



LG

Dust Status Back Ok

Composite Indicator	Dust PM 10	13
Good	Ultrafine Dust PM 2.5	10
	Ultrafine Dust PM 1.0	8

● Good ● Normal ● Bad ● Very Bad

# Air Purify Control Solution

LG **BECON** HVAC

'Fine Dust' is classified as a group 1 carcinogen by IARC\*.

**Fine Dust**  
**Fatal Toxicity When Entering Neurons**

World Bank 2016

Headache, Fatigue and Dizziness



Poor air quality is a major development burden, with significant impacts on public health. According to estimates by the W.H.O. (2016a), exposure to air pollution causes 6.5 million premature deaths annually worldwide.

Nearly 90 per cent of these premature deaths occur in low- and middle-income countries, with close to two out of three in Asia.

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clearly a  
standard

**Air pollution in the world**  
**Exceeds Red-warning level**

2019.06.01

News



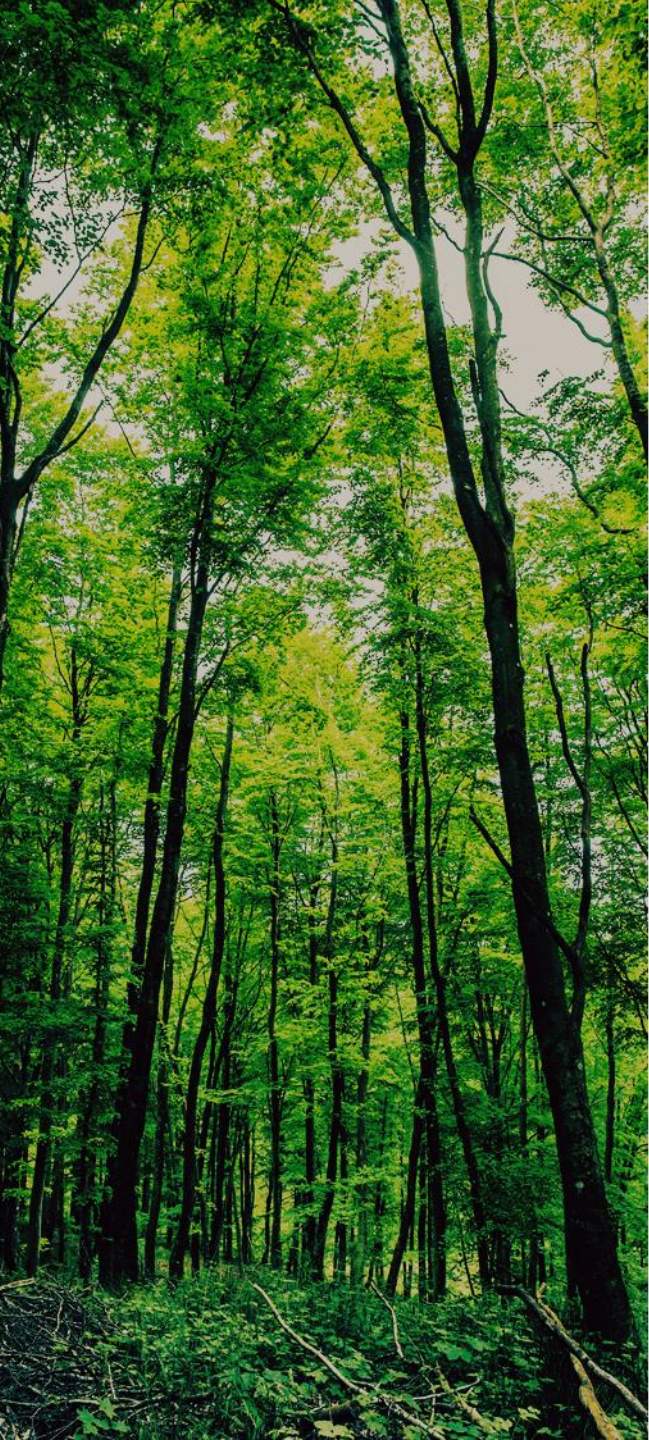
Air pollution in world is caused by fine dust, specifically known as PM2.5, which is particulate matter that can be found in the air and is incredibly small. A single particle has a diameter of less than 2.5 micro meters. At this microscopic size, when inhaled, they penetrate directly into the bloodstream and travel to important internal organs.

\*IARC: International Agency for Research on Cancer.

We need a **controller** that can integratedly control and monitor the **air quality** of the space







# Contents

**Line Up**



**Individual Controller**

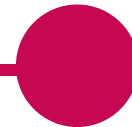


**Central Controller**





LINE UP



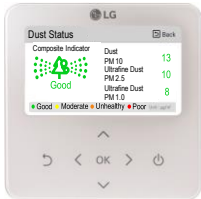

# Introduction





## Control solution

For Indoor unit

	List	Model Name	Function
<p><b>Individual Controller</b></p>	 <p><b>Standard Remote Controller III</b></p>	<p><b>PREMTB100</b></p>	<ul style="list-style-type: none"> <li>• Wired remote control</li> <li>• 4.3 inch color display</li> <li>• Touch button</li> <li>• Group control (Max 16 indoor units)</li> <li>• Monitoring Fine dust, temperature, Humidity, CO<sub>2</sub></li> </ul>
<p><b>Wi-Fi Controller</b></p>	 <p><b>Wi-Fi Modem</b></p>	<p><b>PWFMD200</b></p>	<ul style="list-style-type: none"> <li>• Connectable to indoor unit on 1:1 ratio (Max.1 Indoor unit)</li> <li>• Control LG IDU through LG's ThinQ mobile app</li> <li>• Monitoring air quality level</li> <li>• Air purify kit On/Off</li> <li>• Air quality history(Day, Week, Month, Year)</li> </ul>




※ The air purify function is applicable depending on the indoor unit model.



• DUAL VANE 4 WAY CASSETTE

## Control solution

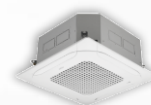
## For Indoor unit & Commercial Air Purifier

	List	Model Name	Function
<b>Central Controller</b>	 <b>AC Smart 5</b>	<b>PACS5A000</b>	<ul style="list-style-type: none"> <li>• 10 inch color display / Touch screen</li> <li>• Max. 128 units</li> <li>• BMS integration (BACnet IP/Modbus TCP)</li> <li>• Based on HTML5 web standard</li> <li>• Fine dust monitoring <sup>1)</sup></li> <li>• *Air cleaning Set/Clear <sup>1)</sup></li> <li>• Air care trend report view/excel report <sup>1)</sup></li> </ul>
	 <b>ACP 5</b>	<b>PACP5A000</b>	<ul style="list-style-type: none"> <li>• PC access controller</li> <li>• Max. 256 units</li> <li>• Fine dust monitoring <sup>1)</sup></li> <li>• *Air cleaning Set/Clear <sup>1)</sup></li> <li>• Air care trend report view/excel report <sup>1)</sup></li> </ul>
	 <b>AC Manager 5</b>	<b>PACM5A000</b>	<ul style="list-style-type: none"> <li>• Multiple ACP and ACS integration solution</li> <li>• Max. 8192 units</li> <li>• Based on HTML5 web standard</li> <li>• Fine dust monitoring <sup>2)</sup></li> <li>• *Air cleaning Set/Clear <sup>2)</sup></li> <li>• Air care trend report view/excel report <sup>2)</sup></li> </ul>

❌ **The air purify function is applicable depending on the indoor unit model.**

1) Available from Dec. 2020, 2) Available from Dec. 2020

\* Air cleaning Set/Clear : Set up to use air purify kit in the indoor unit.



• DUAL VANE 4 WAY CASSETTE



• Mont blanc B



Standard Remote Controller III

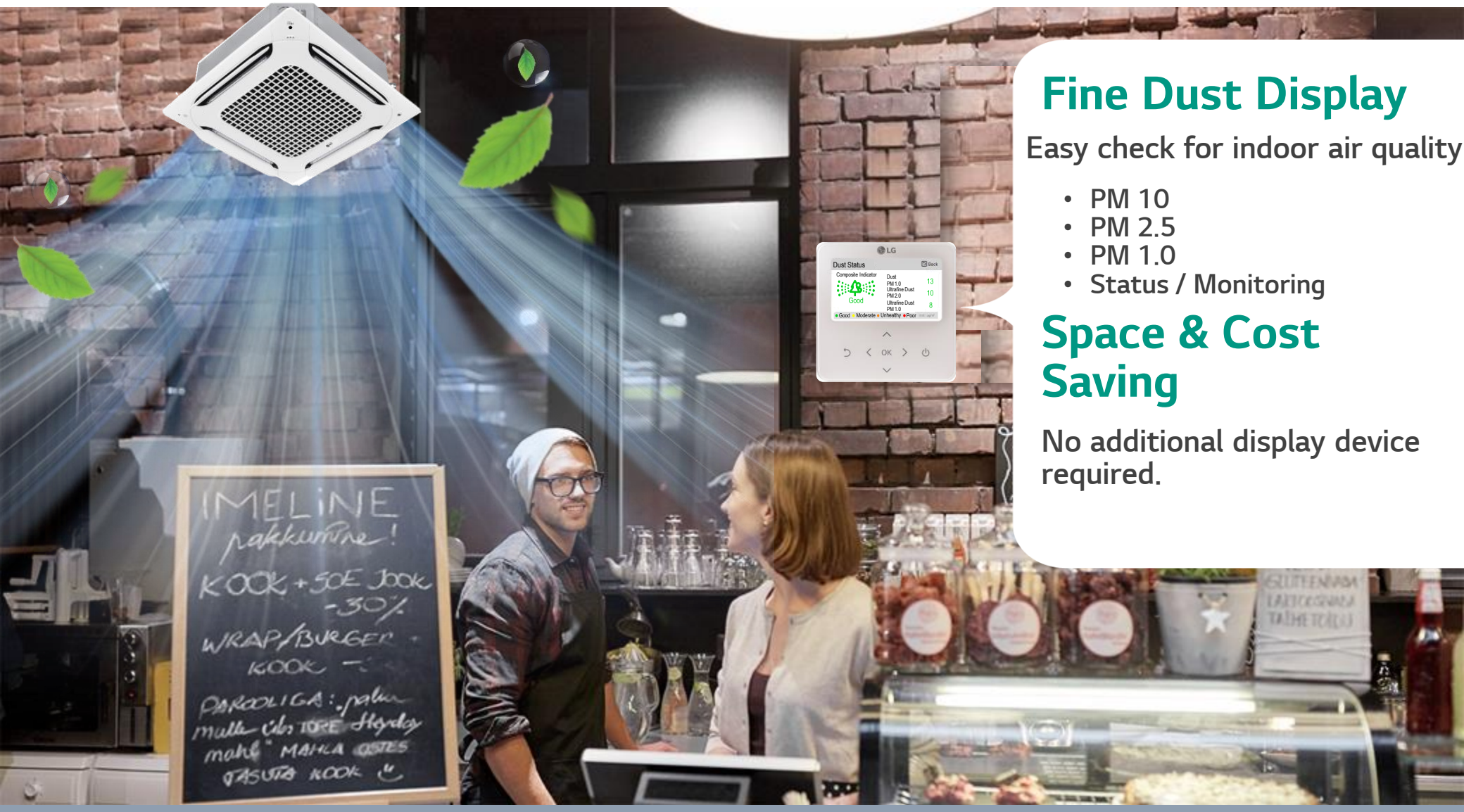


Air Purify





## Standard Remote Controller III



## Fine Dust Display

Easy check for indoor air quality

- PM 10
- PM 2.5
- PM 1.0
- Status / Monitoring

## Space & Cost Saving

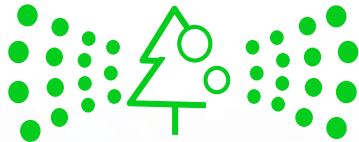
No additional display device required.



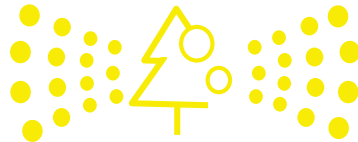
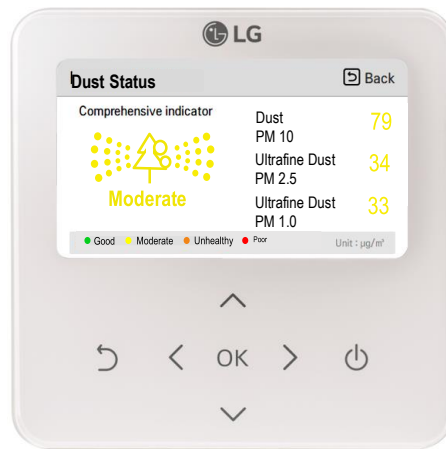
# Individual Controller

Manage fine dust by viewing air quality.

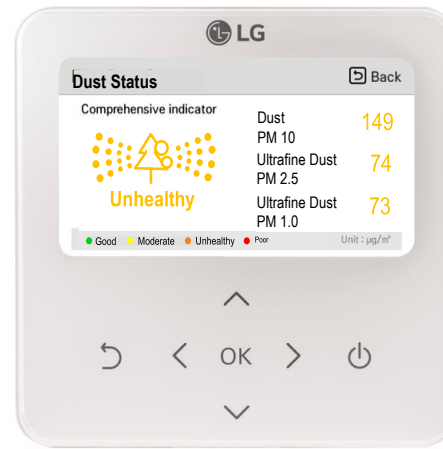
Air quality is 'Good'



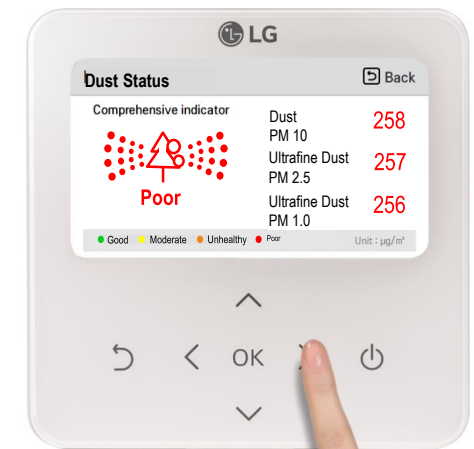
Air quality is 'Moderate'



Air quality is 'Unhealthy'



Air quality is 'Poor'



Classification	Good	Moderate	Unhealthy	Poor
PM10 ( $\mu\text{g}/\text{m}^3$ )	0~54	55~154	155~254	255~
PM2.5 ( $\mu\text{g}/\text{m}^3$ )	0~12	13~35	36~55	56~
PM1.0 ( $\mu\text{g}/\text{m}^3$ )	0~12	13~35	36~55	56~

※ Display color may change depending on the region / country.



## Reference site

Starbucks in Korea started a clean air project by applying air purifying system to a new stores. As of the end of January, 2019, 1,200 air purifiers were installed at 202 stores, and the remaining 1,000 stores are expected to be installed within 2019 (about 5,000 ~ 6,000 units).

“This store is a fine dust management store”



※ This video may cause copyright problems, so only LG internal users should use it.

Source : PaxeNews 2018.08.01



Installed Air Purifier

Managed Fine Dust  
Air Purified Store

Wi-Fi Modem



Air Purify





Using a Wi-Fi modem, control and monitor air purify from your Smart ThinQ App.



## Mobile Remote Control

Anywhere! Anytime!  
Control IDU with LG ThinQ App.

- Temp. / Mode / Fan / Air Flow and so on

## Air Quality Monitoring

Easily Check Air Quality Status

- PM 10
- PM 2.5
- PM 1.0
- Graph View of measurement history  
Day, Week, Month, Year

## Air Purify Control

Air Cleaning Set/Clear



\* Wi-Fi modem(PWFMDD200) is an accessory.

LG BECON HVAC

# Wi-Fi Controller

Anywhere! Anytime! Control IDU with Wi-Fi Modem through LG ThinQ app.



\* Wi-Fi modem(PWFMDD200) is an accessory.



**AC Smart 5 (ACP 5)**



# Air Purify

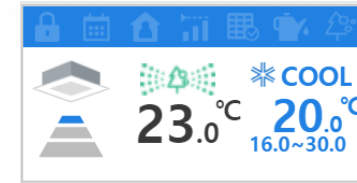


# Central Controller – AC Smart 5

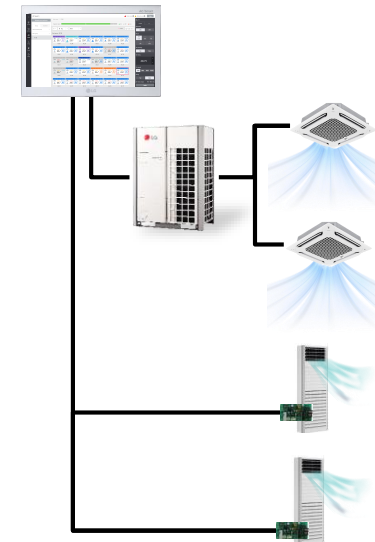
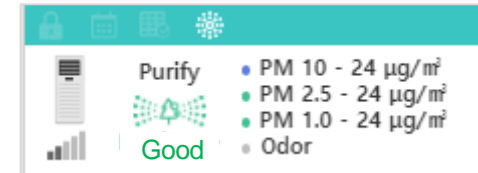
## Air Purify Total Control Solution

## Air Quality Monitoring

- System Air Conditioner



- Commercial Air Purifier



The Commercial Air purifier must additionally install PI485(PHNF14A0).





# Central Controller

Total management of air purifying function creates clean environment for everyday.

The screenshot displays the LG BECON HVAC Central Controller interface. On the left is a navigation sidebar with options: Account, Dashboard, Control, Energy, History, and Setting. The main area shows a 'Basic group > 새그룹' view with a grid of 17 air conditioning units (AC\_00 to AC\_17). Each unit card displays its current temperature, target temperature, and mode (e.g., AUTO, COOL, HEAT, FAN, DRY). A pink box labeled '01' highlights the bottom row of units (AC\_12 to AC\_17), which also show air quality information: 'Purify' status (Good) and fine dust levels (PM 10 - 24 µg/m³, PM 2.5 - 24 µg/m³, PM 1.0 - 24 µg/m³, and Odor). On the right, a detailed control panel for 'AC\_11' is shown, with a pink box labeled '02' highlighting the 'Air Cleaning' section, which includes 'Set' and 'Clear' buttons and a 'Set temp.' field currently set to 20.0°C. The top right of the interface shows status indicators for 'Device error' and 'Network error', and a 'Help' button.

**01** Air Quality Information

- Fine dust status

**02** Air Cleaning Control\*

- Set / Clear

\* Air cleaning Set/Clear : Set up to use air purification kit in the indoor unit.

# Central Controller

## Easy monitoring of indoor air quality with Dashboard



### Fine Dust Monitoring

◀ PM 10 ▶

🌿 **Good**

Average Fine Dust **46.5**

Good 11 EA	Moderate 16 EA	
Unhealthy 5 EA	Poor 0 EA	

View by Device

### Fine Dust Monitoring

◀ PM 10 ▶

🌿 **Good**

Average Fine Dust **46.5**

Good 11 EA	Moderate 16 EA	
Unhealthy 5 EA	Poor 0 EA	

View by Device ^

No.	Name	Group	Fine dust	Status
1	AIR PURIFIER	New	96	Moderate
2	1F_Room12	New	95	Moderate
3	2F_Room13	New	19	Good
4	3F_Room19	New	93	Moderate
5	3F_Room20	New	21	Good
6	5F_Room	New	92	Moderate
7	7F_Room12	New	91	Moderate
8	7F_Room13	New	32	Good
9	8F_Room30	New	44	Good
10	8F_Room32	New	89	Moderate
11	9F_Room14	New	157	Unhealthy

## Summary Monitoring

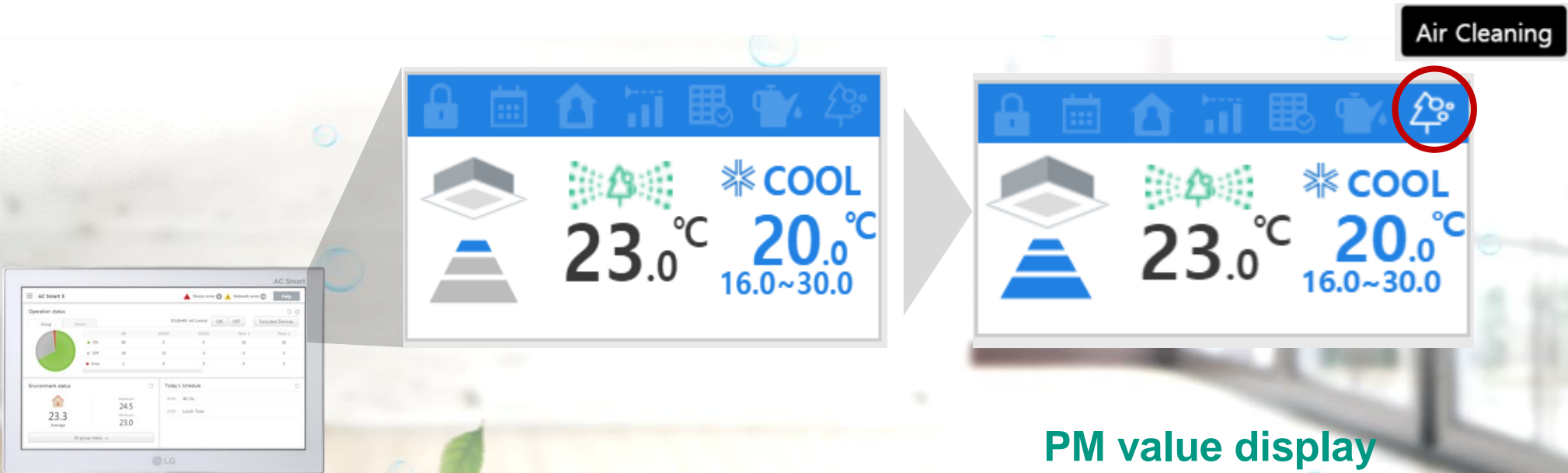
### Clean Air Summary Widget

- Average value
- View by Device  
(Name, Fine dust value, Status)



# Central Controller

Easy setting of Air Cleaning function (On/Off)



## Air Cleaning Control

Air clean operation setting

**Air Cleaning**

Set Clear

## PM value display

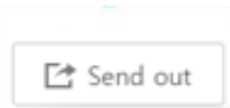
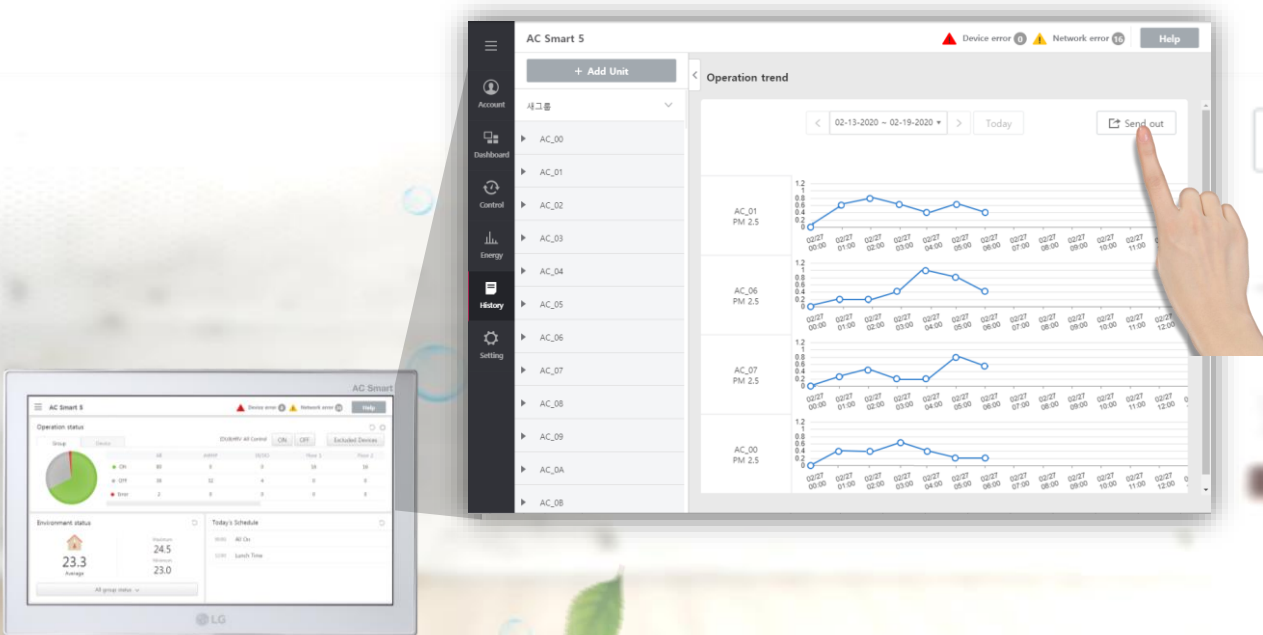
PM 10  
32  $\mu\text{g}/\text{m}^3$  (Good)

PM 2.5  
10  $\mu\text{g}/\text{m}^3$  (Good)

PM 1.0  
7  $\mu\text{g}/\text{m}^3$  (Good)

# Central Controller

## Viewable air quality History(trend) lines for each indoor unit



Name	A	B	C	D	E
1	AC_01	AC_06	AC_07	AC_00	
2	ACP	ACP:000	ACP:000	ACP:000	ACP:000
3	Category	PM 2.5	PM 2.5	PM 2.5	PM 2.5
4	02-27-2020 00:00	18	45	33	45
5	02-27-2020 01:00	20	40	12	34
6	02-27-2020 02:00	22	20	43	22
7	02-27-2020 03:00	24	10	11	3

## View Air Quality Trends

- Daily (per hour), period (30 days) shows trends
- Excel output / easy to manage.
- Integrated control solution for each space.





# Central Controller

Overall Air Quality monitoring and control can be managed easily through AC Smart 5 mobile access.



## Control with Smart phone

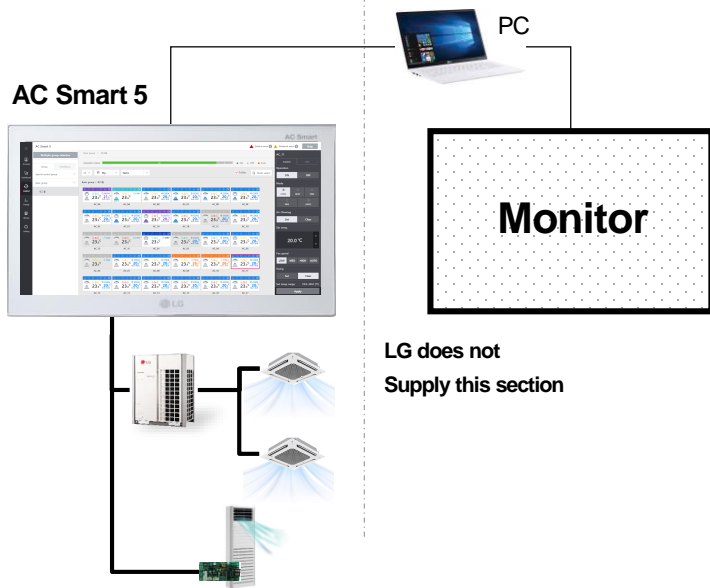
- Control air care setting / Monitoring fine dust with smart phone at any time any where

※ Mobile solutions are provided depending on the case where the wireless router is connected.

It, also, requires a static IP, and the network environment. For further information, please check with your local representative.

# Central Controller

Everyone can check the Air Quality level in real time through a dedicated Air Quality Display



## Air Quality Display

**Restaurant**

Dust PM 10 **13**

Ultrafine Dust PM 2.5 **10**

Ultrafine Dust PM 1.0 **8**

**Good**

● Good ● Moderate ● Unhealthy ● Poor

Additional displayed



## For **Single** place

Information(Menu)

Menu Bar & Grill

DRINKS

SALADS

SNACKS

MAIN DISHES

HOT STEAKS \$19.99

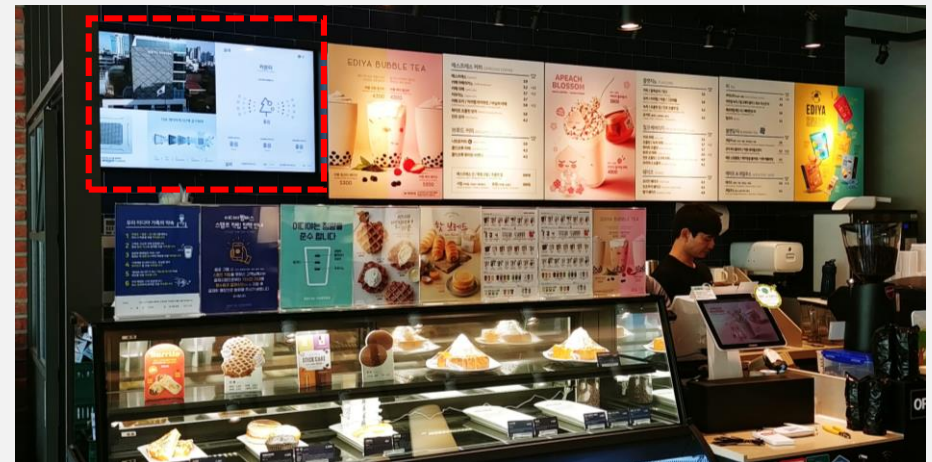
wine \$19.99

\*These are sample images. It will be developed by the end of 2020.

## Library

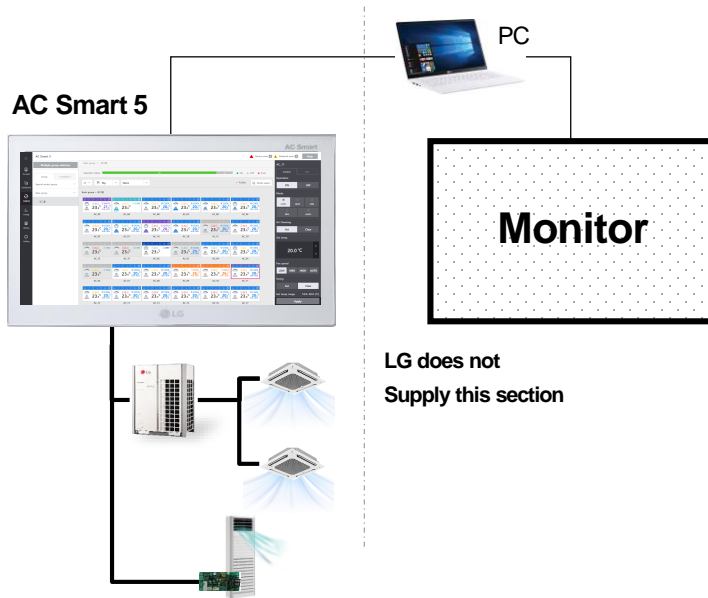


## Restaurant





# Central Controller



LG does not  
Supply this section

## Air Quality Display

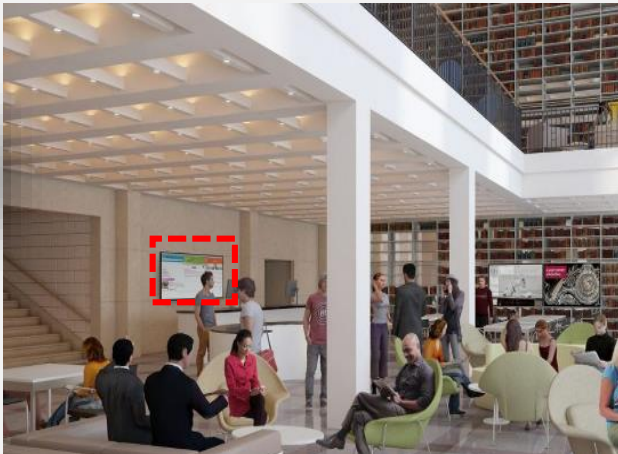
## For Multi place



Average and each place

\*These are sample images. It will be developed by the end of 2020.

## School (Library)



## Hospital



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## Innovation for a Better Life

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