<ul style="list-style-type: none"> The communication between the Wi-Fi Kit and indoor/outdoor units is unstable. Check the communication cables for indoor and outdoor units or check the central control option for indoor units.
After adding a device, the SmartThings app displays the disconnection event.		<ul style="list-style-type: none"> This happens when a device is being added to the server or it is temporarily disconnected from the router. End the SmartThings app and then launch it again.
The controls of the SmartThings app do not operate.	Are all three LED indicators on the Wi-Fi Kit turned on?	<ul style="list-style-type: none"> Reset the Wi-Fi Kit and then check it again.
	Does only  appear on the display of the Wi-Fi Kit?.	<ul style="list-style-type: none"> Make sure you have entered the correct Wi-Fi password when adding a device. Check the router status.
	Is the  indicator blinking?	<ul style="list-style-type: none"> Check that the wireless router is connected to the Internet.
	Are all LED indicators on the Wi-Fi Kit blinking?	<ul style="list-style-type: none"> This indicates a Wi-Fi Kit malfunction. Contact the Samsung service centre.
	Is the  indicator blinking?	<ul style="list-style-type: none"> The Wi-Fi Kit is not connected to the indoor unit(s) normally. Contact the Samsung service centre.

Symptom	Measure
The SmartThings app displays the error number, 628.	<ul style="list-style-type: none"> · This indicates a communication error between the indoor unit(s) and Wi-Fi Kit. Check the connection of the communication cables (F1, F2).
I have a multi-unit HVAC system, but I can only see either cooling or heating option on the indoor unit.	<ul style="list-style-type: none"> · To avoid mixed control, the indoor unit options are automatically restricted to the outdoor unit's settings. ※ Mixed control: Different modes are available for each indoor unit. <ol style="list-style-type: none"> 1. To select a mode other than the current operation mode, turn off the indoor unit to display all operation modes to select. 2. When there is a master indoor unit, change the operation mode of the master unit.
The LED indicator remains in its initial state. (The LED state changes within 1 minute.)	<ol style="list-style-type: none"> 1. Check the connection cable between the network PBA and the Interface module PBA. 2. Even though the connection has no problem but a problem persists, replace the Wi-Fi Kit.

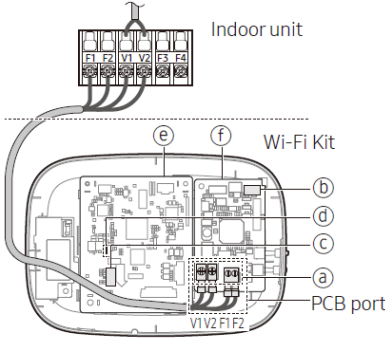
2-2 Network Environment

ISSUE	When it is initial set up(Easy Set up) in smarthings app, Wi-Fi is disconnected often.				
WORK DETAILS	<table border="1" data-bbox="448 405 1369 835"> <thead> <tr> <th data-bbox="448 405 844 454">Cause</th> <th data-bbox="844 405 1369 454">Improvement Measure</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 454 844 835"> <ul style="list-style-type: none"> - Wi-Fi Kit 2.0 is not established due to Wi-Fi communication problems among an air conditioner, a router and a smart phone as there are many routers around that cause frequency interference. - More the duplication of the Wi-Fi channels between the router to be installed and the ones around, more the possibility of the occurrence of communication problems. </td> <td data-bbox="844 454 1369 835"> <ul style="list-style-type: none"> - Start Wi-Fi Analyzer, see if there is a frequency interference by comparing the channels with the routers around and set the channel as the most far-separated one </td> </tr> </tbody> </table>	Cause	Improvement Measure	<ul style="list-style-type: none"> - Wi-Fi Kit 2.0 is not established due to Wi-Fi communication problems among an air conditioner, a router and a smart phone as there are many routers around that cause frequency interference. - More the duplication of the Wi-Fi channels between the router to be installed and the ones around, more the possibility of the occurrence of communication problems. 	<ul style="list-style-type: none"> - Start Wi-Fi Analyzer, see if there is a frequency interference by comparing the channels with the routers around and set the channel as the most far-separated one
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OTHERS	<p data-bbox="424 902 762 931">[Check the frequency of channels]</p> <p data-bbox="424 949 970 978">Start Wi-Fi Analyzer app. (Downloaded from app store)</p> <div data-bbox="691 999 1145 1288" style="text-align: center;">  </div>				


2-3 Wi-Fi Kit 2.0 function

ISSUE	Network Error				
WORK DETAILS	Cause		Improvement Measure		
	- AP Connection OK. But, Internet is not Connected (LED Status 3)		- Check whether the router is correctly connected the Internet.		
	- Air conditioner searching OK. but AP connection is not completed. (LED Status 4)		- Check whether the Wi-Fi Kit 2.0 is correctly connected to a wireless router.		
	- Wi-Fi Modem is in Malfunction (LED Status 5)		- Check whether the Wi-Fi Kit 2.0's Wi-Fi Module is correctly connected to a main board. Replace the PCB if the problem is still same, even though connection is exactly correct.		
OTHERS	Item	LED indication	Power supply	Wi-Fi connection	Wi-Fi setting
	1	Initialized	On	On	On
	2	General	On	On	Off
	3	AP connected, Internet connection incomplete	On	Blinking	Off
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	7	Tracking units	Blinking	Blinking	Off
	8	No unit tracked	Blinking	Off	Off
	9	Inspection of the network PBA required	On	Blinking	Blinking
	10	User authentication required (AP mode)	On	Off	Blinking
	11	Downloading	Off	On	Off
	12	Rescue mode	Blinking	On	Blinking

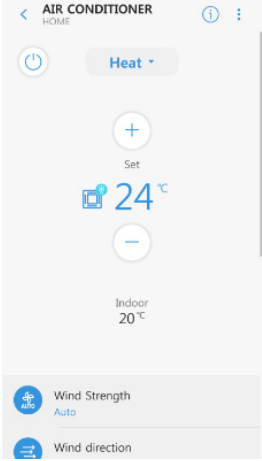
2-3 Wi-Fi Kit 2.0 function

ISSUE	Network Error															
WORK DETAILS	Cause	Improvement Measure														
	- No Air Conditioner Information	- Check whether the Communication cable is correctly connected to a F1/F2 line. This F1/F2 line supports the non-polar.														
- Indoor installation information is different from the actual installation	- Press the tracking button for one second to perform the tracking again.															
OTHERS																
	<table border="1"> <thead> <tr> <th>Item</th> <th>Contents</th> <th>Item</th> <th>Contents</th> </tr> </thead> <tbody> <tr> <td>(A)</td> <td>Power/communication terminals</td> <td>(D)</td> <td>LED</td> </tr> <tr> <td>(B)</td> <td>Tracking/Reset button</td> <td>(E)</td> <td>Network PBA</td> </tr> <tr> <td>(C)</td> <td>Micro SD card slot</td> <td>(F)</td> <td>Interface module PBA</td> </tr> </tbody> </table>	Item	Contents	Item	Contents	(A)	Power/communication terminals	(D)	LED	(B)	Tracking/Reset button	(E)	Network PBA	(C)	Micro SD card slot	(F)
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(B)	Tracking/Reset button	(E)	Network PBA													
(C)	Micro SD card slot	(F)	Interface module PBA													

2-3 Wi-Fi Kit 2.0 function

ISSUE	The Connection between System AC and Wi-Fi Failed. Please try again.					
WORK DETAILS	<table border="1"> <thead> <tr> <th data-bbox="440 405 919 456">Cause</th> <th data-bbox="919 405 1398 456">Improvement Measure</th> </tr> </thead> <tbody> <tr> <td data-bbox="440 456 919 607"> <ul style="list-style-type: none"> - When communication is not connecting between Wi-Fi Kit 2.0 and Router. - When router does not support SSDP Protocol. </td> <td data-bbox="919 456 1398 607"> <ol style="list-style-type: none"> 1. Install the Wi-Fi Kit 2.0 in a place close to the router. 2. Update the firmware of router with the latest version. </td> </tr> </tbody> </table>	Cause	Improvement Measure	<ul style="list-style-type: none"> - When communication is not connecting between Wi-Fi Kit 2.0 and Router. - When router does not support SSDP Protocol. 	<ol style="list-style-type: none"> 1. Install the Wi-Fi Kit 2.0 in a place close to the router. 2. Update the firmware of router with the latest version. 	
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OTHERS	<p>[Check the frequency of channels]</p> <p>Start Wi-Fi Analyzer app. (Downloaded from app store)</p> <div style="text-align: center;">  </div>					

2-3 Wi-Fi Kit 2.0 function

ISSUE	The indoor unit mode of multi product model that supports heating/cooling is displayed only one between heating and cooling.				
WORK DETAILS	<table border="1"> <thead> <tr> <th data-bbox="443 436 919 488">Cause</th> <th data-bbox="919 436 1394 488">Improvement Measure</th> </tr> </thead> <tbody> <tr> <td data-bbox="443 488 919 763">- HP model is displayed automatically restrictively to be able to select only the operating mode on outdoor unit, in order to prevent the mixed control (phenomenon that error occurs because cooling/heating mode is designated differently in each of the indoor units).</td> <td data-bbox="919 488 1394 763"> <ol style="list-style-type: none"> 1. If you turn off the other indoor unit when you want to select the current working operation mode and the other operation mode, all operable modes are displayed. 2. If the master indoor unit is set up, change the operating mode of master indoor unit. </td> </tr> </tbody> </table>	Cause	Improvement Measure	- HP model is displayed automatically restrictively to be able to select only the operating mode on outdoor unit, in order to prevent the mixed control (phenomenon that error occurs because cooling/heating mode is designated differently in each of the indoor units).	<ol style="list-style-type: none"> 1. If you turn off the other indoor unit when you want to select the current working operation mode and the other operation mode, all operable modes are displayed. 2. If the master indoor unit is set up, change the operating mode of master indoor unit.
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OTHERS					



GSPN (GLOBAL SERVICE PARTNER NETWORK)

Area	Web Site
Europe, CIS, Mideast & Africa	gspn1.samsungcpotal.com
Asia	gspn2.samsungcpotal.com
North & Latin America	gspn3.samsungcpotal.com
China	china.samsungcpotal.com

K-Zone	http://20.8.111.9
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