

SAMSUNG

Touch Centralized Controller 2.0

Model Code : MCM-A300BN
MCM-A300BUN
MCM-A300BCN
MCM-A300BNDZ

SERVICE Manual

Touch Centralized Controller 2.0



INDEX

1. Precaution
2. Feature & Specifications
3. Disassembly & assembly
4. Troubleshooting
5. Parts layout

INDEX

1. Precautions	1-1
1-1. Service Precautions.....	1-1
1-2. Product Safety Precautions	1-1
2. Feature & Specifications	2-1
2-1. Feature.....	2-1
2-1-1. Feature.....	2-1
2-1-2. Changes compared to basic products.....	2-9
2-2. Structure of product	2-10
2-3. Product Specification	2-11
2-3-1. Specification & Environment	2-11
2-3-2. Functions overview.....	2-12
2-4. Installation.....	2-18
2-4-1. System Diagram	2-18
2-4-2. Installing the Touch Centralized Controller.....	2-19
3. Disassembly & assembly	3-1
4. Troubleshooting	4-1
4-1. Check point before requesting a service	4-1
4-2. Error Diagnosis.....	4-2
4-2-1. When LCD is not turned on	4-2
4-2-2. When Touch is not input.....	4-3
4-2-3. When tracking is not complete	4-4
4-2-4. When there is no communication	4-5
4-2-5. Initialize password	4-5
5. Parts layout.....	5-1
5-1. Parts layout.....	5-1
5-2. PBA Parts	5-2

1. Precautions

1-1. Service Precautions

- When replacing electrical parts, be sure to use the rated parts.
 - Check the display of the model name, rated voltage, rated current, etc. of the electrical parts.
- When repairing the fault, please repair the connection of HARNESS type firmly.
 - If the wiring is not good, abnormal noise or abnormal operation may occur.
- If the product is disassembled and assembled while lying down, work on the operation beam.
 - Scratches may occur on the back of the product.
- When repairing a fault, remove dust and foreign matter from the HOUSING, wiring and inspection parts.
 - It is possible to prevent fire hazard such as TRACKING, SHORT.
- Check the assembly of the parts after the fault has been repaired.
 - It must be in the same state as before repair.

1-2. Product Safety Precautions

- Do not pull on the wire or touch the power plug or the auxiliary power switch with wet hands.
 - Risk of electric shock or fire.
- If the power cord or power plug is damaged, be sure to replace it to prevent danger.
- Do not bend the wires excessively or do not break them with heavy objects.
 - Risk of electric shock or fire.
- Do not use multi-outlet.
 - Risk of electric shock or fire.
- Ground if necessary.
 - In particular, be sure to ground if water or humidity indicates that there is a risk of a short circuit.
- When replacing or repairing electrical parts, unplug the power plug or turn off the auxiliary power switch.
 - There is a danger of electric shock.

2. Feature & Specifications

2-1. Feature

2-1-1. Feature

① Large Display

10.1" Large Display with Simple Design



② Select Background Image

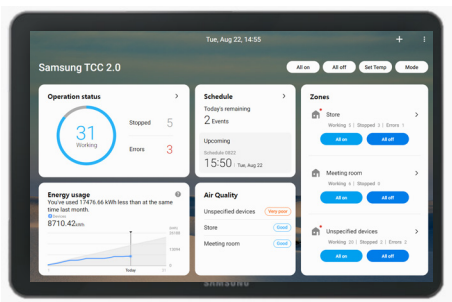
Harmonized product with the Field



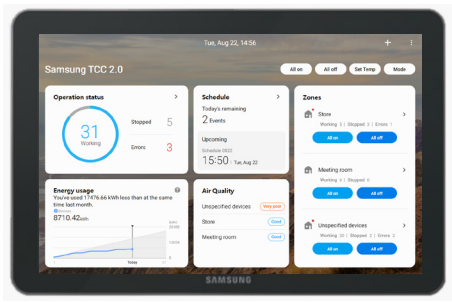
※ Cover screen (Include)



※ Cover screen (Customize)



※ Home screen (Include)



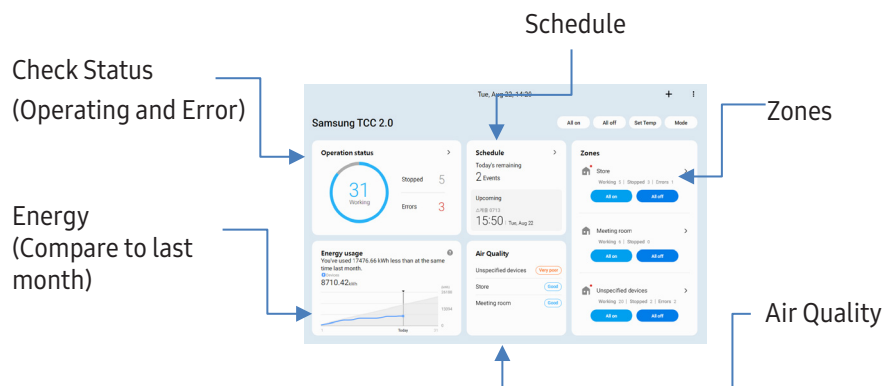
※ Home screen (Customize)

③ Convenient usability

Providing familiar usability by applying SmartThings UI Style

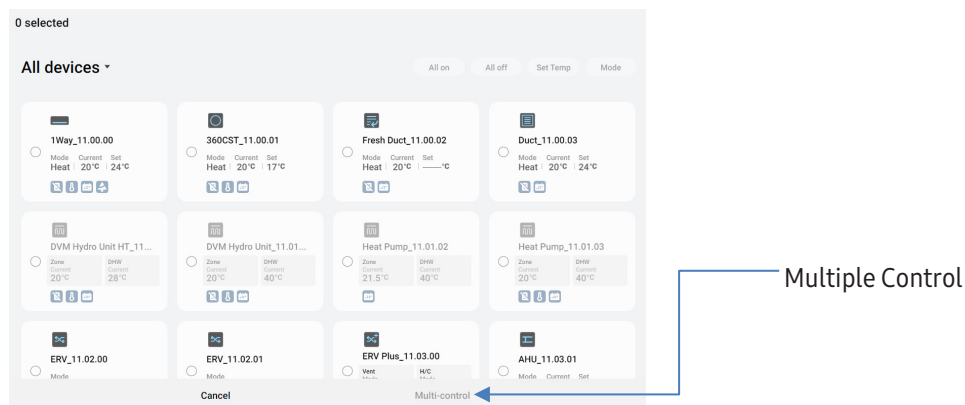
1. Simple control and setting

- Check zone & device status on the home screen
- Efficient management by providing graphs data such as status and air quality



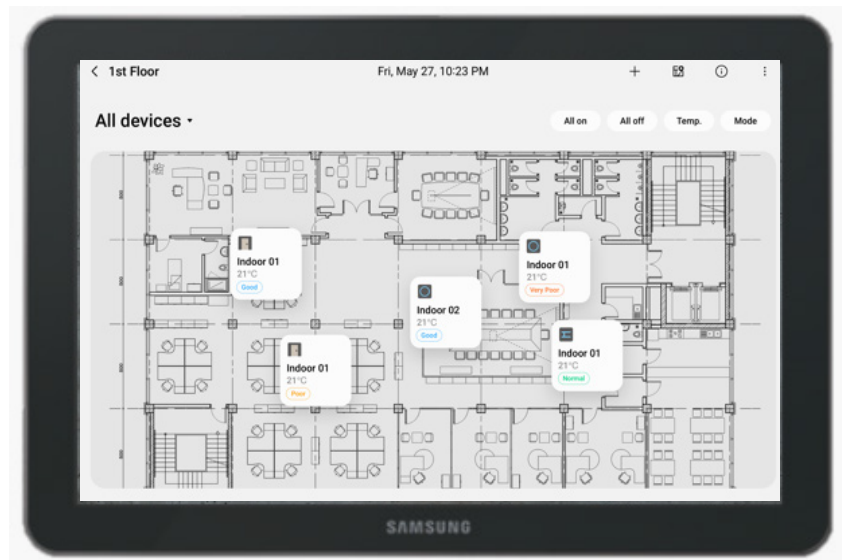
2. Control based zone

- Zone setting considering floor, use, usage time, etc.
- Multiple devices in the zone can be managed at once



④ 2D Layout view

Intuitively control the indoor unit operation status on the screen where the drawings are displayed.

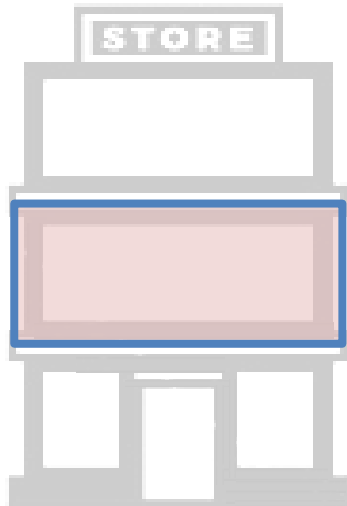


1. Provide intuitive indoor unit navigation with 2D layout view
2. The indoor unit type is displayed as an icon
3. It is possible to check the operation status (on/off), temperature, and air quality status
4. You can upload drawing image files using Micro SD card

※ 2D Layout view (To be updated)

⑤ Remote Control (In-site)

Improve control accessibility by using various devices (In-sites)

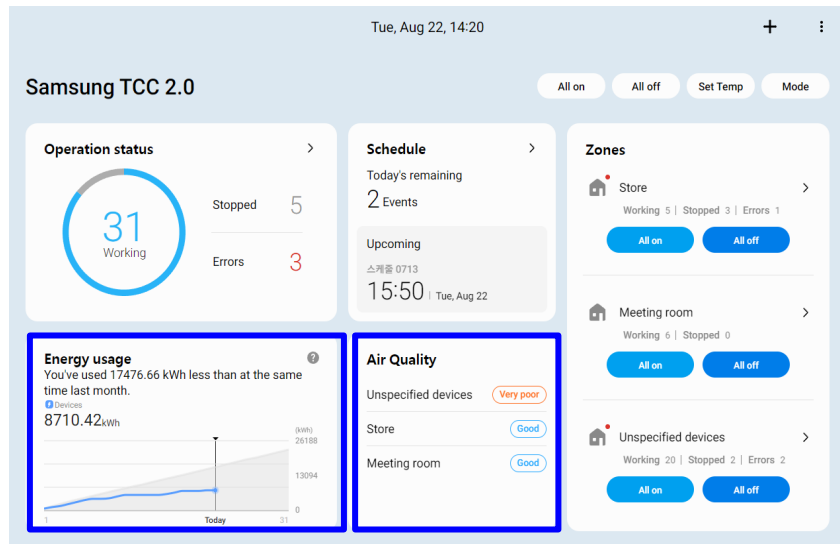


1. Remote control within a site using Ethernet communication
2. Conditions for using other devices
 - PC and Tablet environment with 10-inch display or higher (1280 * 800 resolution or higher)
 - Use Chrome Web browser

※ Remote Control (To be updated)

⑥ Monitoring

Monitoring energy usage and air quality data

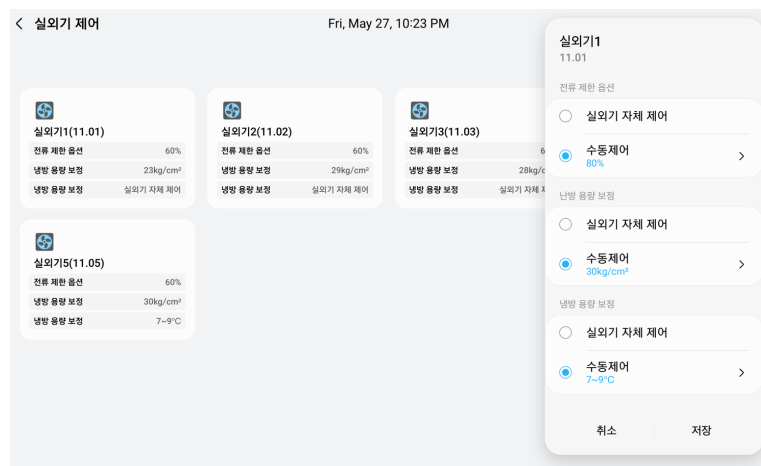


1. Energy Trend : Provides data by indoor unit and zone
day / week / month / year (4 years)
※ This data is self-measured data and may differ from the wattmeter data.
2. Air quality : Air quality data provided by indoor unit and zone (PM10 / PM2.5 / PM1.0) ※ It is supported when installing an indoor unit containing a dust sensor.

※ Trend (To be updated)

⑦ Energy Control

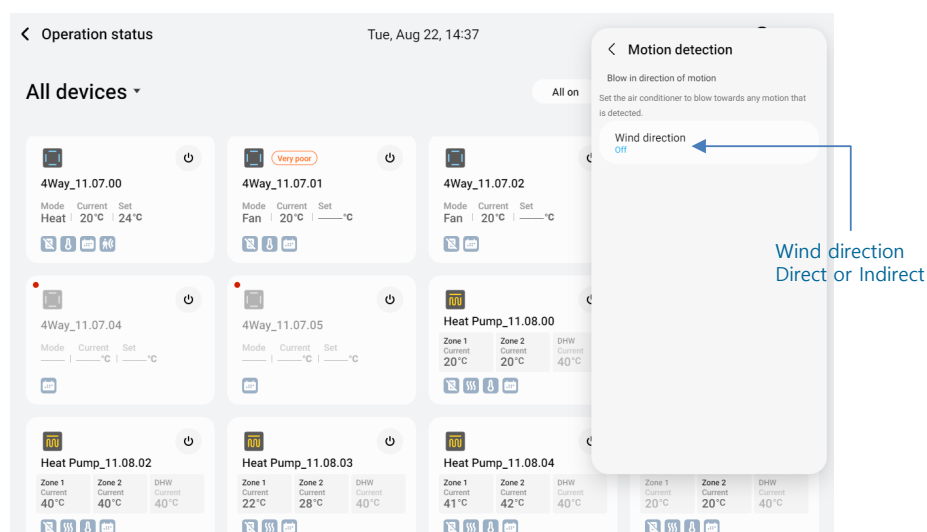
Adjust energy usage according to installation site and requirements



※ Energy Control (To be updated)

⑧ Motion Detection Sensor

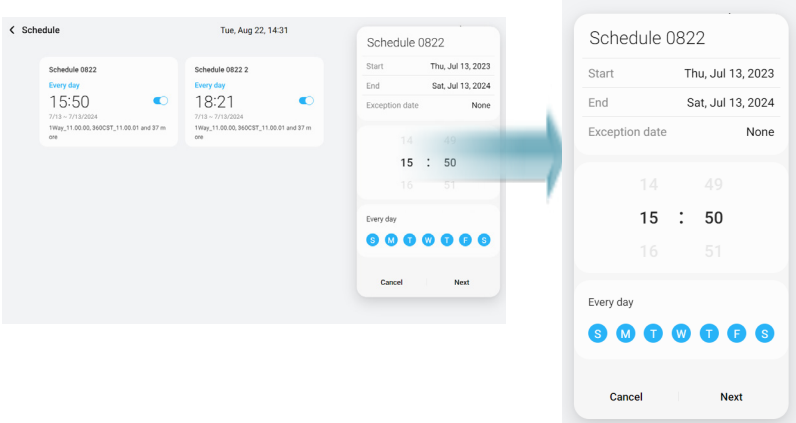
Energy saving functions by utilizing MDS



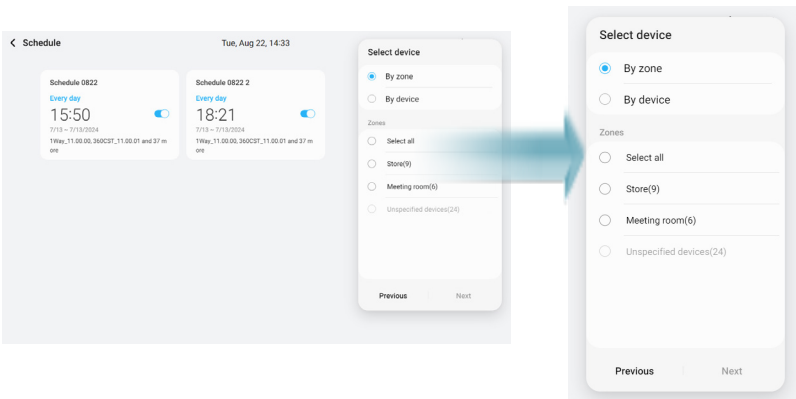
⑨ Schedule

Supports detailed schedule management by set temp and operation status for each zone

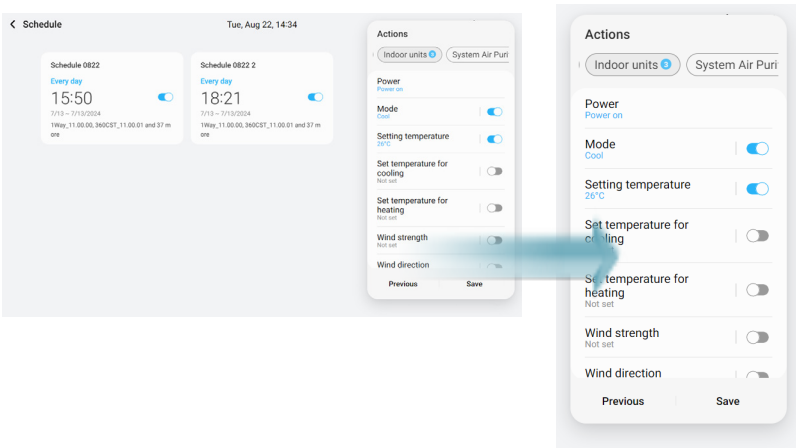
1. Set start and end dates and exception dates



2. Set by zone and indoor unit



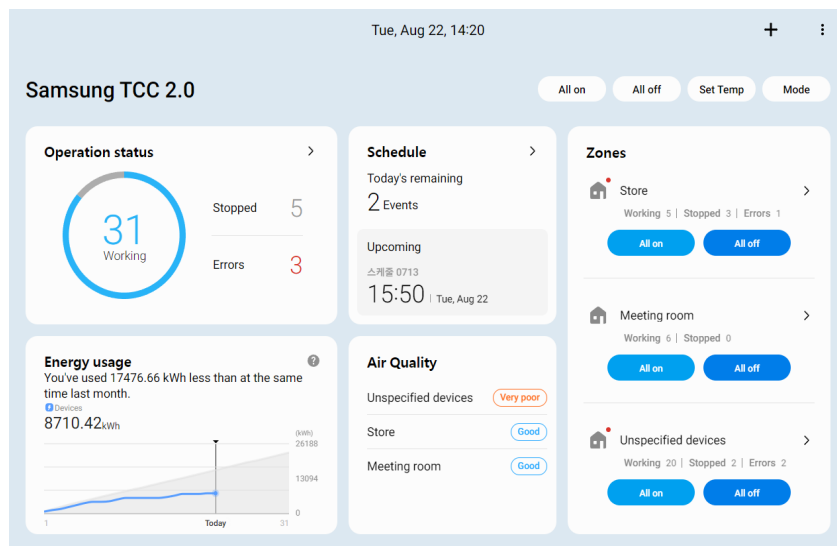
3. Set temperature and mode



⑩ Error Alarm and History Management

Error alarms and history can be searched, so quick response and accuracy of fault diagnosis are improved.

1. You can check for errors on the home screen screen



2. Error occurrence history can be checked by period (up to 1 year)

<

History

Tue, Aug 22, 14:29

Filter

All

Today

14:28

Heat Pump_11.08.00

11.08.00

121: ROOM TEMP SENSOR SHORT/OPEN

14:28

4Way_11.07.02

11.07.02

121: ROOM TEMP SENSOR SHORT/OPEN

14:28

4Way_11.07.00

11.07.00

154: Indoor unit fan motor error.

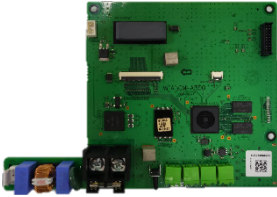
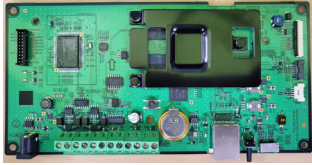
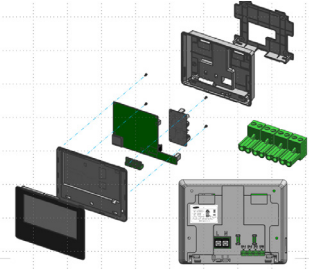
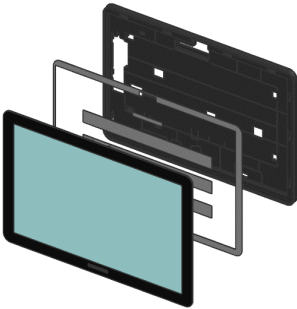
14:25

11.07.00

11.07

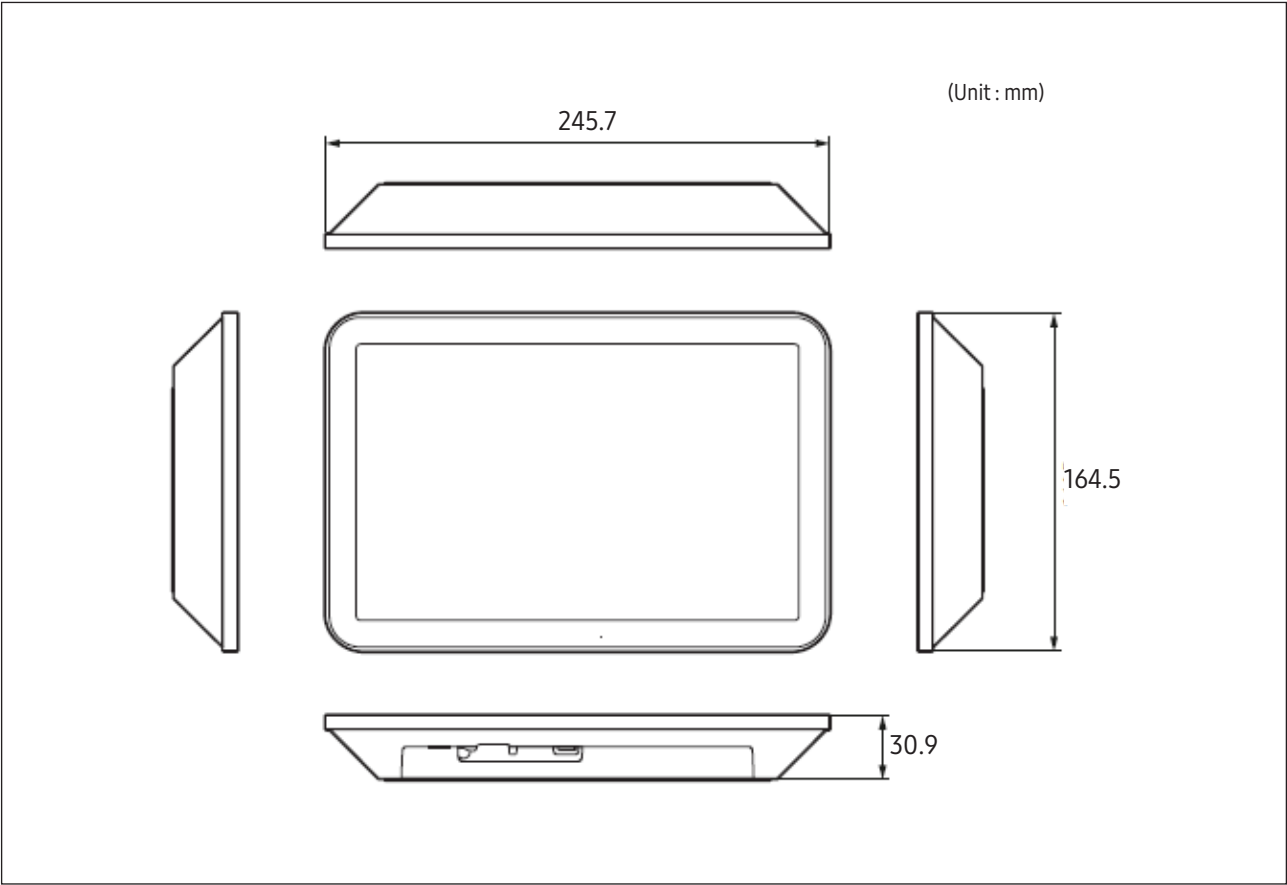
201: MISMATCHING of the IDU NUMBER

2-1-2. Changes compared to basic products

Item	Basic(MCM-A300N)	New(MCM-A300B*N**)	Changes
Case			New Case -CASE TOP -CASE BOTTOM -CASE REAR
ASSY PCB			New PBA
ASSY CASE DISPLAY	 - ASSY CASE Display isn't configured Refer to ASSY CONTROL		7" LCD Display → 10.1" LCD Display
ETC	- S/W Code • Micom : DB91-01533A	- S/W Code • MICOM : DB91-02554A - SmartThings Style Design - Select Background Image - Trend Data (To be updated)	

2-2. Structure of product

■ External Dimensions

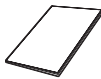


2-3. Product Specification

2-3-1. Specification & Environment

구분	Item	Details
Environment	Temperature range	0°C(32°F) ~ 39°C(102°F)
	Humidity range	30~90% RH
Model Name		MCM-A300BN / MCM-A300BUN / MCM-A300BCN / MCM-A300BNDZ
Size (WxHxD)		245.7 x 164.5 x 30.9 mm
Max. number of units that can connect		128 indoor units
Display		10.1-inch capacitive touch display (1280 x 800 pixels)
Memory	RAM	3GB
	Flash	16GB
External ports	DI/DO	2 ports / 2 ports
	SD card slot	1 micro SD slot
	RJ45 (LAN)	1 port (1 Gbps)
	RS485 (NASA)	2 EA
	Installation type	Wall-mount type
Power supply		Supplied through a DC 12 V adapter (AC 100~240 V, 50/60 Hz)
Operating system		Tizen O/S

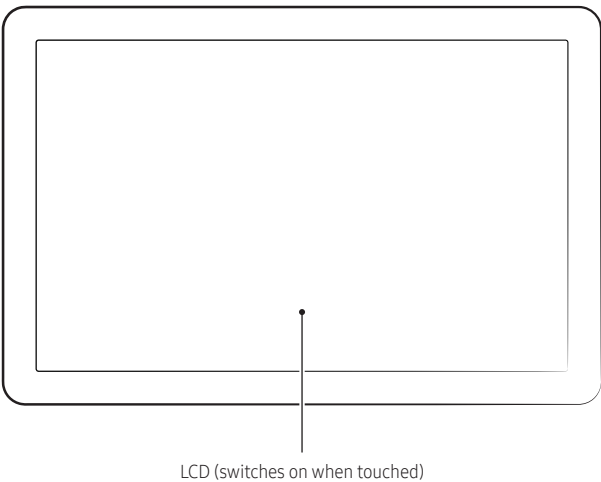
■ Accessories

Item	Touch Centralized Controller	Adapter Power cable Cable tie	Power cable	Cable tie	M4x6 mm screw	User & installation manual
Quantity	1	1	1	3	4	1
Shape						

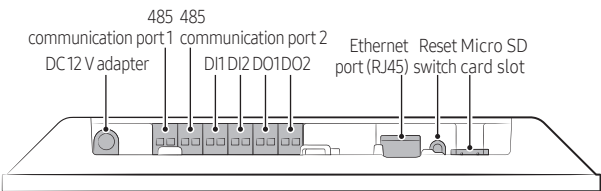
2-3-2. Functions overview

■ Device overview

Front



Bottom



NOTE

- The Ethernet port is not available. (It will become available after the corresponding function is added through software update.

■ Functions

► Control and monitoring

1. Grouped control

Use the Home screen to simultaneously control all indoor units, or use the zone screen to simultaneously control the indoor units included within a specific zone.

Setting item	Description	Remarks
All On	Turn on all units.	
All Off	Turn off all units.	
Set Temp	Indoor unit: Control the target temperature. Heat Pump: Control the target temperature, Water outlet temperature and DHW temperature.	
Mode	Indoor unit: Control the operation mode. ERV (ventilation system): Control the operation mode. Heat Pump: Control the operation mode and DHW mode.	

2. Individual control

Control and monitor individual indoor units that are connected.

Setting item	Description	Remarks
Power	Indoor unit: Control the power On/Off. ERV (ventilation system): Control the power On/Off. Heat Pump: Control the H/C power or DHW power On/Off.	
Temperature	Control the target temperatures for the Indoor unit / Heat Pump.	
Temperature (DHW)	Control the target hot-water-supply temperature for the Heat Pump.	
Wind strength	Control the fan speed.	
Air flow	Control the airflow direction.	
Mode	Control the operation modes of the Indoor unit / ERV (ventilation system) / Heat Pump.	
Mode (DHW)	Control the hot-water-supply operation mode of the Heat Pump.	
Remote control	Control the remote-control level. (Enable/Disable/Conditional)	
Dedicated mode setting	Control the dedicated mode. (Cool/Heat/No limits)	
Temperature limits	Set the Cooling/Heating target temperature limit.	
Discharge Temperature	Control the discharge temperature.	Only applicable to indoor units for which the discharge temperature can be controlled
Filter	Control the reset of filters. (e.g. Ultrafine dust filter, Fine dust filter, Washable pre filter)	Only applicable to indoor units for which filters can be controlled individually
Options	Purify/Motion detection/Wind Free/Long Wind/Lighting/Clean/Sleep/Away	Only applicable to indoor units that can be controlled individually

- You can select and control a single indoor unit or multiple indoor units.
- Turn on or off an indoor unit by selecting the [Power] button for the unit.
- Select an indoor unit, and control the target temperature, operation mode and other settings.
- The control panel displays the states of the selected units in different ways.
 - If a setting is identical for all units, that setting is displayed.
 - If a setting is different from unit to unit, '--' is displayed.
 - If some units are in the On state and other units are in the Off state, 'On' is displayed.

► Manage zones

1. Create zone

- Create a new zone by entering a zone name or selecting from among the provided default zone names.
 - At the top right of the Home screen, tap the [+] button to display the Create zone page.
- After adding a zone, you can move units included in the Unspecified devices zone to the new zone.

2. Zone name/Change icon and Delete zone

- On the Home screen, touch and hold a zone title to display the zone-management tooltip. Tap the tooltip to redirect to the zone-list page.
- To rename a zone, select a zone name from the zone list and change the name.
- To change a zone icon, select a zone icon from the zone list and change the icon by selecting from among the 16 default icons.
- To delete a zone, select a zone from the zone list and delete it.
 - The units included in a deleted zone automatically move to the Unspecified devices zone.

3. Rearranging a zone

- Touch and hold the zone to rearrange, and drag and drop it to the desired position.

► Schedule

Manage the operation settings for indoor units by setting schedules.

- You can set a maximum of 50 schedules.
- If you set an exception day, all schedules assigned to that day do not run.

1. Create schedule

- Tap the [+] button at the top right of the schedule page.
- Settings required to create a schedule

Item	Description	Remarks
Schedule name	Enter a schedule name.	
Start	Set the start date of the schedule.	
End	Set the end date of the schedule.	
Exception date	Select (a maximum of 50) exception days when you do not want the schedule to run.	
Time	Set the time when the schedule will run.	
Days of the week	Select which days of the week (e.g. Mon, Tue, Wed, Thu, Fri, Sat, Sun) the schedule will run.	
Select device	You can select zones or devices. It is not possible to select the unspecified devices zone or a zone that has no indoor unit.	

Item	Description	Remarks
Actions	Operation settings for indoor units that will be controlled according to the schedule - Indoor unit: Power, Setting temperature, Mode, Wind strength, Wind direction, Air flow, Remote control (Enable/Disable/Conditional) - IERV (ventilation system): ERV power, ERV mode, ERV Wind strength, Remote control (Enable/Disable/Conditional) - IERV Plus: Power, Mode, ERV power, ERV mode, ERV Wind strength, Remote control (Enable/Disable/Conditional) - IHeat Pump: Power, Mode, Setting temperature, Water outlet temperature, DHW power, DHW mode, DHW temperature, Remote control (Enable / Disable / Conditional)	The operation feature is only available for setting items supported by the indoor units assigned to the schedule.

2. Editing a schedule

From the schedule page, tap the schedule to edit, to display the Edit page.

3. Deleting a schedule

Touch and hold the schedule to delete, to switch to Edit mode. At the bottom right of the page, tap the [Delete] button to delete the schedule.

- Alternatively, at the top right of the schedule page, tap the [Edit] button from the ':' menu, and then tap the [Delete] button at the bottom right.

4. Enabling/disabling a schedule

An individual schedule can be enabled or disabled by tapping the toggle switch on the right of the schedule card.

► History

View the history of errors that occurred in the units connected to the Touch Centralized Controller.

At the top right of the Home screen, select the [History] button from the ':' menu, to view the error records.

► Settings

Display

• Wallpapers

Select images to display on the Home screen and Cover screen.

Basic background images are provided. You can also use custom images by using a micro SD card.



- To use a custom image, ensure the image file resolution is 1280x800 and the file size does not exceed 10 MB.
- Only images with an extension of PNG, GIF or JPG are supported.
- Images included in the 'wallpaper/images' folder in a micro SD card are displayed, and a maximum of 12 images can be used.

• Brightness

Change the screen brightness in the range of 1% to 100%. The default value is 50%.

• Screen off time

Select from among 15 seconds, 30 seconds, 1 minute, 2 minutes, 5 minutes and 10 minutes. The default value is 1 minute.

► Lock

Use this Lock feature when you want to limit access to a specific feature.

- Screen lock type
 - Swipe: If the screen has switched off after a specified period of time and a user taps or swipes on the cover screen, the user is redirected to the previously used page.
 - Password: If the screen has switched off after a specified period of time and a user taps or swipes on the cover screen, the user is prompted to enter the password before being redirected to the previously used page.
 - None: When the screen has switched off, the cover screen does not appear and the previously used page appears.



- If 30 minutes have elapsed after the screen switched off, the Home screen appears, instead of the previously used page.

• Operation panel lock

Prevent specific items from being controlled by users.

For example, you can prevent the operation mode from being controlled by users.

• Menu lock

Lock specific features in the Touch Centralized Controller, so that users are prompted to authenticate themselves before accessing such features. If a menu is locked, you can only access the menu after entering the password.



- The 'Back up and restore' menu is locked by default.

• Set password

To use features for which user access is restricted, such as Tracking and Entire system, users should authenticate themselves by entering the password. There is no initial password. Users can set the initial password before using the Controller for the first time.

► General management

- Device name: Set the name of the Touch Centralized Controller. (The specified name appears on the cover screen and Home screen and in the device information.)
- Language: Select a language from among Korean, Chinese, Germany, Greek, English, Spanish, French, Italian, Hungarian, Dutch, Portuguese, Polish, Slovak and Turkish.
- Date/Time: Set the date/time of the Touch Centralized Controller. Select whether to display the time in the 24-hour format.
- Summer time: Configure Summer time (daylight saving) settings.



- If the date or time is not set correctly, schedules may not run at the intended times.

- Display as address instead of device name: Identify a unit by viewing the unit address, instead of the unit name.
- Reboot TCC 2.0: Restart the Touch Centralized Controller.



- To restart, user authentication is required. ㉔

► System

- Tracking: The Touch Centralized Controller searches for the installation and state information of the units constituting the system. (for a maximum of 30 minutes).
To use this function, user authentication is required.

- Temperature display unit: Select Celsius or Fahrenheit as the unit in which temperature is displayed.
- Temperature control unit: Select 1 or 0.5 as the amount by which the set temperature will be changed. If temperature is displayed in Fahrenheit, the temperature control amount is fixed to 1.
- Heating indoor compensation temperature display: Display the calibrated value as the current temperature in heating mode.
- Level control: In Remote control lock mode, indoor units cannot be controlled from the On/Off controllers or the wired/wireless remote control.
- Silent control: Control indoor units, connected to the Touch Centralized Controller, in mute mode.
- DI pattern: Define the operation rules depending on the DI signal. (Refer to the 'DI patterns' section for details.)

► Installation

- Initial settings: Configure all basic settings at once when running the Touch Centralized Controller for the first time (or after a full system reset is complete).
 - Setting items: Language, Date and time, Screen lock type and others.
- Tracking: The Touch Centralized Controller searches for the installation and state information of the units constituting the system. (for a maximum of 30 minutes).
To use this function, user authentication is required.



- After tracking for the first time, all units are included in the Unspecified devices zone. Even if tracking is performed after zones are edited by users, the edited zone information is retained.

- Back up and restore: Save all user information, stored in the Touch Centralized Controller, to a micro SD card, and restore by using the saved data. Data restoration requires user authentication.



- To use the Back up and restore feature, connect the micro SD card to the Touch Centralized Controller.

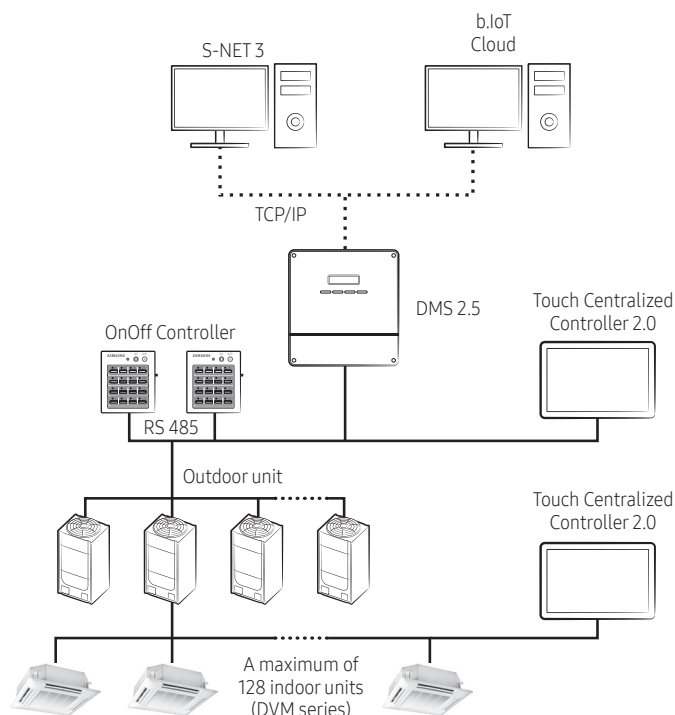
- Reset device - Entire system: Delete all user information stored in the Touch Centralized Controller. To use this feature, user authentication is required.

► Device information

- Device information: Display the following information of the Touch Centralized Controller: Version, MAC address and Model number.
 - This information is displayed when 'Information' is selected from the '' menu at the top right of the Home screen.
- For the open-source-related information, refer to Open Source License on the 'Information' screen.
- User manual: View the user manual as a PDF file.

2-4. Installation

2-4-1. System Diagram



1. Checking the power connection

- 1) Tap on the LCD of the Touch Centralized Controller to turn on the LCD.
- 2) Confirm that the LCD turns on.
 - If the LCD does not turn on, confirm that the power adapter (DC 12 V, 3.34 A) is connected correctly.

■ Maximum number of units that can connect to the Touch Centralized Controller

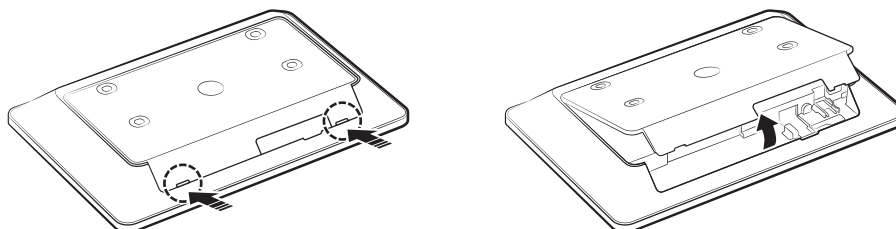
Unit	Control unit communication (R1R2)	Indoor-outdoorunit communication (F1F2)
Outdoor unit	32 units (16 units for each 485 channel)	2 units (1 unit for each 485 channel)
Indoor unit (Indoor unit/ERV/Heat Pump)	128 units (128 units for each 485 channel)	128 units (64 units for each 485 channel)

NOTE

- Maximum number of indoor units that can connect to the indoor-/outdoor-unit communication port
 - A maximum of 64 units can be connected to each 485 channel. Note that the total number of units that can connect to two channels cannot exceed 128.
 - Outdoor units are counted on an individual unit basis.

2-4-2. Installing the Touch Centralized Controller

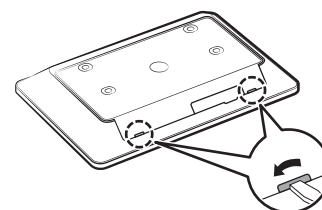
- 1) Insert a flat-head screwdriver into each of the square grooves at the lower part of the Touch Centralized Controller, turn the screwdriver and then remove the back cover.



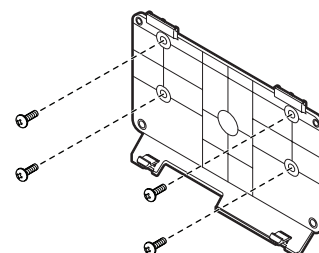
※ Push both latches at the same time.

NOTE

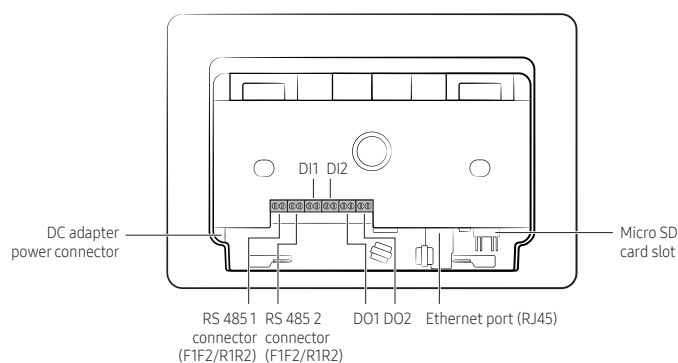
- Use a flathead screwdriver to turn the square hole at the upper part of the fixing hook for easy removal.



- 2) Use four screws to attach the Touch Centralized Controller wall-mount plate to the wall.



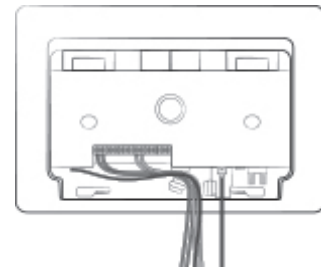
- 3) Connect the communication cable to the RS485 connector, the LAN cable to the Ethernet port (RJ45) and the contact signal cables to the DI/DO connectors.



NOTE

- The RS485 channel provides two ports. Connect cables to these ports as required, depending on the installation environment.
If you assign many units to a single RS485 channel, the communication speed may decrease. If 64 units or more are installed, assign the units to different channels, to distribute the load.
- The DI and DO connectors are contact connectors that are used by configuring function settings, such as emergency stop and operation.
For more information, refer to the details on DI/DO operation pattern settings.
- The Ethernet port is not available. (It will become available after the corresponding function is added through software update.)
- With a micro SD card, you can use the Software update, Back up and restore and Set as wallpaper features.

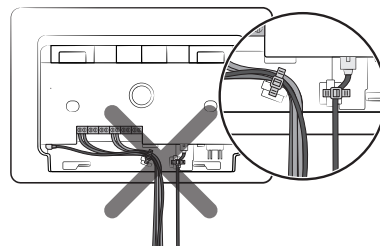
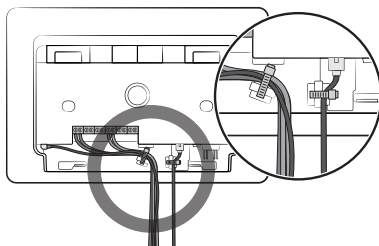
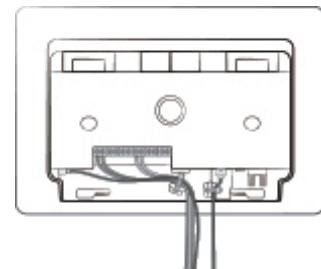
4) Tidy up the power and communication cables at the bottom.



5) Use the supplied cable ties to fix the cables to the cable clips.

CAUTION

- Ensure that the knots of the cable ties face the side.

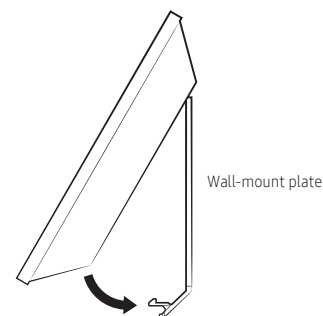


6) Hang the Touch Centralized Controller onto the wall-mount plate on the wall, and insert the tab at the bottom of the plate into the slot on the Controller.

- Make sure to confirm that the bottom tab has been inserted securely, to prevent the Touch Centralized Controller from falling and being damaged.

CAUTION

- It is recommended that the Touch Centralized Controller be installed on a wall, to prevent malfunction and breakage and to ensure safe use.



7) Connect the power supply to the power adapter of the Touch Centralized Controller.

■ Tracking

Tracking is a process of finding indoor/outdoor units connected to the Touch Centralized Controller.

To control or monitor your system-air-conditioner units using the Touch Centralized Controller, you should complete the tracking process.

Use the tracking feature only when the number of connected system-air-conditioner units or the unit model has been changed.

1) Connect the power supply, navigate to [Settings] > [System] > [Tracking] and then start tracking.

2) Tracking is performed for a maximum of 30 minutes.

- Tracking may take long if many indoor and outdoor units are connected.

3) After the tracking is complete, the connected units are shown on the initial screen.

4) To view units the tracking of which is complete, navigate to [Settings] > [System] > [Tracking].

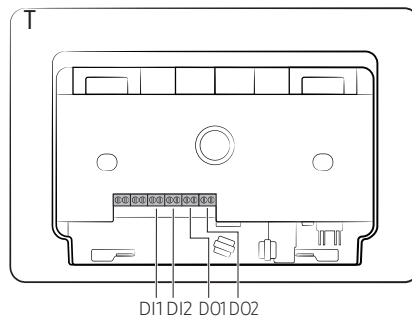
5) Indoor units with 'Without central control' selected is locked in the hidden state, in which case the settings for those units cannot be changed.

■ External contact control for DI ports (optional feature)

1. DI pattern settings

Configure pattern settings from [Settings] > [System] > [DI pattern].

- DI ports: Connect dry-contact inputs to these ports.

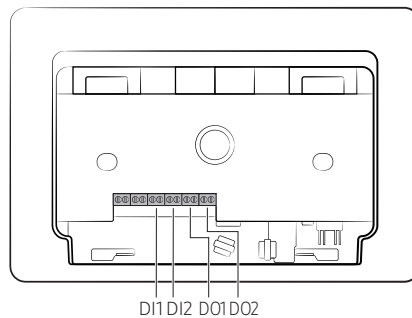


2. Control patterns

Pattern	Control details
Pattern 1	There is no external input. (factory settings state) If a contact-control signal is received through port 1, the Controller does not control anything.
Pattern 2	If a DI-1 ON signal is received, the Controller switches to emergency stop mode. It stops the operations of all indoor units, and sends a command to the indoor units so that they cannot be controlled using the remote control. While in the emergency stop state, issuing control commands by users is prevented. Schedule control also does not work. If the contact-control signal state changes to OFF, control commands are processed normally. (In pattern 2, DI-2 is not used.)
Pattern 3	If a DI-1 ON signal is received, the Controller turns on all indoor units. It turns off all indoor units if a DI-1 OFF signal is received. If a DI-2 ON signal is received, the Controller enables the remote control for all indoor units. It disables the remote control if a DI-2 OFF signal is received.
Pattern 4	The effective pulse width for input signals is 0.5 to 1.0 seconds. Signals with a pulse width of less than 0.5 seconds or of 1.0 seconds or more are ignored. If a pulse contact signal enters DI-1, the Controller sends the ON command to all indoor units. If a pulse contact signal enters DI-2, the Controller sends the OFF command to all indoor units.

3. DO ports

- DO 1 operation details: DO output turns on if at least one indoor unit is turned on.
DO output turns off if all indoor units are turned off.
- DO 2 operation details: DO output turns on if at least one unit has an error.
DO output turns off if there is no error in any of the units.
- DO ports: The positive (+) port sends 12 V and the negative (-) port sends Open Collector signals.
The DO ports are driven using a current of 10 mA or less



■ How to update to micro SD card

1. Copy the latest software update file to the micro SD card.

NOTE

- Make sure you format the micro SD card in the FAT32 or FAT16 format, before copying the latest software update file.
- Make sure to use an SD card of class 10 or higher. Lower-class SD cards may have version-recognition errors.

2. Insert the micro SD card into the micro SD card slot at the bottom of the Touch Centralized Controller.

NOTE

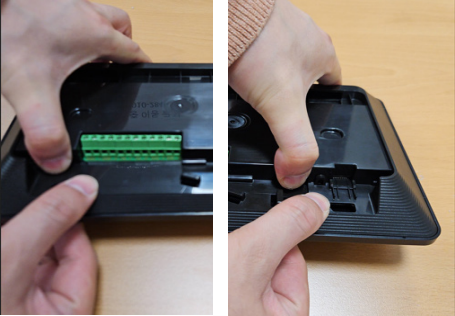
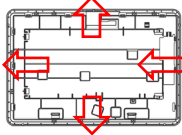
- Before proceeding to the update, navigate to [Settings] > [System] > [Back up and restore] > [Back up device], and back up the data, just in case of problems during the update.

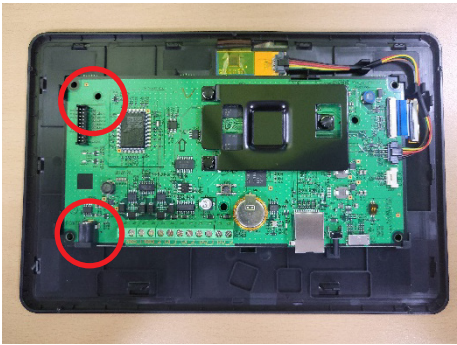
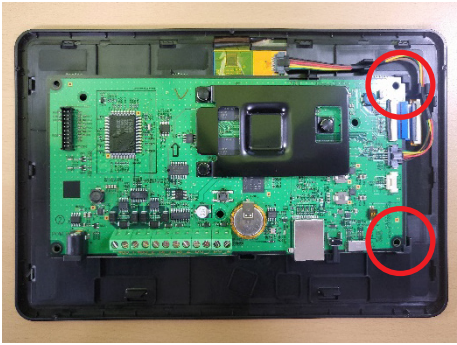
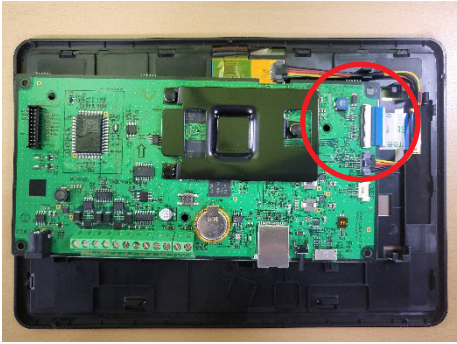
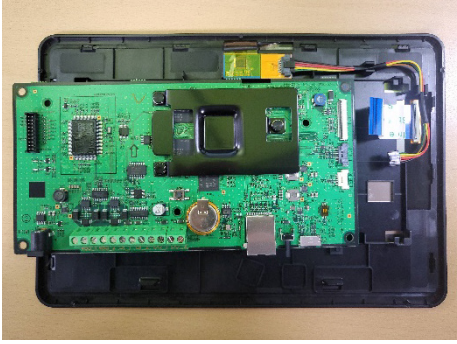
3. Select [Settings] > [System] > [Software update].
4. If the software image is correct, select [Start] from the displayed update dialogue box.
5. When a message appears that the update is complete, you can use the Controller normally.

NOTE

- After the update is complete, remove the micro SD card.
- If the update has failed, take the following measures:
 - If the file has a problem, change the update image (file).
 - If the micro SD card has a problem, change with a different micro SD card.
 - If the Controller has a problem, replace the Controller.

3. Disassembly & assembly

NO.	Picture	Working method
1		Slide the bottom two grooves inside the product using a straight driver to lift the CASE BOTTOM and separate it from the CASE REAR.
		When the CASE REAR is removed, you can see two large hooks at the bottom Hold the CASE BOTTOM and push each hook to separate the bottom of the CASE TOP and CASE BOTTOM.
		Structurally, when viewed from the back, the right side is designed to be easy to separate. Disassemble the right side as shown in the image.
		Remove the right side, then the upper side, and finally the left side disassemble the hook. ⚠ Be careful not to break the hook when disassembling it with hook assembly without screw assembly • All hooks are designed in CASE TOP and hook direction is as follows (as viewed from the back) 

NO.	Picture	Working method
1		Pull the hook on the left side of the PBA, disassemble the left side of the PBA.
		Remove the right side of the PBA from the instrument as well.
		Remove the cable from the LCD connector and TOUCH connector on the right side of the PBA.
		PBA and ASSY DISPLAY are separated.

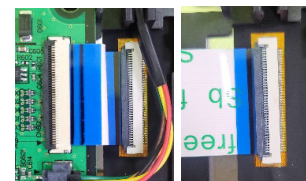
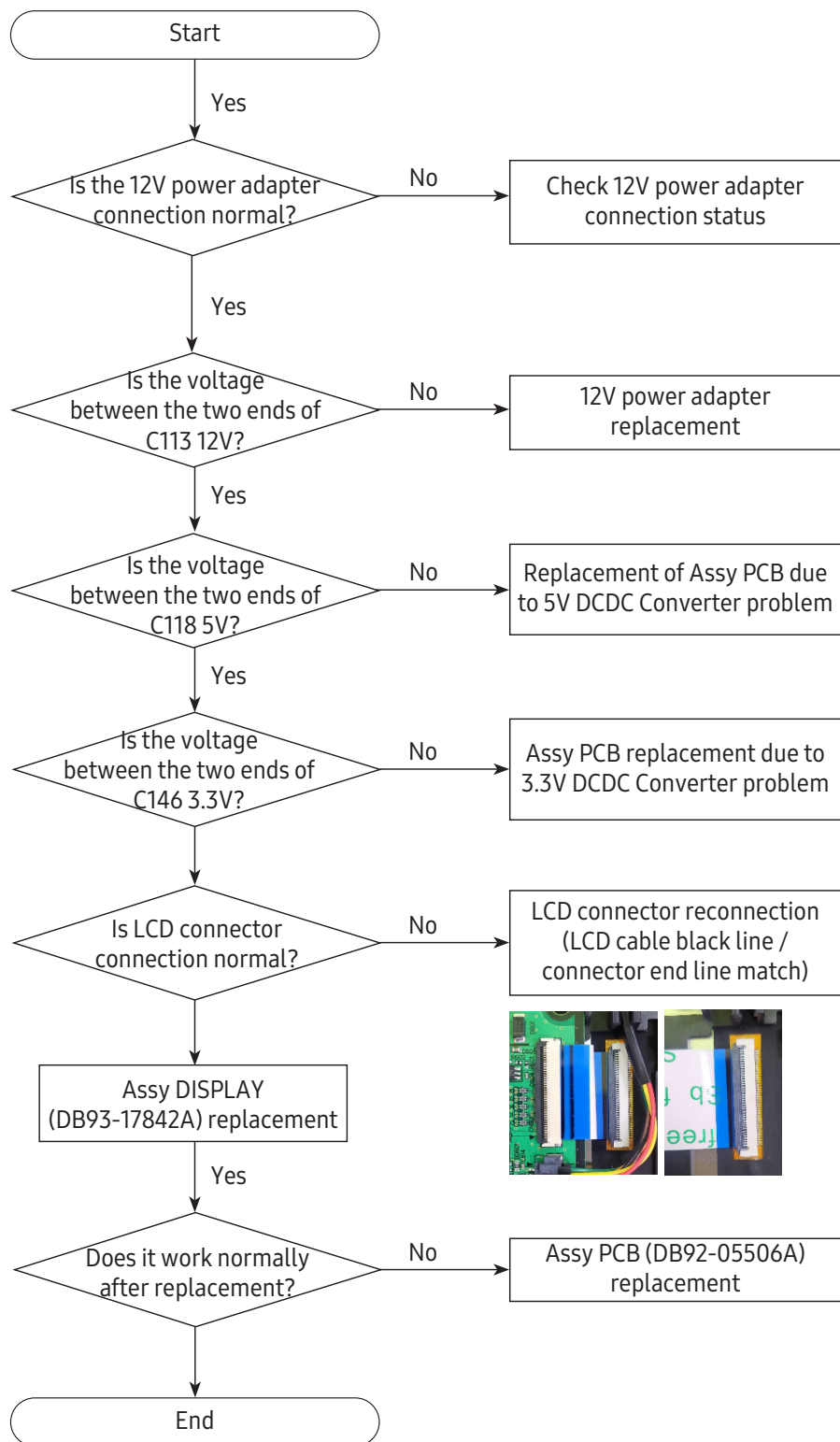
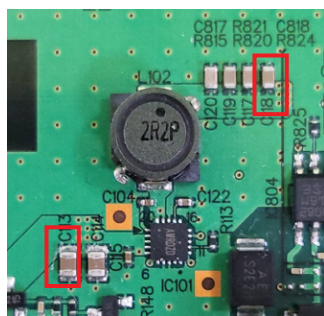
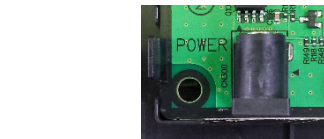
4. Troubleshooting

4-1. Check point before requesting a service

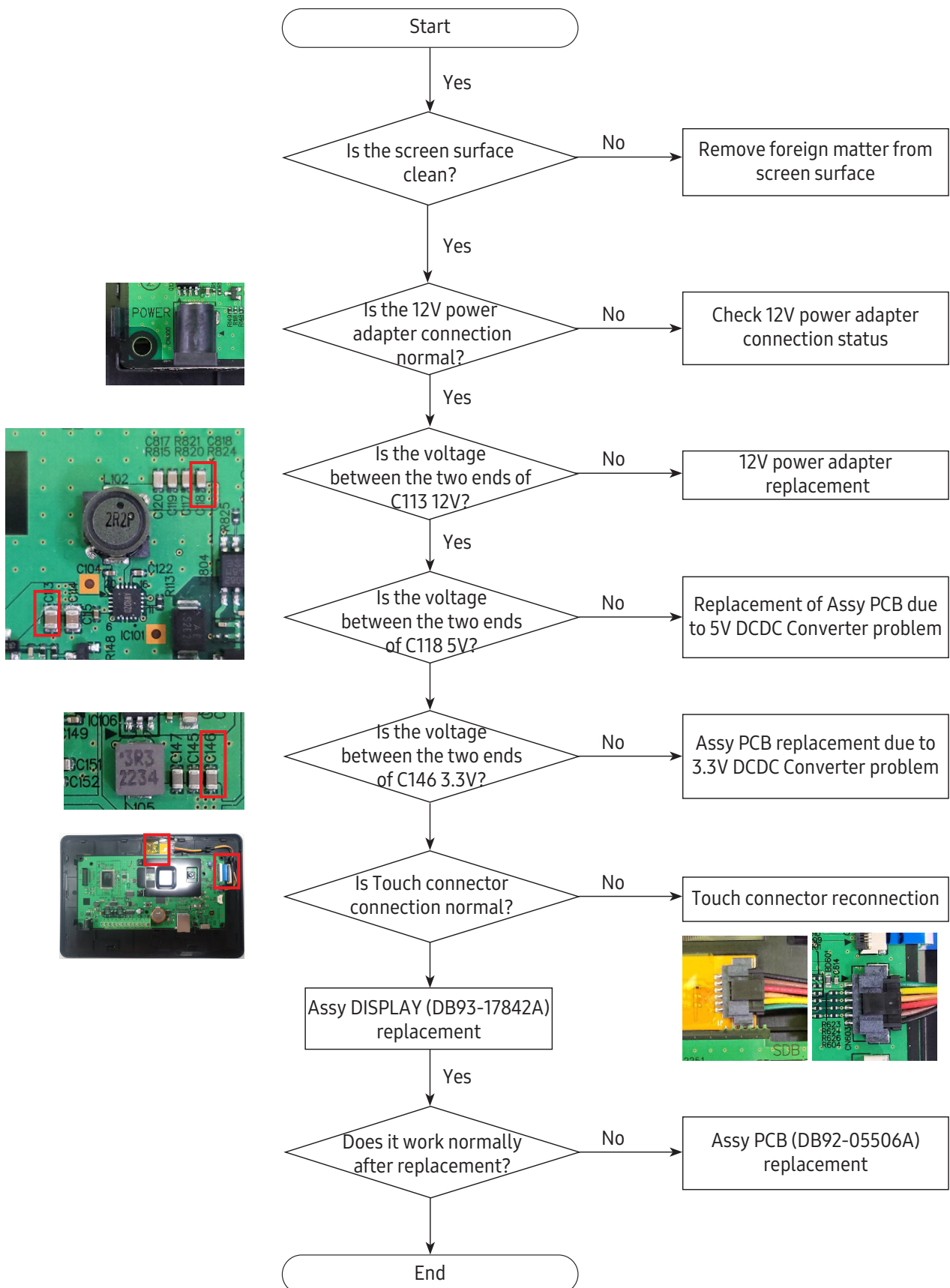
Symptom	Measure
The LCD appears blank.	- Check the power connection, and reconnect it if necessary. - The LCD automatically switches off if it is left idle for a specified period of time. Tap on the LCD to switch it on.
Touchscreen input does not work.	Press the reset switch to reboot the system.
Indoor units cannot be controlled.	Check the communication cable connection to the indoor and outdoor units.
The target temperature cannot be increased or decreased.	If a temperature limit is set, the target temperatures for indoor units can be controlled only within the temperature limit range.
Indoor units cannot be controlled using the remote control.	If Remote control lock is selected, indoor units cannot be controlled using the wired or wireless remote control.
Schedules do not run at the specified times.	Navigate to [Settings] > [General management] > [Date] and [Time], and change the current date and time settings.
The [All on] and [All off] options are disabled.	Confirm that there are installed units and that not all of the installed units have errors.
The [Set Temp] button on the Home screen is disabled.	Confirm that not all of the installed units are in a state in which temperature cannot be controlled, as follows: - All units are in fan mode. - All indoor units are off. - All units have errors.
The [Mode] button on the Home screen is disabled.	Confirm that there is no error in the installed units.
The [Change order] button is not shown even if I press a unit card.	When the Controller has entered the Operation status or Unspecified devices zone, the button disappears, because it is not possible to rearrange units.
[Set password] cannot be saved.	Ensure that the password is at least eight characters long and has a combination of at least one alphabet letter, at least one special character and at least one numeric character.

4-2. Error Diagnosis

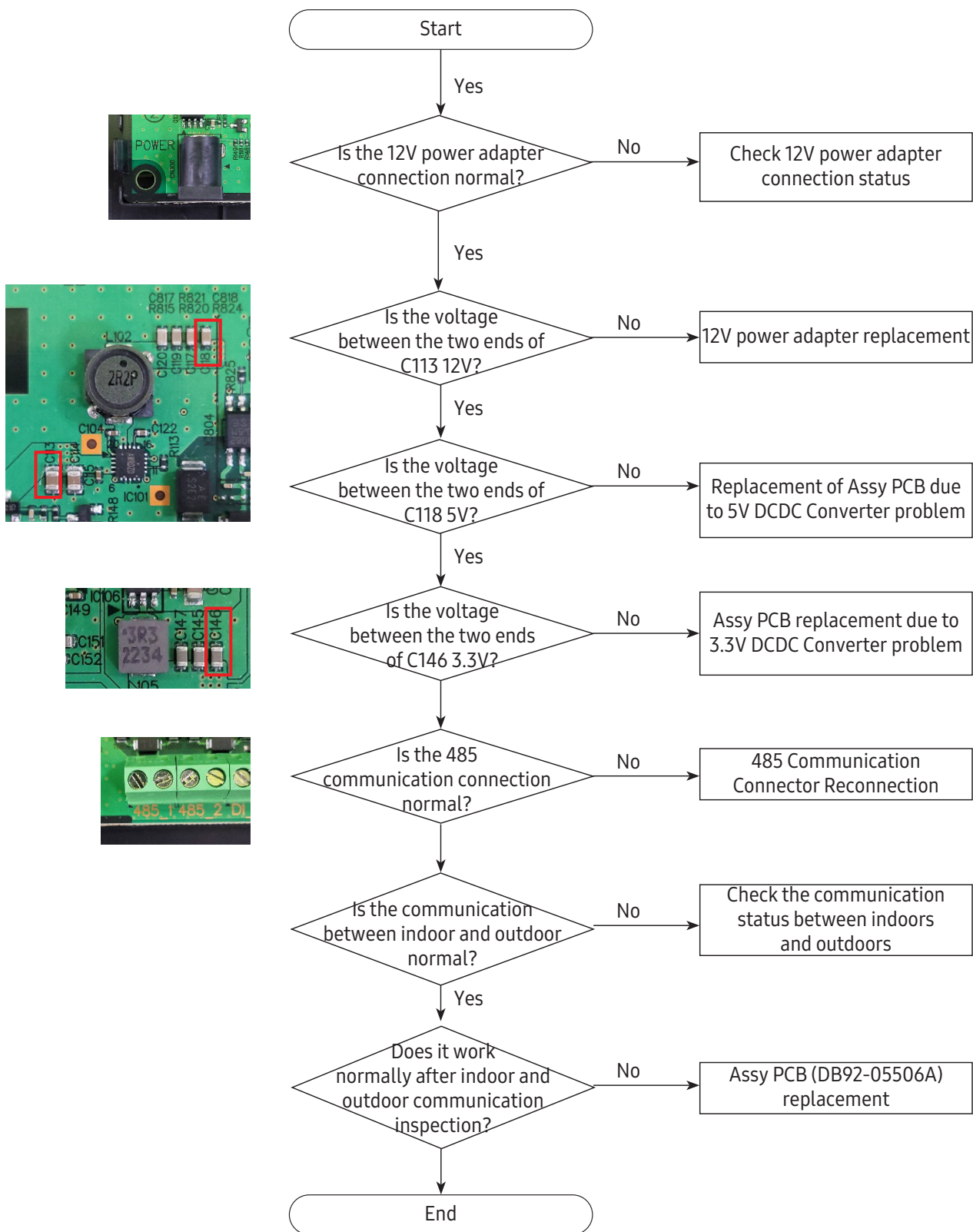
4-2-1. When LCD is not turned on



4-2-2. When Touch is not input



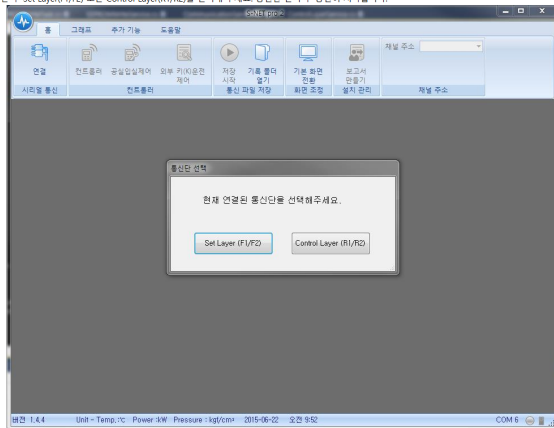
4-2-3. When tracking is not complete



4-2-4. When there is no communication

1. Please check if the RS485 communication line is normally connected to the touch central controller.
2. Reboot the touch central controller with the RS485 communication line normally connected.
 - If there is an existing connected device, please check if device status monitoring and control are normal.
 - If there is no existing connected device, please track it again and check.
3. If you can not communicate with the device normally even if you perform the 1st and 2nd above, please proceed with tracking again.
 - ※ Note: If you proceed with new tracking, the existing device information may disappear, so if you have an existing connected device, please make sure to back up the data in advance.
4. If it is not normal even if it is performed up to 3 times, it is necessary to check whether the communication status of indoor and outdoor air is normal. Please disconnect the communication line (F1/F2 or R1/R2) connected to the touch central controller, connect to S-NET Pro2, and check.
5. If indoor and outdoor air is displayed normally in S-Net Pro2 at 4, the touch central controller must be replaced.

4. [연결] 버튼을 선택한 후 Set Layer(F1/F2) 또는 Control Layer(R1/R2)를 선택해 주세요. 통신단 선택 후 통신이 시작됩니다.



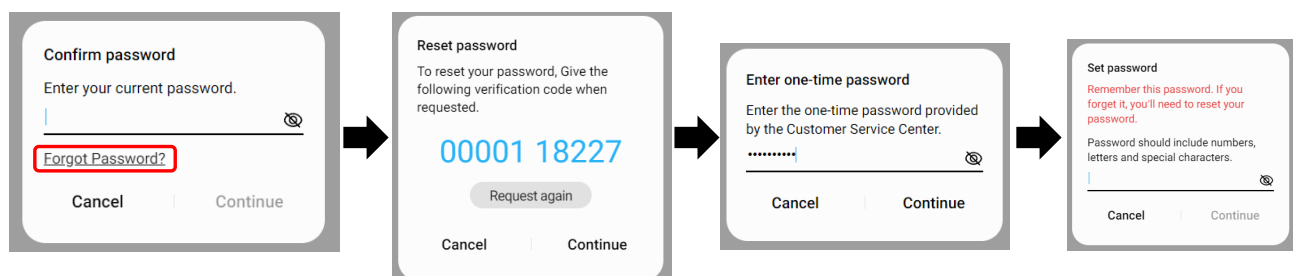
통신 점검

1. S-NET pro2 오른쪽 하단의 상태에서는 연결된 통신 포트 및 통신 상태를 표시합니다. (각각 통신 패킷 수신, 노란색 통신 패킷 미수신)
- Set Layer 연결 시 통신 상태 좌측에 'Set Layer'로 표시되고, Control Layer 선택 시 'Control Layer'로 표시됩니다.



4-2-5. Initialize password

When the user forgets the password, the password can be initialized



When I forgot my password,
You can reset your password.

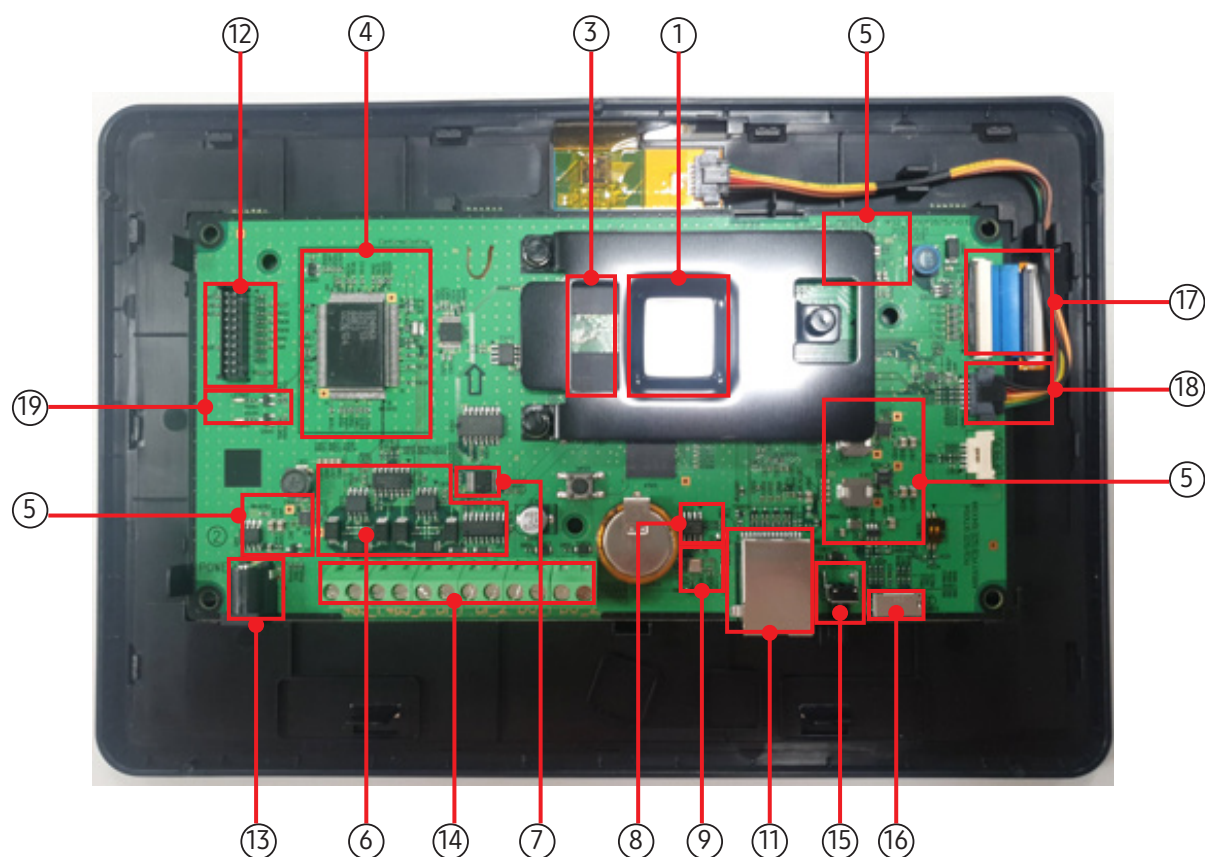
The user calls the service
center 10 digits of the
authentication number
displayed on the screen

The service center creates a
disposable password based on
10 digits of the authentication
number informed by the user
through a separate PC program
and delivers it to the user.

If the disposable pass-
words match, The user
can reset the password.

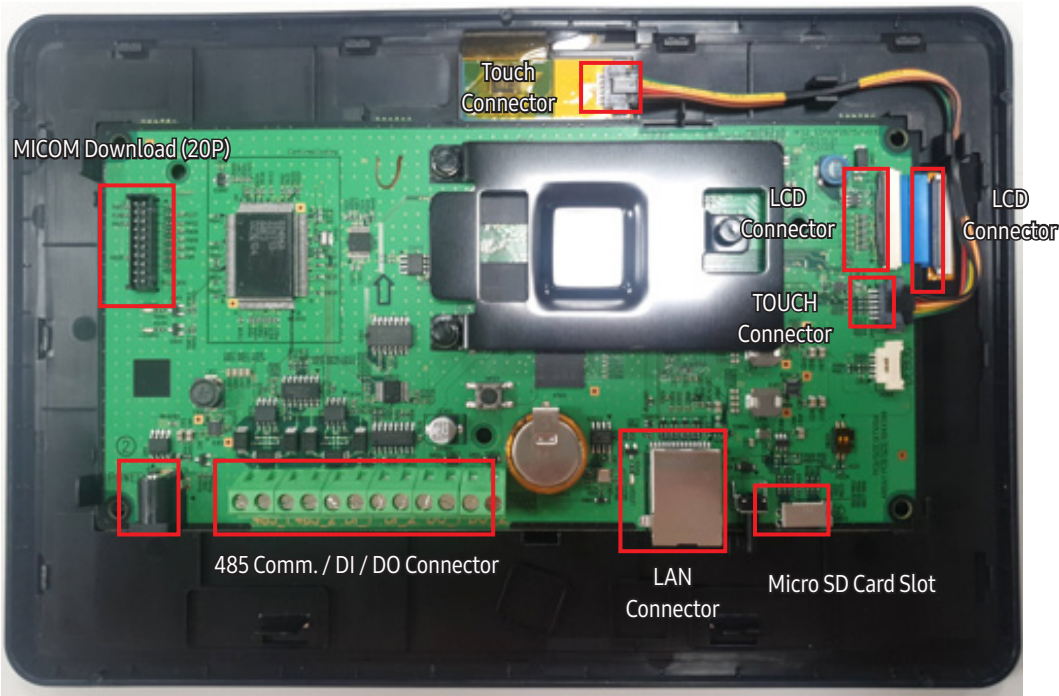
5. Parts layout

5-1. Parts layout



1	AP (S922X)	11	LAN Connector
2	EMMC	12	MICOM Download (20p)
3	DDR4 2EA	13	Power Jack
4	MICOM (Hart-M320)	14	485 Comm. / DI / DO Connector
5	DCDC Block	15	Reset Switch
6	485 Communication Block	16	Micro SD Card Slot
7	DI/DO Communication Block	17	LCD Connector
8	EEPROM	18	Touch Connector
9	RTC	19	Comm. LED 2EA
10	Ethernet IC Block		

5-2. PBA Parts





GSPN (GLOBAL SERVICE PARTNER NETWORK)

Area	Web Site
Europe, Middle East & Africa	https://gspn1.samsungcsportal.com
East Asia, West Asia	https://gspn2.samsungcsportal.com
North America	https://gspn3.samsungcsportal.com
China	https://gspn4.samsung.com.cn
CIS	https://gspn5.samsungcsportal.com
Latin America	https://gspn6.samsungcsportal.com

This Service Manual is a property of Samsung Electronics Co., Ltd.
Any unauthorized use of Manual can be punished under applicable International and/or domestic law.

© Samsung Electronics Co., Ltd. September. 2023.
Printed in Korea.
Code No. AC-00341E_1