Central & Remote Control Solutions for HVAC Systems

Solutions Overview

There is a diverse range of effective control solutions that satisfy specific needs of each building and its user scene.

Hotel

Office

Central Control Solution

Energy Management

External Device

Residential

Smart Individual
Control Solution

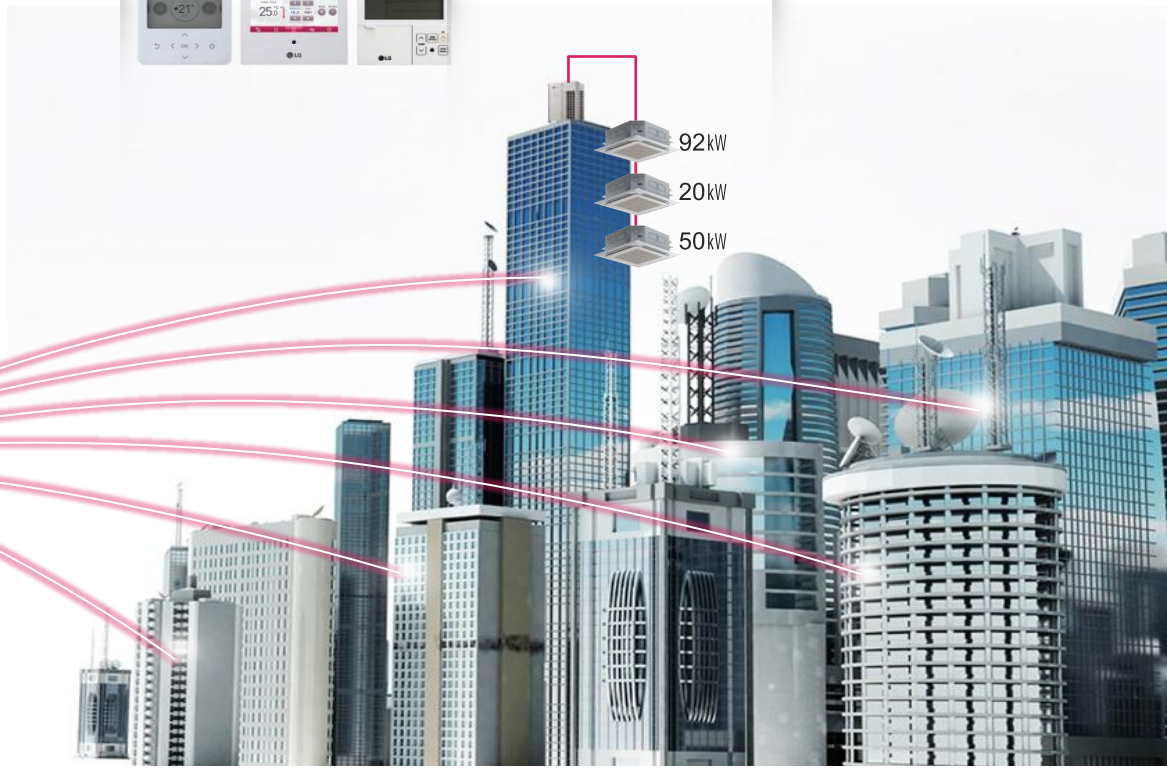
Apartment

Power Distribution
Solution

Small Building

Small Central Control
Solution

Integrated Solution

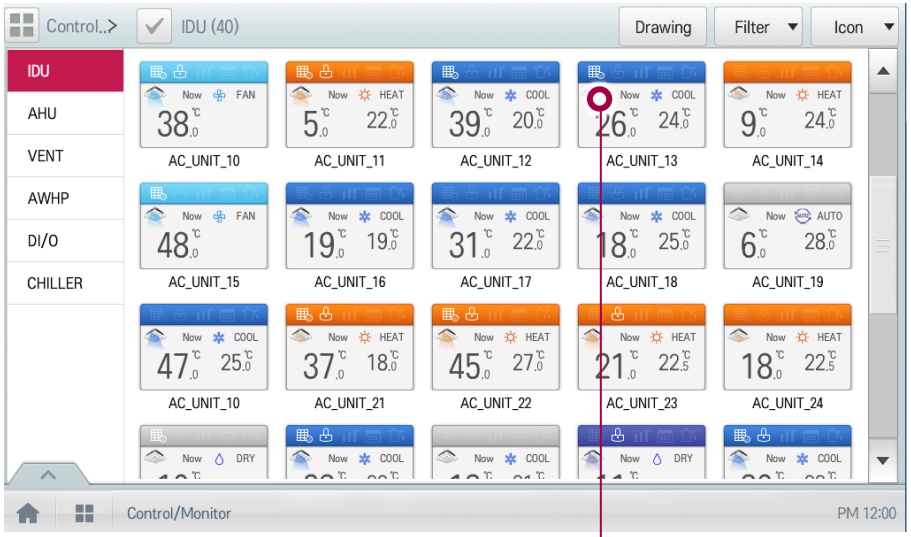


Intuitive User Interface

Through the user friendly interface, the user can easily and intuitively monitor and control the units

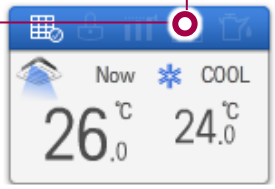
Smart GUI

Unit's individual status check at once



Different color by mode

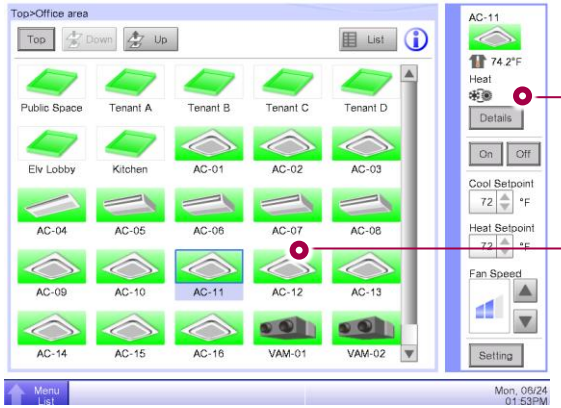
- Stop
- Fan
- Cooling
- Dry
- Heating
- Error
- Auto



*Error status

Operation mode, Room/Set temp., Fan speed, Error code, Schedule..

One-by-one checking individual status in a separated view



Individual status view (mode, temperature..)

Unit icon view (On/Off status)

Intuitive User Interface

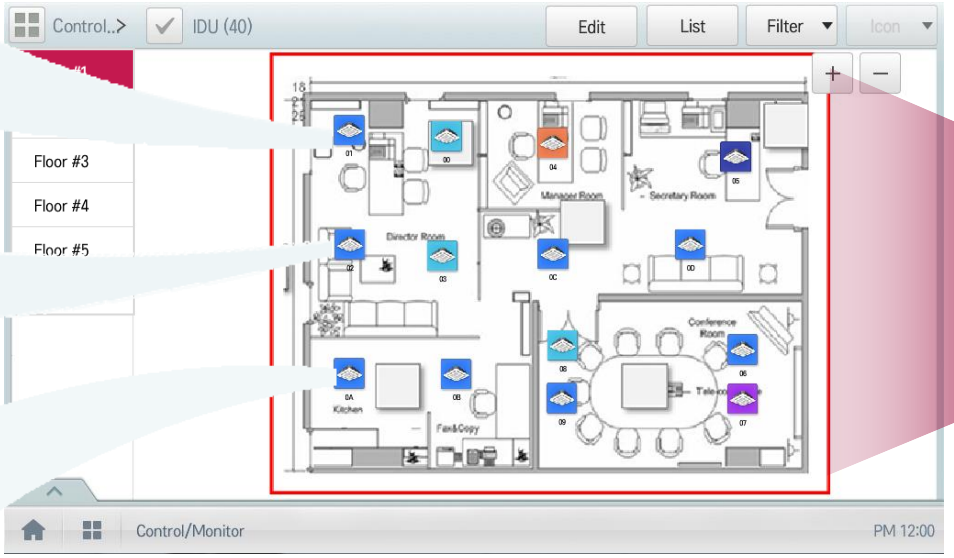
Visual Navigation

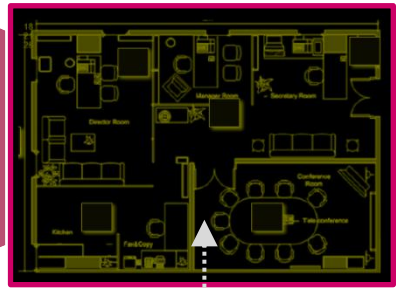
Customers can visually monitor and control any type of unit connected to the central controller on the floor map.

VIP Room

Meeting Room

Server Room





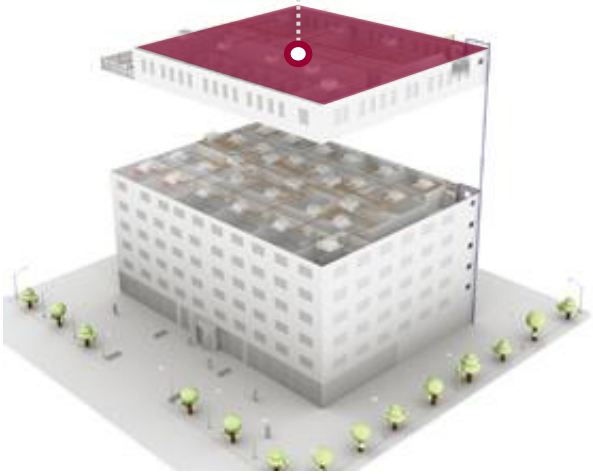
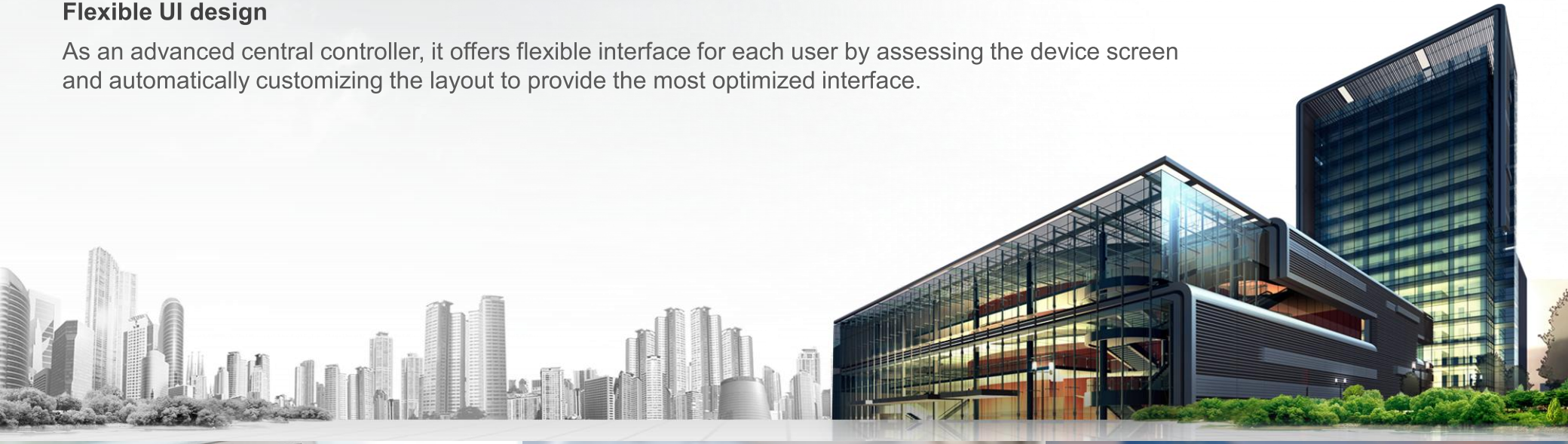


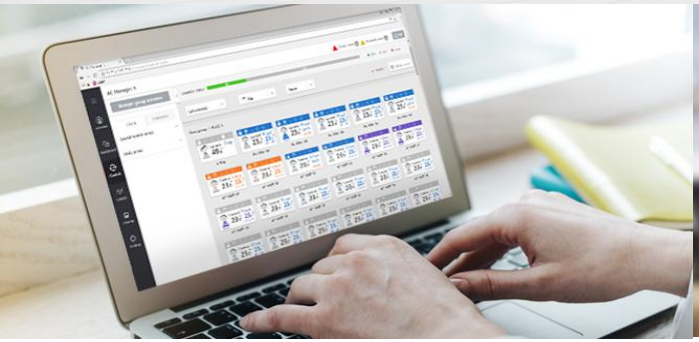
*Image file (jpg, png, gif) of floor map is allowed

Accessibility

Flexible UI design

As an advanced central controller, it offers flexible interface for each user by assessing the device screen and automatically customizing the layout to provide the most optimized interface.



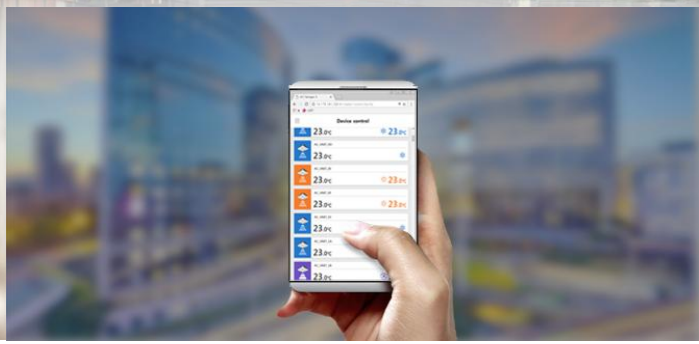


Monitoring room

PC

Checking each room

Tablet



Working outside

Mobile

Schedule function

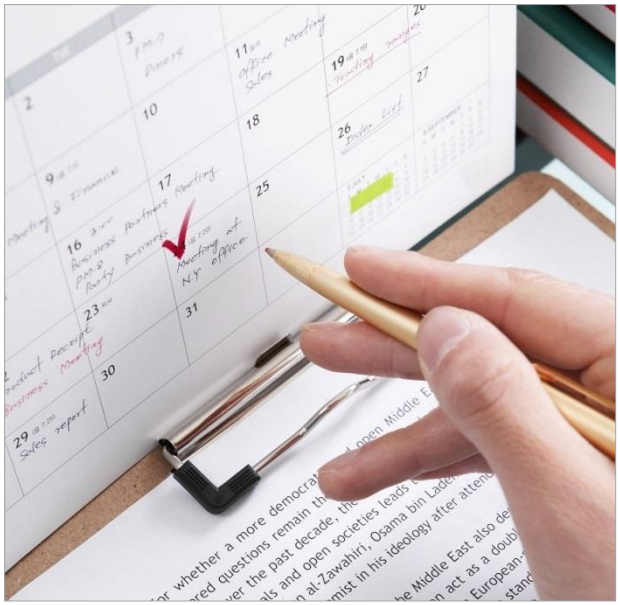
Energy Management

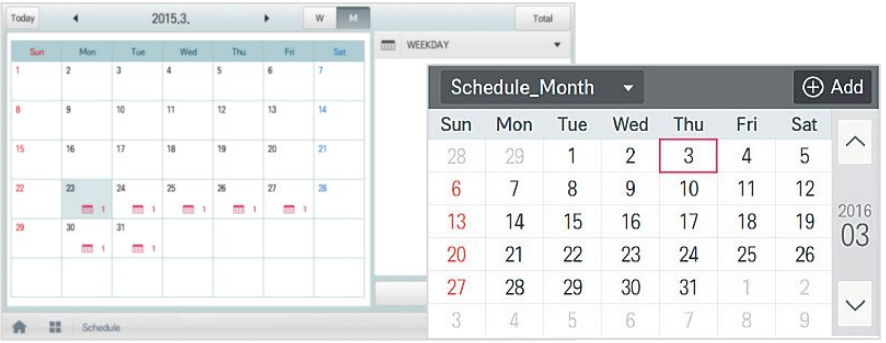
Operation Trending Report

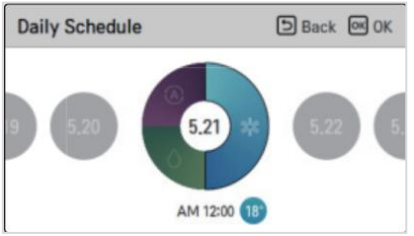
Automatic E-mail Sending

Easy Scheduling

Schedule function allows customers to arrange the operation setting of equipment according to their desired schedule.
Customers easily schedule daily, weekly, monthly plan with a calendar, also an exception date enables patterned schedule.

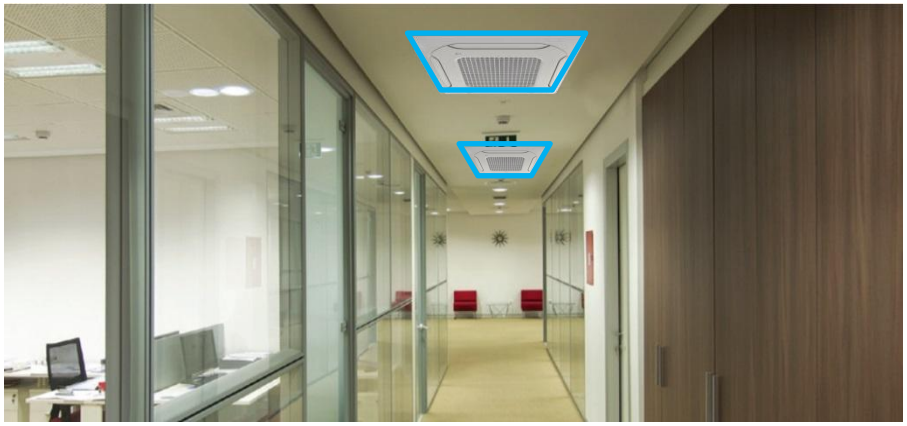






Group Control

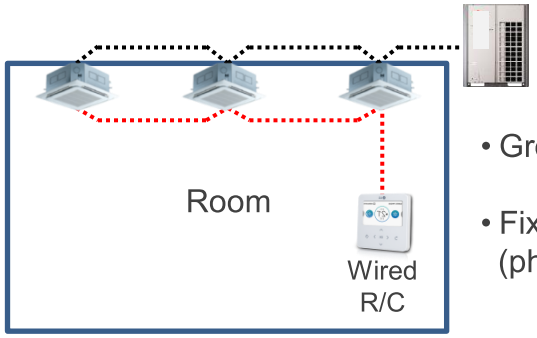
Group Control is to control multiple indoor units in a big room at once.
This is the appropriate solution for zoning the big area as a one control zone.



Group Control

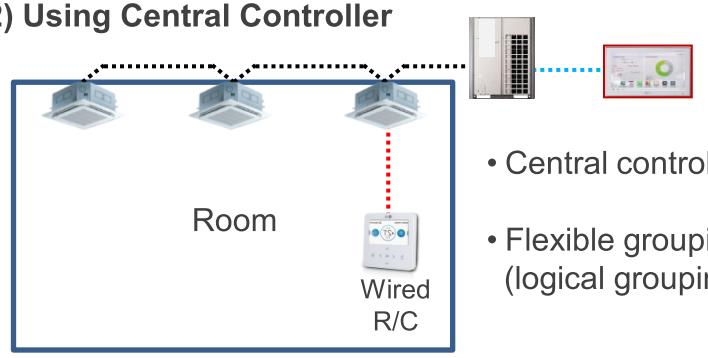
IDU~ODU Comm. wiring
Remote controller wiring
ODU~Central Controller Comm. wiring

1) Using Remote Controller Wiring

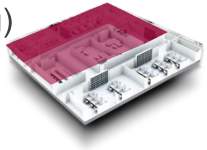


- Group wiring is necessary
- Fixed grouping (physical grouping)

2) Using Central Controller



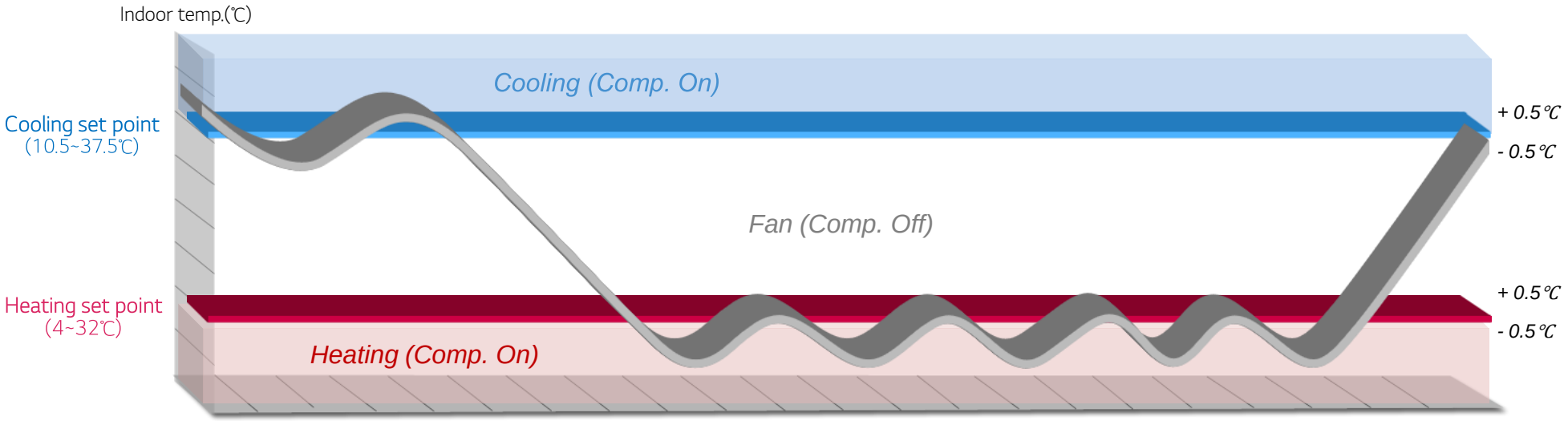
- Central control is necessary
- Flexible grouping (logical grouping)



2 Set points

Auto Changeover

Auto Changeover can manage room temperature with changing Heating/cooling mode and Compressor-off automatically.
With setting Heating and Cooling set temperature just one time, comfortable condition will continue at all times.



※ This function is available only for Heat Recovery models (In case of Heat Pump, required on consultation with technician)

2 Set points

Occupied / Unoccupied mode

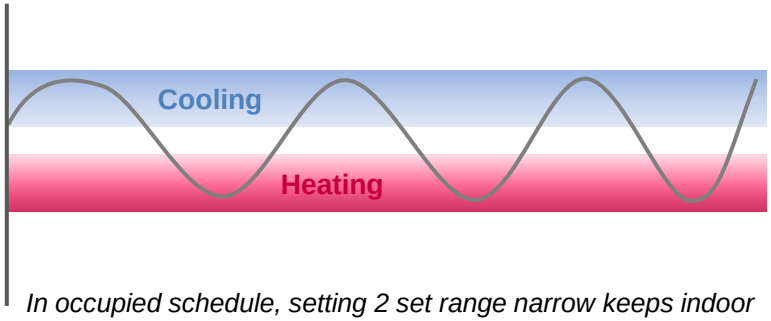
In the absence, the range of Indoor unit's 2 Set points can be extended instead of power off. It prevents room temperature too high or low and provides comfortable indoor environment quickly when the mode is changed to Occupied.

Occupied

AM

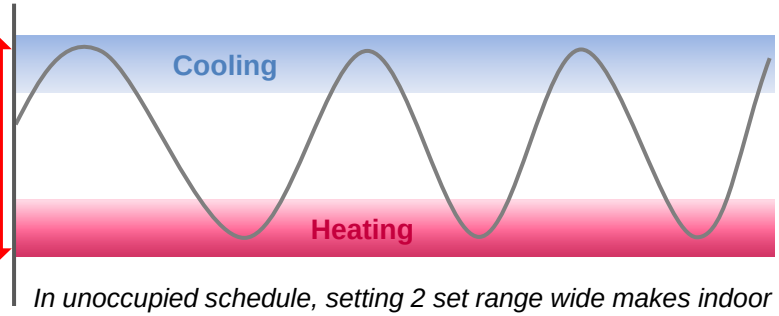
Unoccupied

PM



In occupied schedule, setting 2 set range narrow keeps indoor environment optimized by auto changeover between cooling and heating.

Just setting one time,
Keeping comfortable
at all times



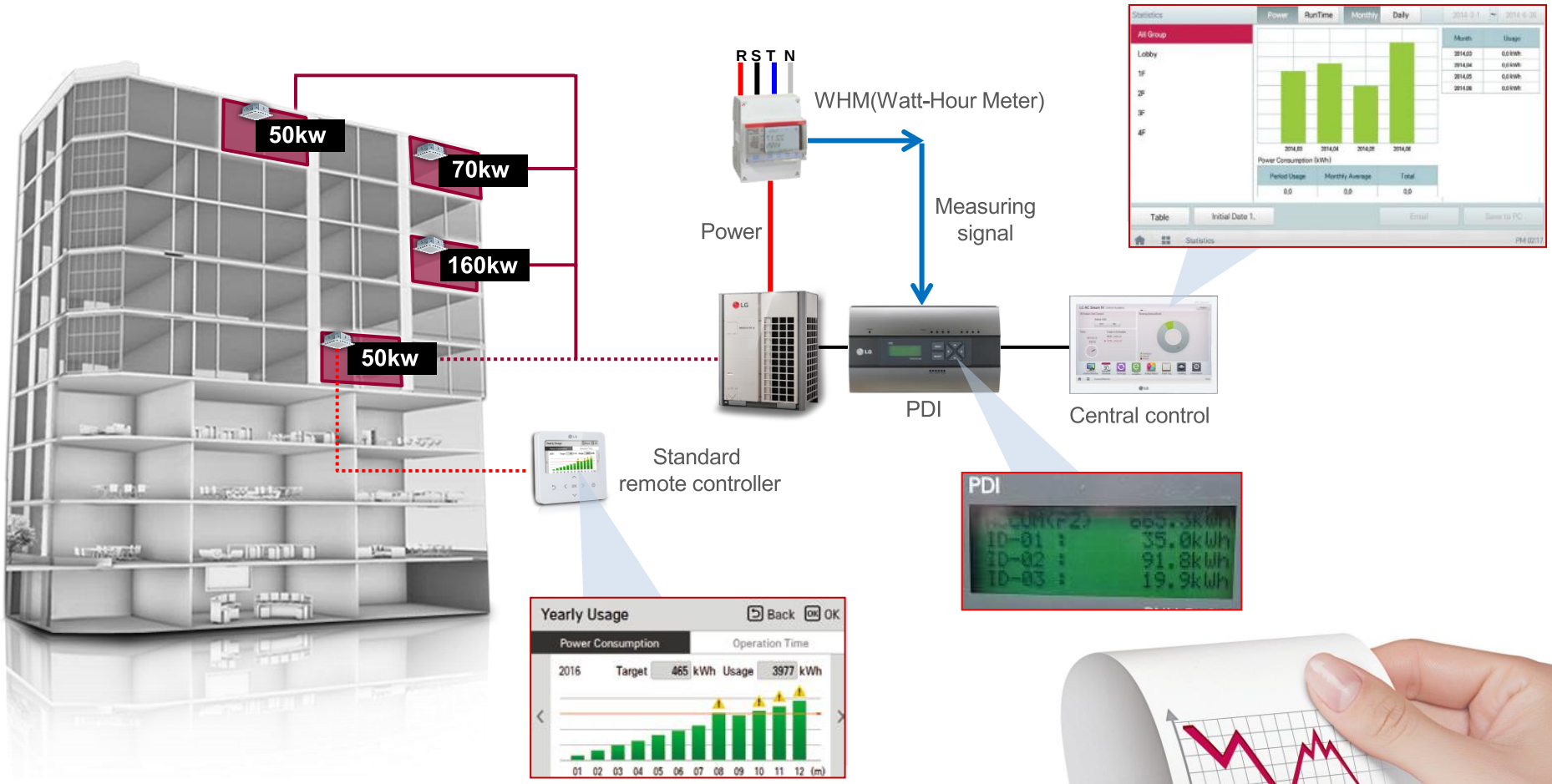
In unoccupied schedule, setting 2 set range wide makes indoor environment comfortable quickly when it changes occupied schedule

※ The condition to use 2 Set point related function requires the confirmation by an engineer.

Energy Report

Power Consumption Report

Accumulated electric energy of the indoor unit can be identified with wired remote controller as well as with the central controller.
This function is an advantage for energy management.



※ The condition to use power consumption report by remote controller requires the confirmation by an engineer.

Energy Report

Running Time Report

Accumulated running time report of indoor unit helps an user to find out the operation trend and the factor of energy waste

Energy Navigation

Energy navigation function allows air conditioners to preset monthly target of energy usage based on the previous consumption. By analyzing and comparing the present consumption trend and planned target of energy usage for the month, overuse of the HVAC system operational costs can be prevented

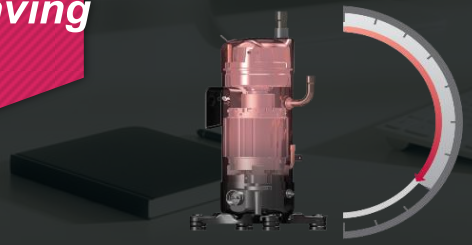
Monthly Target Setting

Control Step & Logic Selecting

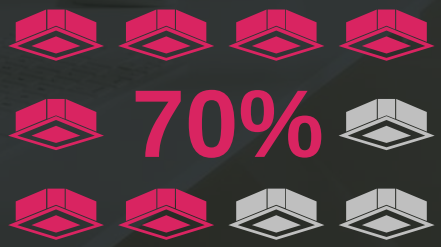
(Up to 7 Steps)

Automatic Control By Power consumption

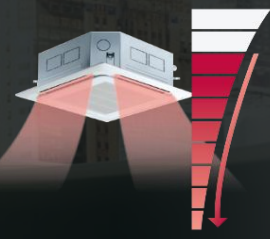
Energy Saving Logic



Compressor Capacity Control



IDU operation Ratio Control

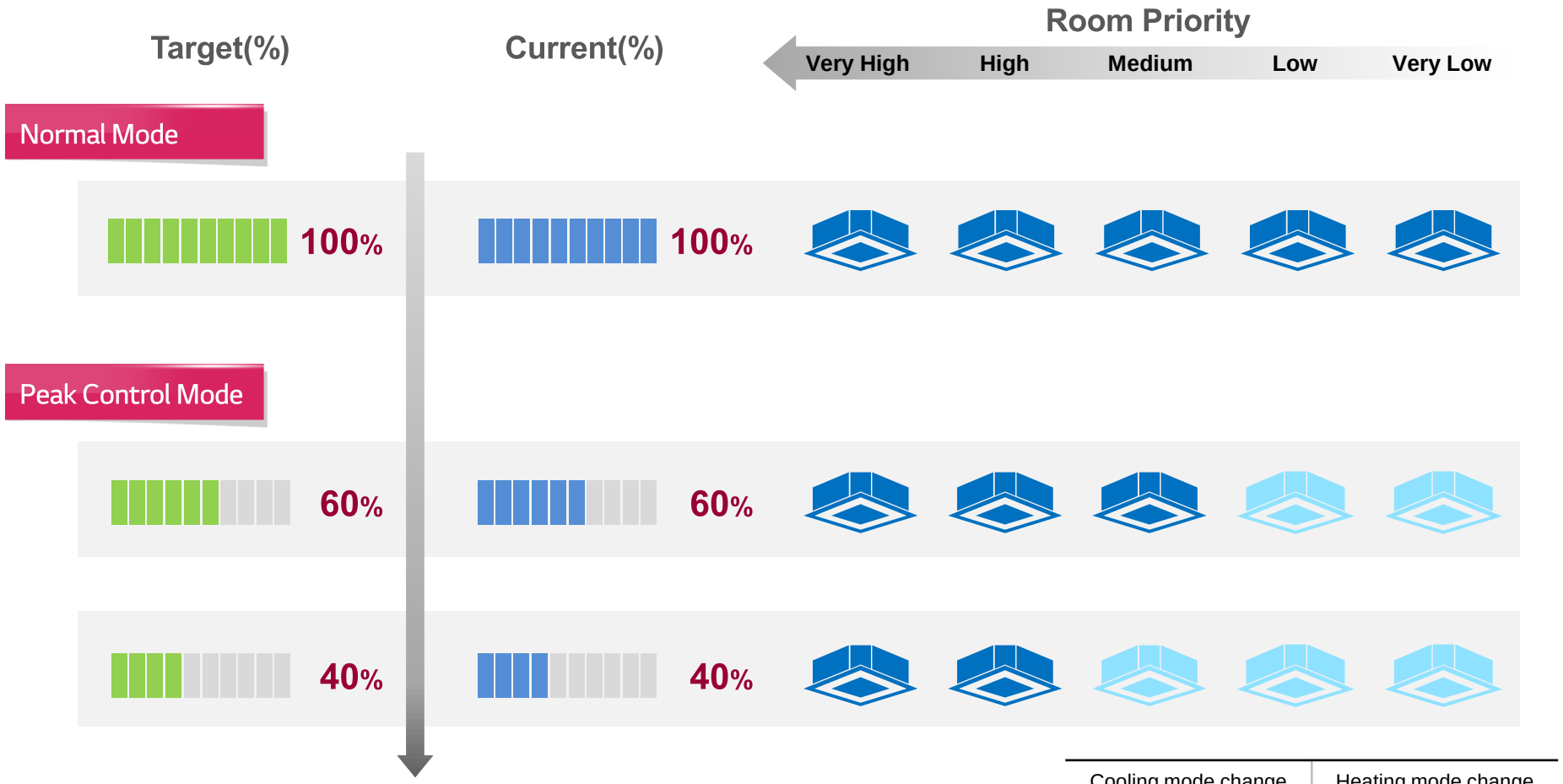


IDU operation level

Peak Control

Operation Usage Ratio Control

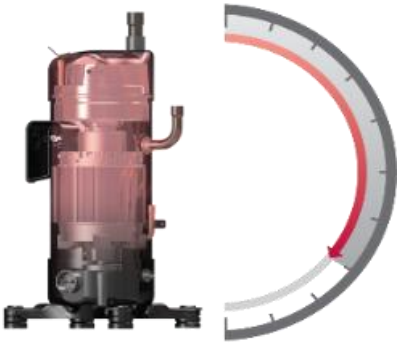
User can restrict operation usage according to the energy management plan while minimizing discomfort.
The system turns off or alternates A/C units according to the target usage by priority level



Peak Control

Outdoor unit Capacity Control

User can restrict operation usage according to the energy management plan while minimizing discomfort.
The system adjusts the capacity of the compressor to meet the target energy consumption.



	Target(%)	Current(%)
Normal Mode	100%	100%
Peak Control Mode	60%	70%
	40%	40%
	0%	0%

Time Limit Control

User can set the operation time limit in advance so that the device is automatically turned off after the period. This ensures preventing waste of energy from continuous operation at the common area like meeting room or classroom.

Time

Room in Use

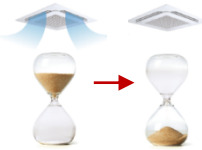
Room not in use

Without Time Limit Control

Nobody cares turning off the IDU
So IDU keeps operating….

Waste of Energy !!

With Time Limit Control



Auto-Off when the limited time is over

Prevent Waste of Energy

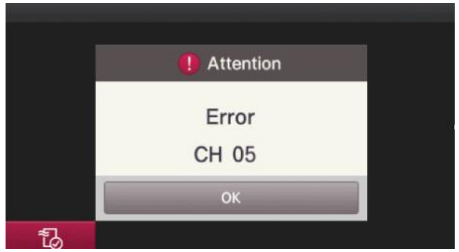
Alarm Function

History / Status Monitor

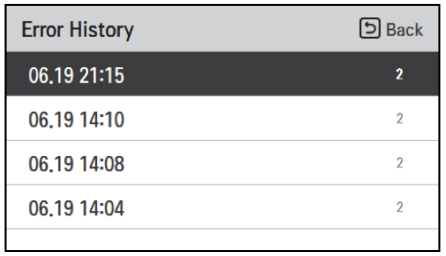
When the error occurs, Individual & Central controller display the error code to notify the building manager, and it is recorded as an history report as well.

Using Individual Controller

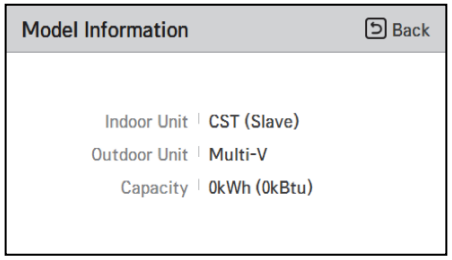
Error history



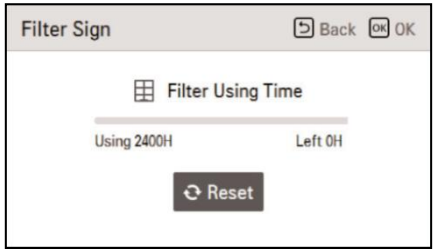
Error code display



Model info.



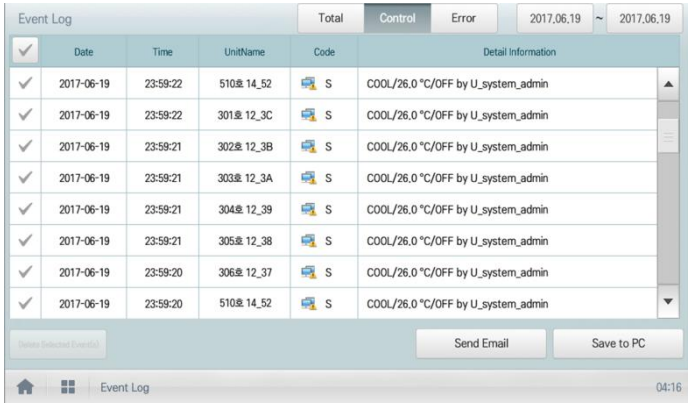
Filter change alarm



Using Central Controller

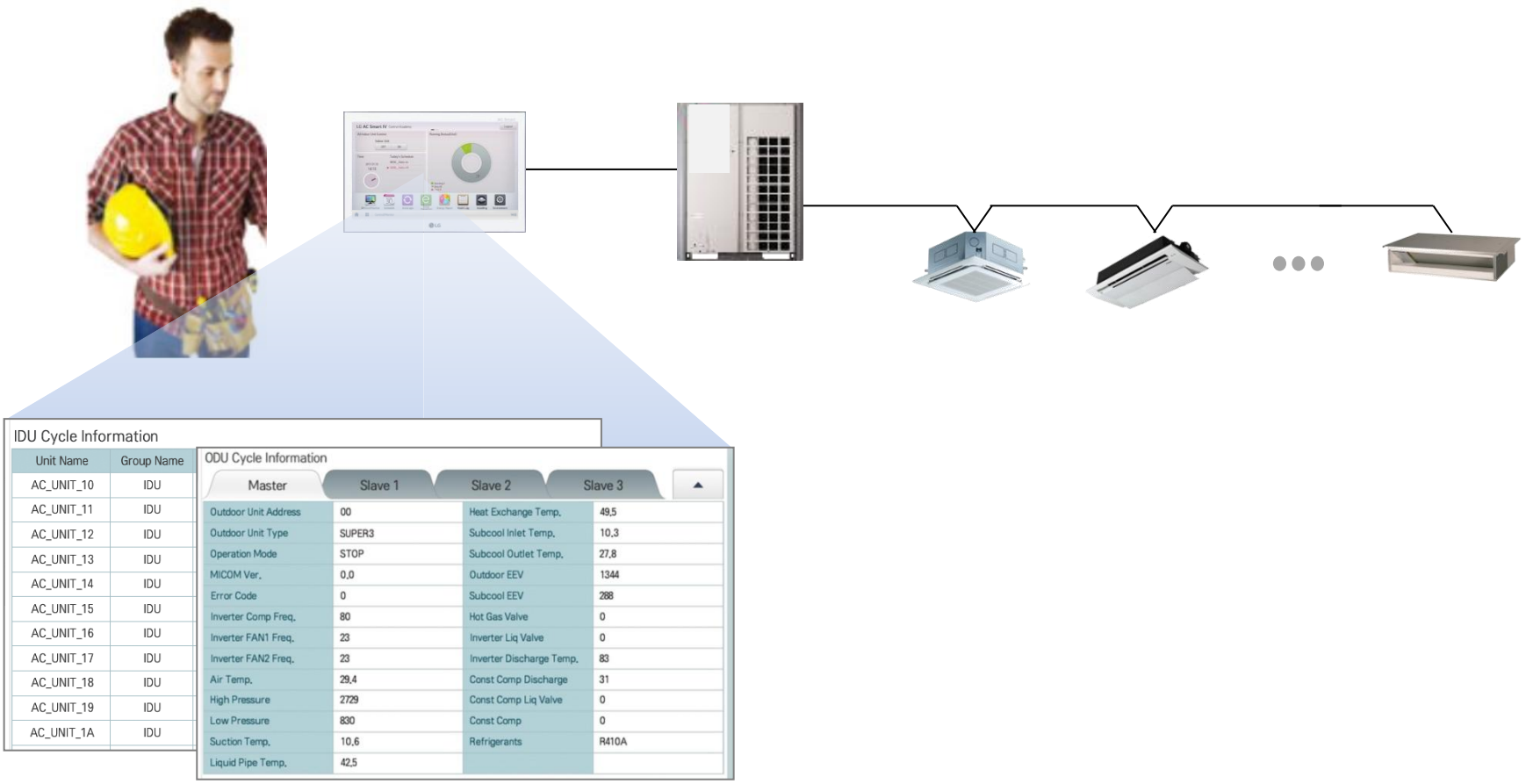
Error code display

Event history



Cycle Monitoring

Cycle Monitoring function helps engineers to monitor the cycle information of outdoor/indoor unit via Smart GUI.



IDU Cycle Information

Unit Name	Group Name
AC_UNIT_10	IDU
AC_UNIT_11	IDU
AC_UNIT_12	IDU
AC_UNIT_13	IDU
AC_UNIT_14	IDU
AC_UNIT_15	IDU
AC_UNIT_16	IDU
AC_UNIT_17	IDU
AC_UNIT_18	IDU
AC_UNIT_19	IDU
AC_UNIT_1A	IDU

ODU Cycle Information

Master | Slave 1 | Slave 2 | Slave 3

Outdoor Unit Address	00	Heat Exchange Temp.	49,5
Outdoor Unit Type	SUPER3	Subcool Inlet Temp.	10,3
Operation Mode	STOP	Subcool Outlet Temp.	27,8
MICOM Ver.	0,0	Outdoor EEV	1344
Error Code	0	Subcool EEV	288
Inverter Comp Freq.	80	Hot Gas Valve	0
Inverter FAN1 Freq.	23	Inverter Liq Valve	0
Inverter FAN2 Freq.	23	Inverter Discharge Temp.	83
Air Temp.	29,4	Const Comp Discharge	31
High Pressure	2729	Const Comp Liq Valve	0
Low Pressure	830	Const Comp	0
Suction Temp.	10,6	Refrigerants	R410A
Liquid Pipe Temp.	42,5		

Cycle information of Outdoor unit & Indoor unit

Integration with BMS

Improved BMS connection

Sizable buildings use BMS(Building Management System) which controls various types of equipment in the building.
HVAC system can be integrated by BMS via gateway product, which offers self diagnosis interface thanks to Smart GUI included.
So the system can be consistently managed even if BMS failure occurs.