

2011
SAMSUNG
System Air
Conditioner

For Lasting Peace in Comfort, Samsung Air Conditioner

The Fresh, Purified air is one of the most important elements to stay healthy. Samsung air conditioner lets you live in pleasant environment with completely purified comfortable air.



SAMSUNG

CONTROL SYSTEM

Convenient Management



Project **DVM Building**
 Location **Croatia**
 Type **Business & Apartment Building**
 Indoor units **5328EA**
 Outdoor units **641EA**
 ERV **12EA**



INTEGRATED MANAGEMENT 94

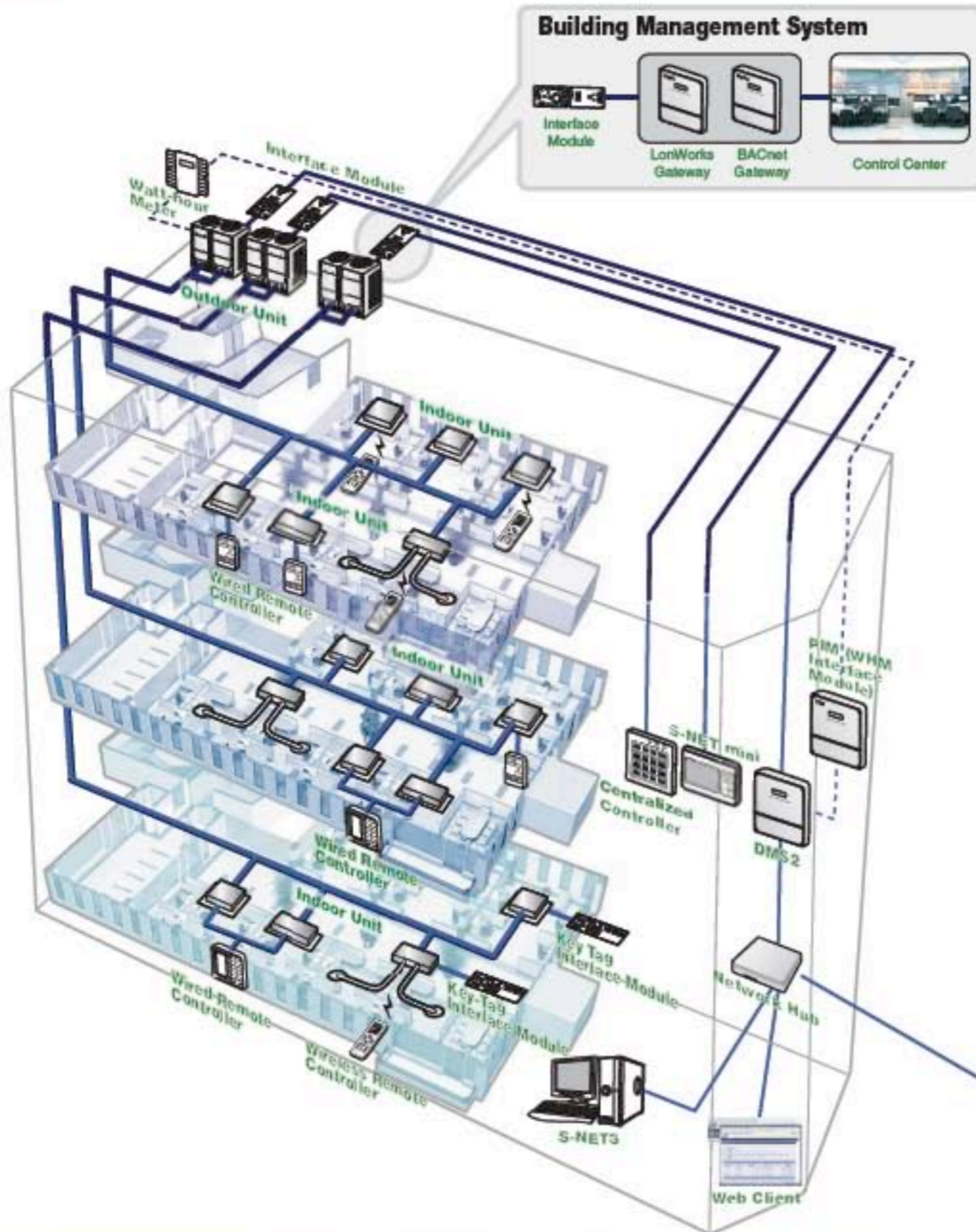
CENTRALIZED CONTROL 103

INDIVIDUAL CONTROL 104

BUILDING MANAGEMENT 106

DVM System Structure

Samsung provides efficient management solutions ranging from a single product to a group of products to form a structured air conditioning system. Samsung's optimized management system is designed to ensure operational reliability and your satisfaction.



S-NET3

This integrated software connects to the internet to manage system air conditioners through DMS. S-NET3 supports up to 16 different DMSs installed in different buildings, enabling you to control system air conditioners in 16 different places from a single computer connected to the internet.



S-NET Mini

This upper level controller features a touch screen and can be directly connected to the system air conditioners through the centralized controllers or interface modules, allowing up to 256 indoor units to be controlled. S-NET mini also supports up to 4 DMSs to provide the same remote control functions as the S-NET3.



DMS2

DMS2 is an internet-based management device that stores and manages all the data relevant to the system air conditioner. It controls up to 256 indoor units—including ERV and AHU units—and its built-in web server allows access from multiple upper-level controllers. (S-NET3, S-NET mini, Web Client)



Centralized Controller

The centralized controller controls up to 16 groups (256 indoor units) of system air conditioners. It can control the system air conditioners individually or in groups, and it supports many other functions.



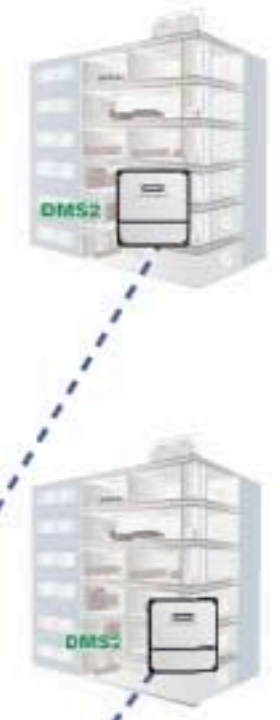
Interface Module

The interface module transmits data between the outdoor units and the upper level controllers.



Wired Remote Controller/ Wireless Remote Controller

These individual controllers are used to control single indoor units.



Integrated Management

For relatively larger places with many indoor and outdoor units to manage, you need a control solution that is easy and convenient to manage. Samsung's Integrated management system is the perfect choice for managing large and middle-sized buildings.

S-NET3

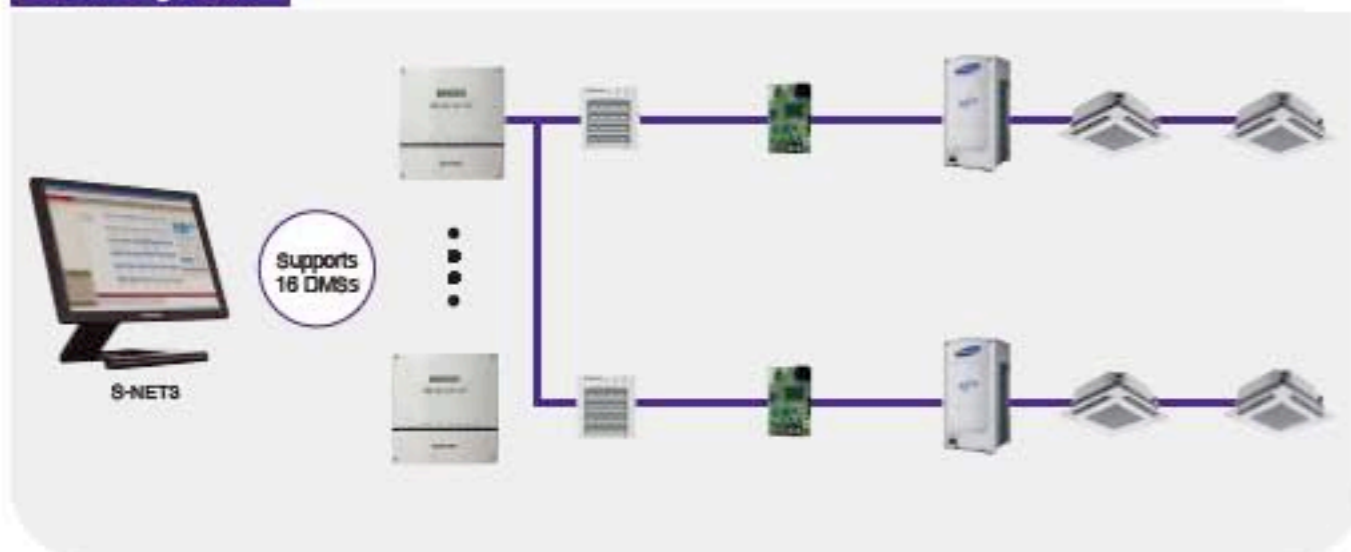
You can manage a group of buildings with the S-NET3 through Data Management Servers that individually manage each building. The S-NET3 provides flexible and complete control for a wide variety of applications.



MST-P3P

- Fully integrated PC management software.
- Up to 16 DMSs connection through the Ethernet.
- Central management of up to 4,096 indoor units including ERV, ERV PLUS, AHU
- Schedule/Zone control.
- Error/Operation history management.
- Power distribution management and analysis.

S-NET3 System



Control and Monitoring

- Control & monitoring of up to 4,096 indoor units including ERV, ERV PLUS, AHU
- Wireless/wired remote control restriction
- Temperature limit setting
- Operation mode lock
- Multiple/full indoor unit selection
- Icon-based indoor unit display mode



Power Distribution Management

- Data query for power distribution and operation time
- Power distribution report generation and printing
- Time section setting for different electricity rates
- Group setting for power distribution summary



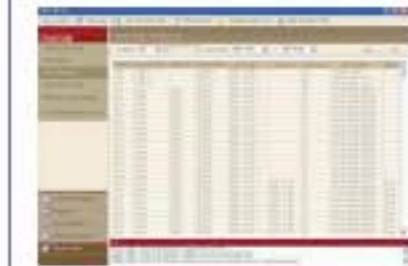
Schedule Control

- Graphical schedule settings
- Weekly, Daily schedule control
- Exception date setting



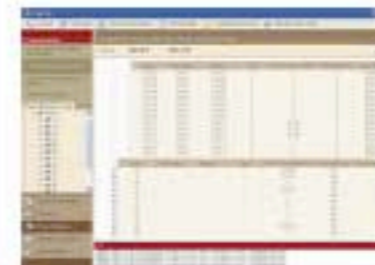
History Management

- Error/Event history management
- Indoor unit operation history management
- Report generation and printing



Zone Management

- Management structure customization regardless of installation structure
- Control zone creation/edition/deletion
- Tree structure zone management control



Cycle Monitoring

- Monitoring outdoor/indoor unit cycle data (Supported for specific outdoor unit models)



Integrated Management

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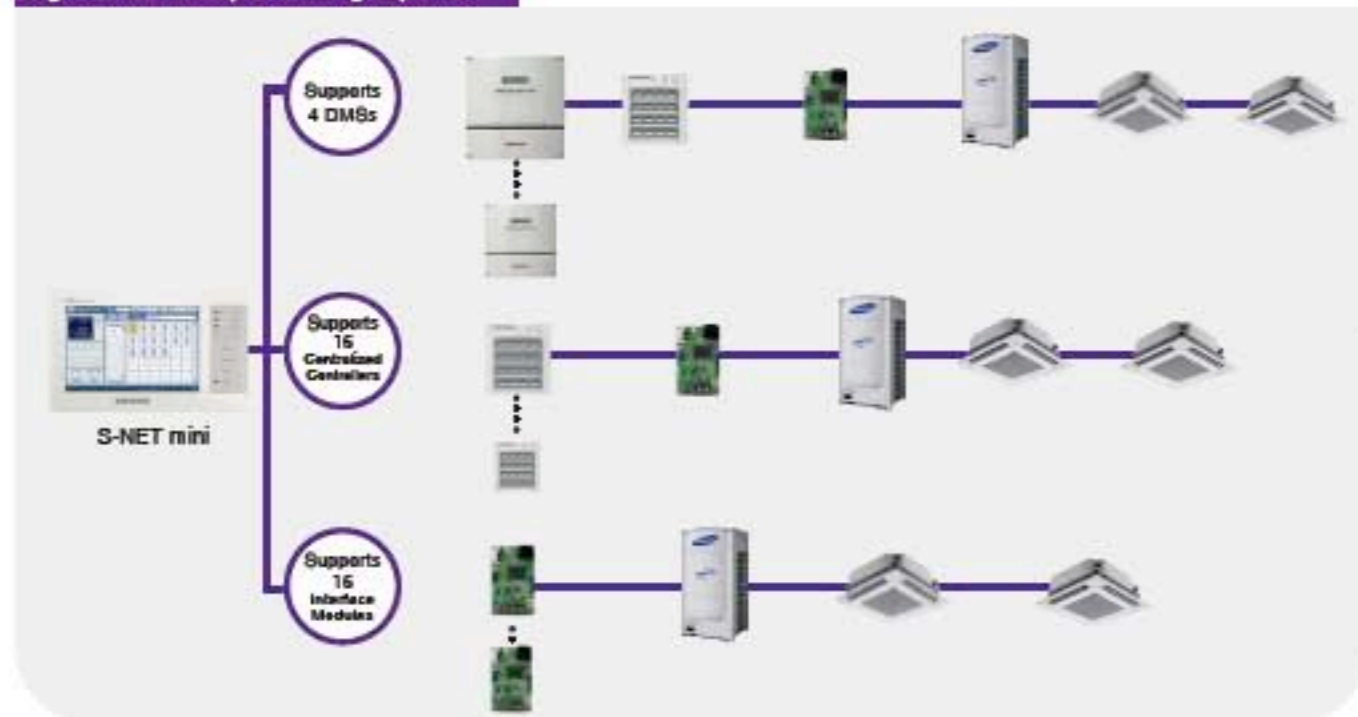
S-NET Mini The S-NET mini supports up to 4DMSs to provide the same remote control functions as the S-NET3. This touch screen controller can be directly connected to the system air conditioner through the centralized controller or interface modules, allowing for control of up to 256 indoor units.



MST-S3W

- Flexible compatibility options (DMS, centralized controller, interface module)
- Central management of up to 256 indoor units including ERV, ERV PLUS, AHU
- Detailed cycling information monitoring
- Schedule function (Weekly, Daily)
- USB keyboard support
- Error display
- 7-inch wide LGD display
- Temperature limit setting
- Touch screen
- Zone control
- Child-lock setting
- Operation mode lock
- External contact control.

Dynamic Compatibility Option



Control and Monitoring

- Control & monitoring of up to 256 indoor units including ERV, ERV PLUS, AHU
- Operation control and monitoring
- Detailed operation cycling information monitoring
- Wireless/wired remote control restriction setting



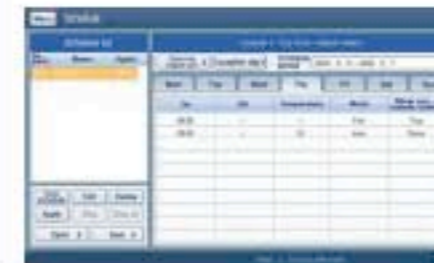
Central Restriction Function

- Upper/Lower temperature limit setting
- Operation mode lock



Schedule Control

- Maximum 256 Weekly, Daily schedule control
- Schedule repetition, exception date setting
- Schedule edit (add, edit, delete)
- Detailed operation schedule setting
- Remote control restriction option setting



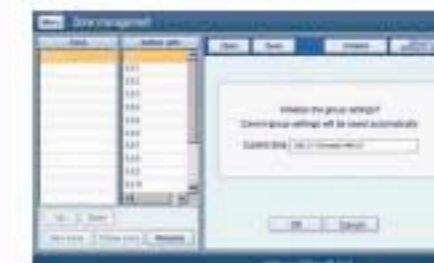
Cycle Monitoring

- Outdoor/Indoor unit cycling information monitoring (supported for specific outdoor unit models)



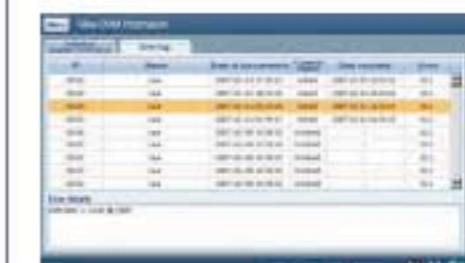
Zone Management

- Management structure customization regardless of installation structure
- Control zone creation/edition/deletion



Error Management

- Error history management
- Error management information query
- Detailed error information query



Integrated Management

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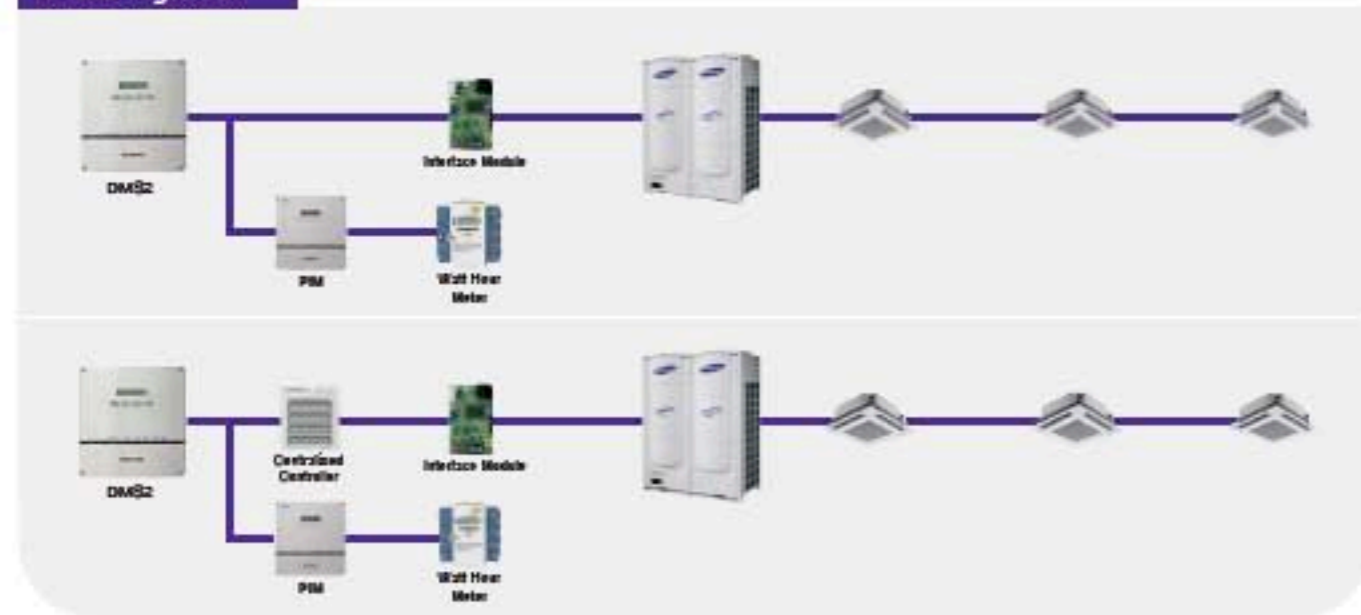
DMS2 The newly improved Data Management Server has gotten smarter: it can manage a variety of different air conditioning units, and the newly upgraded functions can automatically manage your air conditioning system for you.



MIM-DOOA

- Built-in web server for PC-independent management and remote access control
- Multiple upper-level control access (S-NET3, S-NET mini, Web-client)
- Central management of up to 256 indoor units including ERV, ERV PLUS, AHU
- User editable control logic
- Accessible level management
- Dynamic security management
- Operation & error history management
- Weekly/Daily schedule control
- Power distribution function
- Current time management even during power failure (for 24 hours)
- Data storage in non-volatile memory & SD memory
- Emergency stop function with simple contact interface

DMS2 System



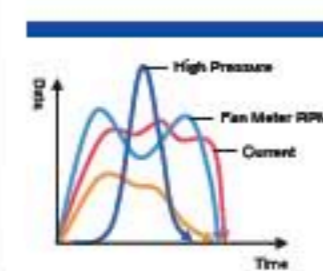
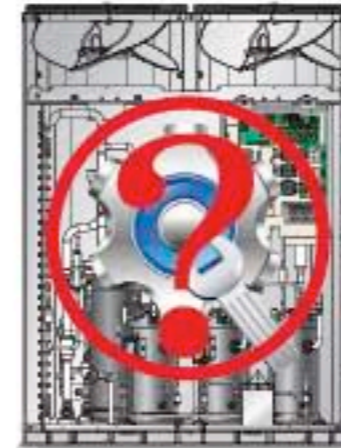
Easy Control & Monitoring

- Control and monitoring of up to 256 indoor units via internet network
- Operation on/off
- Operation mode, fan speed, temperature setting
- ERV, ERV PLUS, AHU support



Air-Conditioning Operation Monitoring

- No need to open each outdoor units
- Detailed refrigerant flow check in control room
- Reduced service lead time



Name	Address	IP-Address	Model	Operation Mode	Temp
System Status	10.10.10.1	10.10.10.1	10.10.10.1	Normal	25.0
System Error	10.10.10.1	10.10.10.1	10.10.10.1	Normal	25.0
System Error	10.10.10.1	10.10.10.1	10.10.10.1	Normal	25.0



Indoor Unit On/Off Time Storage

- Operation history that records data for up to 6 months

Unit No.	Operation Date	Control Mode	Control Type	Control Status
0001	2010.01.01 00:00:00	Auto	Normal	Normal
0001	2010.01.01 00:00:00	Auto	Normal	Normal
0001	2010.01.01 00:00:00	Auto	Normal	Normal



- Storage parameters
 1. Indoor unit address and name
 2. On/Off time (year, month, day, hour, min)
 3. Operation mode (Cool, Heat, Auto, Fan, Dry, Sleep)
 4. Set Room temperatures
- Storage Period - At least 6 months

Smart Central Management

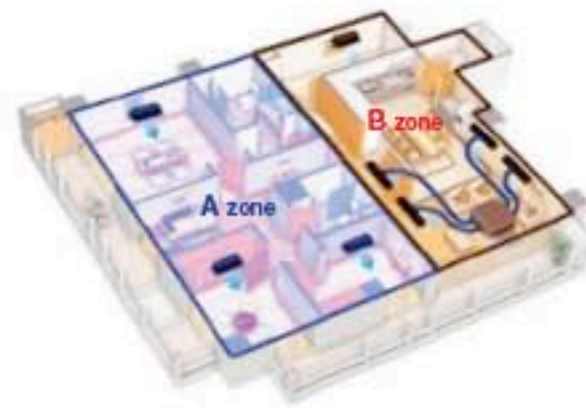
- Control & monitoring zone edition
- Wireless/wired remote control restriction
- Temperature limit setting
- Operation mode restriction

Zone A

- Cooling only/No remote controller/
Minimum setting temperature in cooling is 20°C

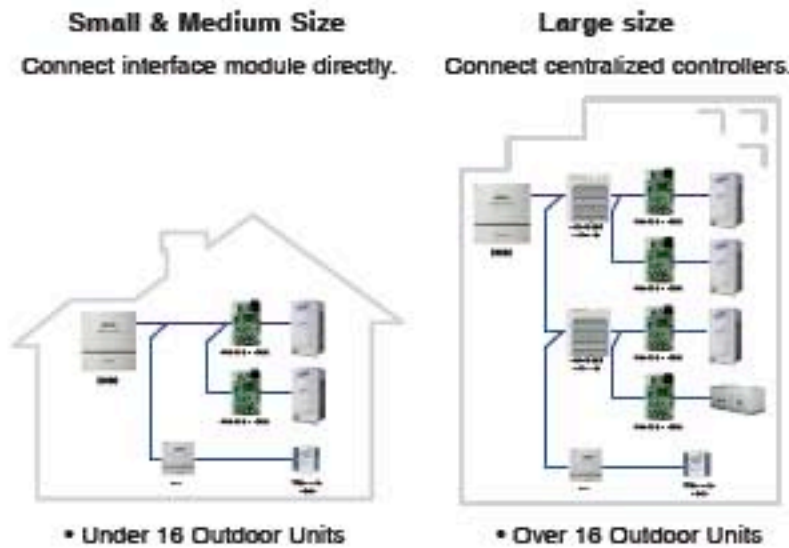
Zone B

- Cooling only/Remote controller use



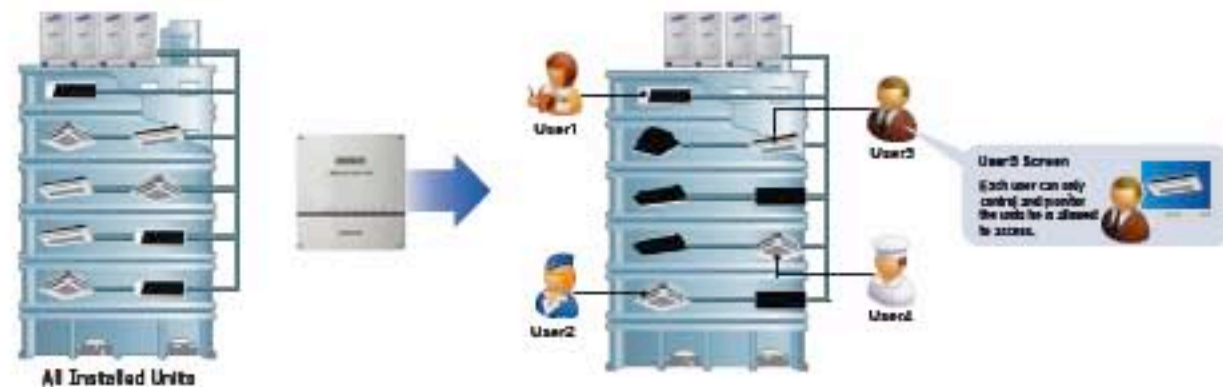
Flexible Connectivity

- Indoor unit control via Centralized controllers or interface modules directly
- Select connection point according to site



Accessible Level Management

- It is possible to specify the scope of control and monitoring unit by each user.



Enhanced Graphical Display

User friendly icon-based unit control

Zoom in & Zoom out icon display

Color indication and icons make it easy to recognize indoor unit status

Convenient & stylish controller

Dynamic User Security Management

General users, managers, and administrators can be registered separately by ID and password. Administrators (utility managers) have the authority to set access levels for DMS2 functions on users.

Functions	Admin Access All	Manager Changeable	User
Control / Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zone Management	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power Distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
System Configuration	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Powerful Data Backup

- Important data is safely stored on SD memory card.
1. Indoor/outdoor unit name
 2. Power distribution data
 3. Operation history (On/Off by DMS)
 4. DMS power On/Off history
 5. System configuration
 6. Others



Rapid & Easy Service Response

- Remote control and monitoring through the Internet (In case public IP is used)
- E-mail notification to private internet account in case of malfunction



Useful History Management

- DMS2 records indoor unit operation and error occurrence history.
- Recorded history makes it convenient to analyze air-conditioner operation and perform unit maintenance.

Operation History

1. Operation On/Off execution time
2. Daily accumulated operation On time
3. Schedule operation execution time

Error History

1. Error occurred unit name
2. Error details
3. Error occurrence/clear time
4. Error state (solved / unsolved)

Speed-up Hardware Improvement

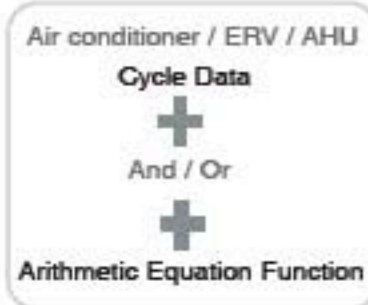
Improved hardware allows you to access your air conditioner faster than ever before.

- CPU upgrade (800MHz)
- Ethernet 100base-T (100Mhz)
- RS485 communication channel increase (1 channel → 5 channels)

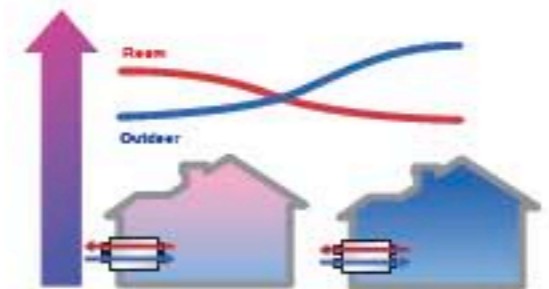


User Editable Control Logic

- User can edit control logic with arithmetic/ conditional operators and parameters.
- Energy can be efficiently used and reduced for various operation conditions.



Example: Energy saving function, operation adjustment depending on outdoor temperature



Logic	Outdoor temp < Room temp	Room temp < Outdoor temp
Control	Turn ON ERV (Cool air intake UP)	Turn ON Air Conditioner



Power Distribution System

- Power distribution to a maximum of 256 indoor units
- Data query for watt-hour, usage time, and usage ratio
- Files are saved in Microsoft Excel format.
- 1-year power distribution data is saved in storage.
- Current actual power consumption monitoring
- Current-type electricity meter support (GT ratio input)



More Extended Contact Interface

- Interlocking with external emergency system for emergency control
- System operation and error signal output
- Contact input and output for interface with a general purpose device (Maximum of 16 contacts)
- Direct contact output control and input monitoring



Centralized Control

Samsung's centralized control system offers easy and convenient control of individual indoor units or entire groups of multiple units.

Centralized Controller

MCM-A202D

- Maximum of 16 group controls (Maximum of 256 Indoor units)
- Unified/Individual indoor unit control (On/Off)
- Wireless/wired remote control restriction
- Cooling/Heating mode control
- Indoor unit error display

MCM-A202D is compatible with MCM-A202A and MCM-A202B

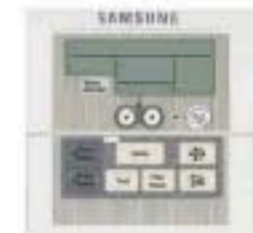


Function controller

MCM-A100

- ON/OFF, Operation Mode, Fan Speed, Airflow, Temperature setting
- Error display
- Filter replacement alarm reset
- Control and monitoring of up to 16 indoor unit groups

The Function Controller must be connected to MCM-A202D to operate.



Operation Mode Selection Switch

MCM-G200

- Operation mode selection (Cooling, Heating or Auto)
- Mixed operation mode protection



Interface module

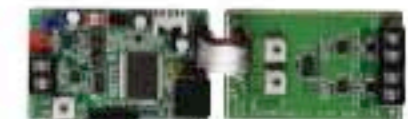
MIM-B13D

- Communicator between indoor/outdoor units and the centralized controller
- MIM-B13D must be used when controlling a group of less than 16. (If it is not used for group control, then MIM-B13D has to be used.)
- MIM-B13D supports the DVM, FJM, CAC, ERV and ERV PLUS.



MIM-B13E

- Communicator between indoor/outdoor units and the centralized controller
- MIM-B13E is compatible with MIM-B13A and MIM-B13B.
- MIM-B13E must be used when controlling a group of more than 16.
- MIM-B13E supports the DVM, FJM, CAC and ERV. (It doesn't support the ERV PLUS.)



Individual Control

There is a variety of wired and wireless controllers that enable you to easily control your air conditioners. Take a look at which controllers offer the options you want, and choose the ones that best suit your air conditioning environment.

Wireless remote controller

MR-DH00

- ON/OFF, Operation Mode, Fan Speed, Airflow, Temperature Setting
- Filter replacement alarm reset
- Simple schedule control
- Wide display
- Soft touch button
- Individual blade control (supports specific indoor unit models)
- Multi-channel wireless remote control (maximum of 4 channels)



Wired remote controller

MWR-WE10

- ON/OFF, Operation Mode, Fan Speed, Airflow, Temperature Setting
- Individual and group control (Maximum to 16 indoor units)
- Error display
- Filter replacement alarm reset
- Sleep & Silent mode
- Built-in Room Temperature sensor
- Child lock
- Automatic stop mode
- Wireless remote control restriction
- Clear & Bright screen with LCD backlight
- Unified controller (AC, ERV, ERV PLUS, AHU)
- Different permission levels
- Weekly schedule setting (A/C, ERV, A/C+ERV)
- Exception date setting
- Individual blade control (Supported the specific indoor unit models)



MWR-WH00

- ON/OFF, Operation Mode, Fan Speed, Airflow, Temperature Setting
- Built-in Room Temperature sensor
- Child lock
- Automatic stop mode
- Sleep & Silent mode
- Simple schedule control
- Different permission levels



Wireless Signal Receiver

MRK-A00

- ON/OFF control
- Operation indication
- Error Indication
- Filter replacement sign
- Use with receiver wire, MRW-10A



Simplified Wired Remote Controller

MWR-SH00

- ON/OFF, Operation Mode, Fan Speed, Airflow, Temperature Setting
- Individual and group control (Maximum of 16 indoor units)
- Error display
- Filter replacement alarm reset
- Mode selection protection



ERV Wired Remote Controller

MWR-VH02

- Individual and group control (Maximum of 16 ERVs)
- On/Off control
- Operation mode (By-Pass, Heat Exchange), fan speed
- Simple schedule control
- Error display
- Synchronized operation with indoor units



External room sensor

MRW-TA

- External sensor to sense exact user environment temperature



7day Scheduler

MWR-BS00

- Up to 100 weekly and daily schedule settings
- Schedule setting based on 1-minute time units
- Digital clock display
- Permanent schedule setting storage
- Current time protection from blackout (maximum of 3 days)
- Use with wired remote controller or centralized controller (MCM-A202D)



Building Management

Samsung's excellent building management system with convenient monitoring makes management of your air conditioning units much easier.

BACnet gateway

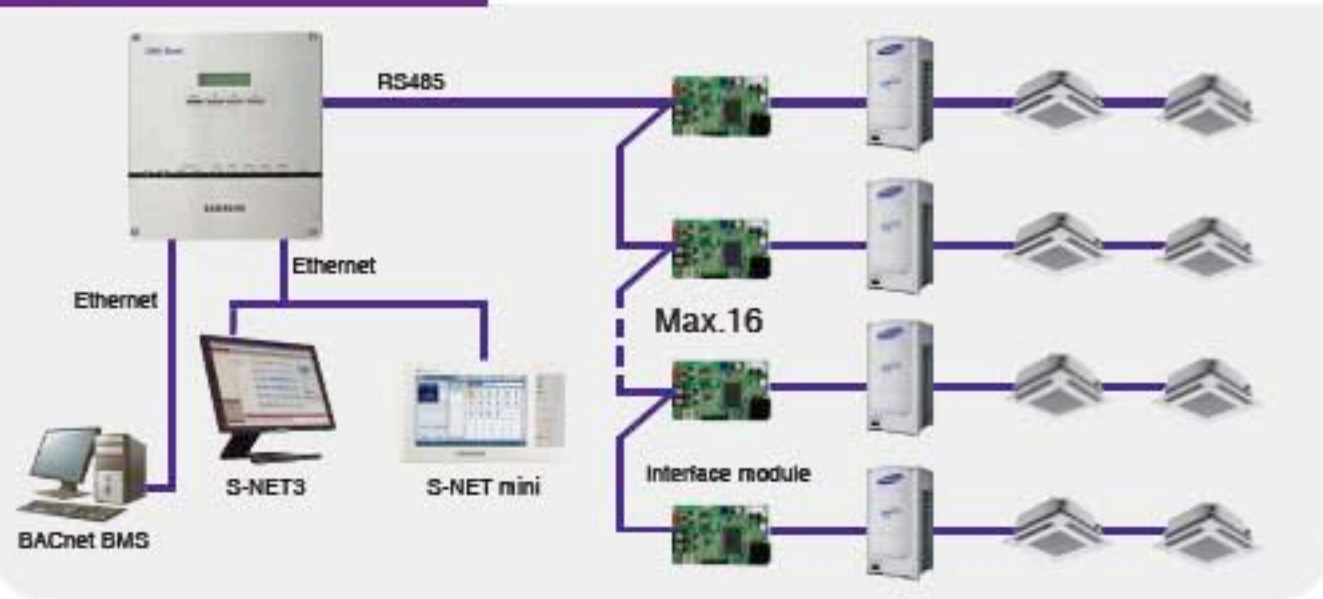


MIM-B17

- Interface for BACnet management system
- Maximum of 256 indoor units. ERVs support with maximum of 16 interface modules
- Combinational use of BACnet and S-NET3/ S-NET mini
- Included DMS2 functions

Control		Monitoring	
*On/Off control	*Filter alarm reset	*On/Off control	*Room On/Off
*Operation mode	*User control restriction	*Operation mode	*Power distribution
*Temperature setting	*Operation mode lock	*Room temperature	*Operation mode lock
*Fan speed/direction	*Set temperature limit	*Fan speed/direction	*Set temperature limit
*ERV operation mode	*Emergency stop	*ERV operation mode	*In/Out contact state
*ERV fan speed	*Output contact control	*ERV fan speed	*Emergency stop
		*Filter alarm	*Error code
		*User control restriction	

Connection



LonWorks gateway

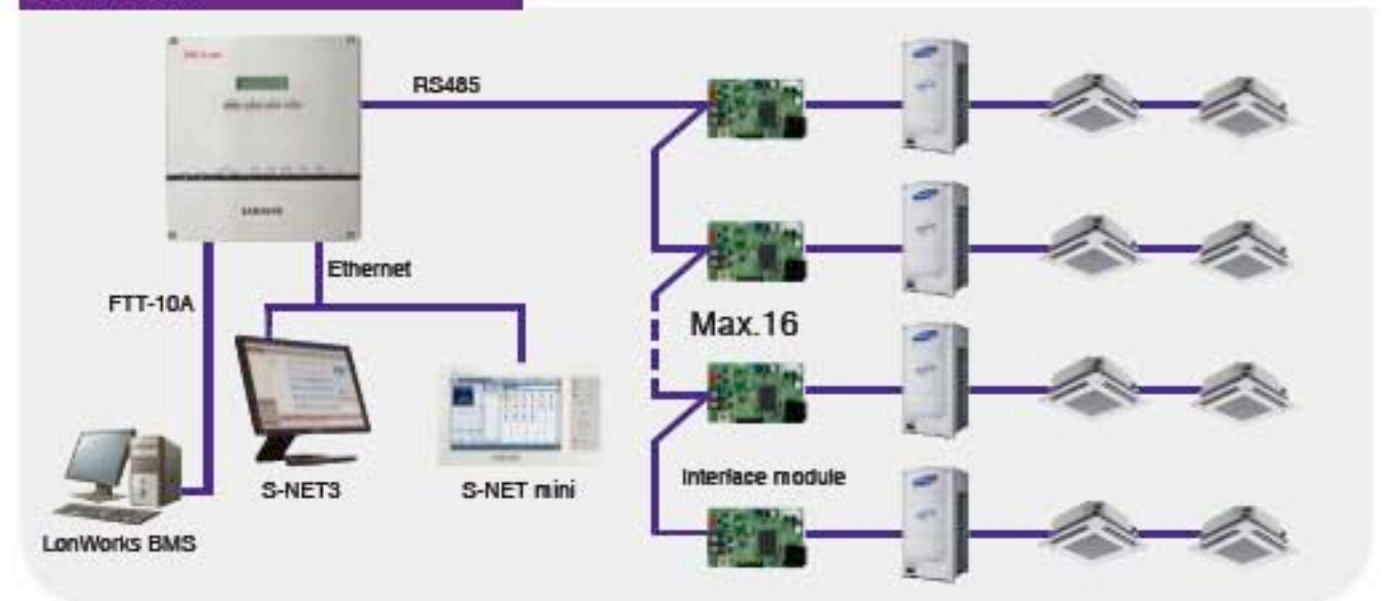


MIM-B18

- Interface for Lon-Connection to LonWorks management system
- Max. 128 indoor units, ERVs support with a maximum of 16 interface modules
- Combinational use of LonWorks and S-NET3/ S-NET mini
- Includes DMS2 functions

Control		Monitoring	
*On/Off control	*Filter alarm reset	*On/Off control	*Room On/Off
*Operation mode	*User control restriction	*Operation mode	*Power distribution
*Temperature setting	*Operation mode lock	*Room temperature	*Operation mode lock
*Fan speed/direction	*Set temperature limit	*Fan speed/direction	*Set temperature limit
*ERV operation mode	*Emergency stop	*ERV operation mode	*In/Out contact state
*ERV fan speed	*Output contact control	*ERV fan speed	*Emergency stop
		*Filter alarm	*Error code
		*User control restriction	

Connection



LonWorks Interface Module

MIM-B07

- Interface for Lon-Connection to LonWorks management system
- Quick and easy installation
- Up to 12 indoor units can be controlled
- Communication : RS485 to LonWorks
- Upper Physical Layer: FTT-10A



BMS Control Function	Monitoring Function
• On/Off control	• On/Off
• Temperature setting	• Operation mode
• Operation mode	• Room temperature
• Fan speed	• Error information

Building Management

Samsung's excellent building management system with its convenient monitoring functions make management of your air conditioning units much easier.

Watt-hour Meter Interface Module

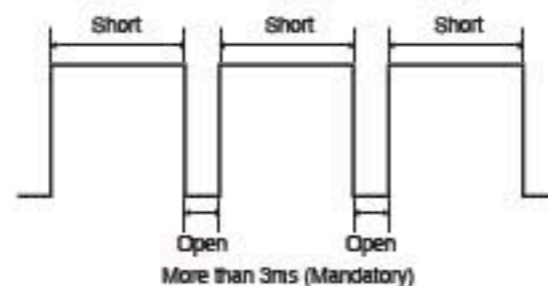


MIM-B16 PIM (Pulse Input Module)

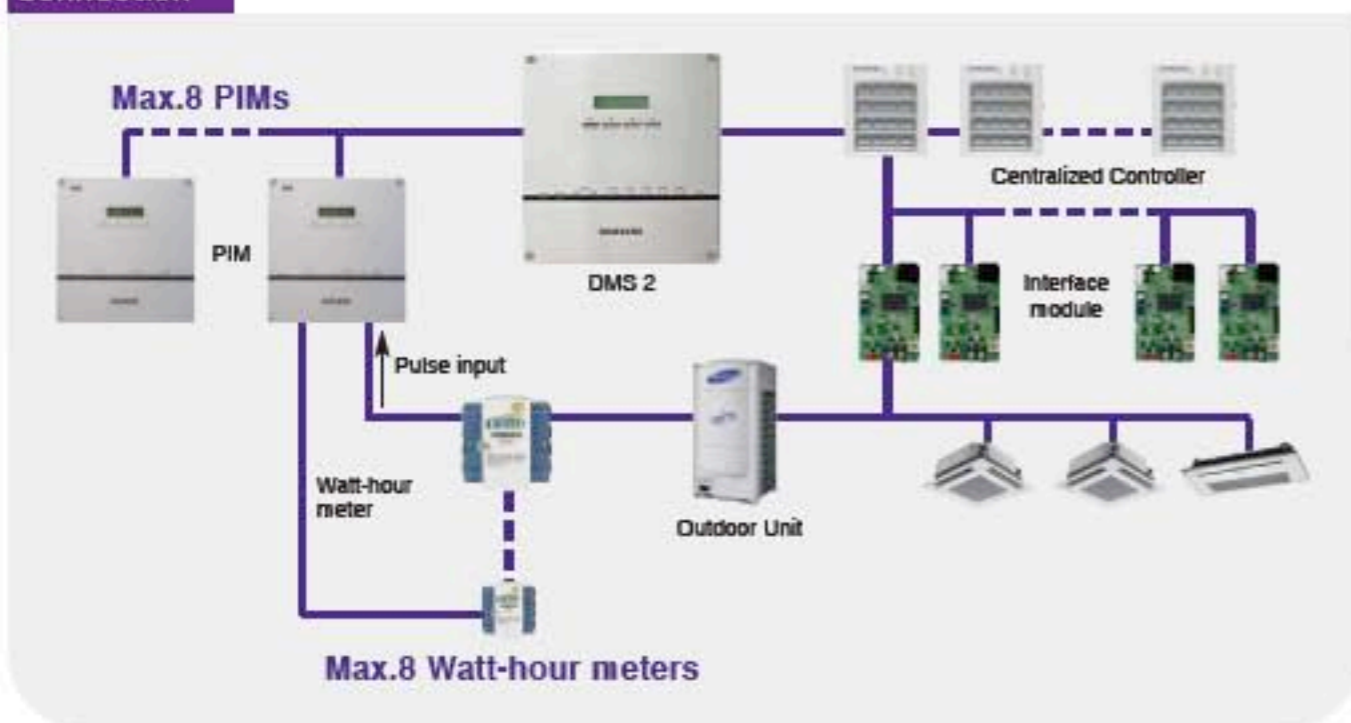
- Exclusive use for DMS2 power distribution
- Connection with up to 8 watt-hour meters
- Pulse interface with watt-hour meters
- Power consumption display for each watt-hour meter

Connectable Watt-hour meter with PIM

- Wh/Pulse Range : 1~10000 Wh/Pulse (no decimal place)
- Pulse Width Range : 20~400ms
- Interval between Pulses : Minimum of 3ms



Connection



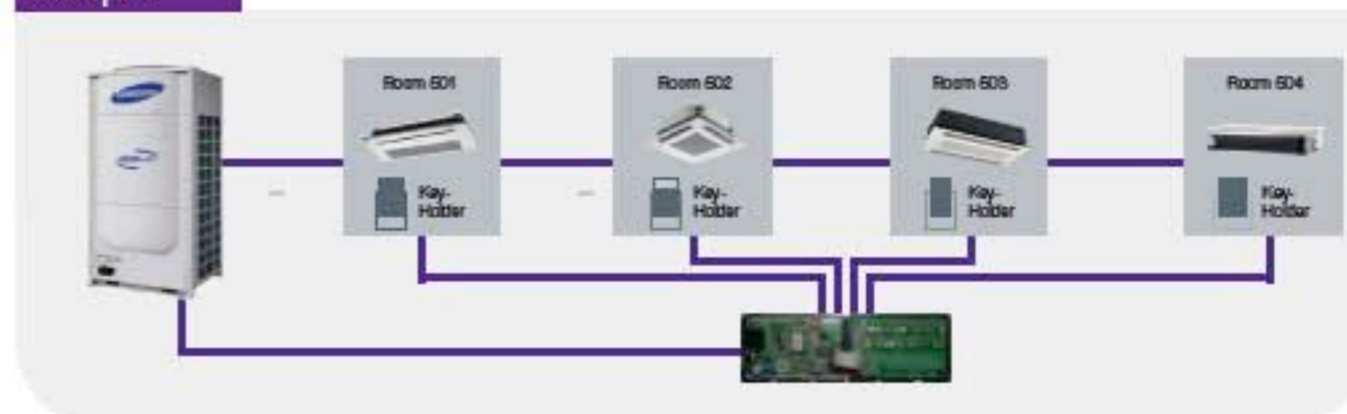
Guest Room Management

The Guest Room Management System is a smart way for saving energy and money: the air conditioner is activated when the Key-Tag is in place, and turns off when the Key-Tag is removed. By avoiding the waste of energy on cooling an unoccupied room, you can reduce energy usage and costs.

Key Tag Interface Module

- Indoor unit control by external contact signals
- Individual / Group control of up to 16 indoor units
- Combinational use with sensor / timer / emergency inputs

Example



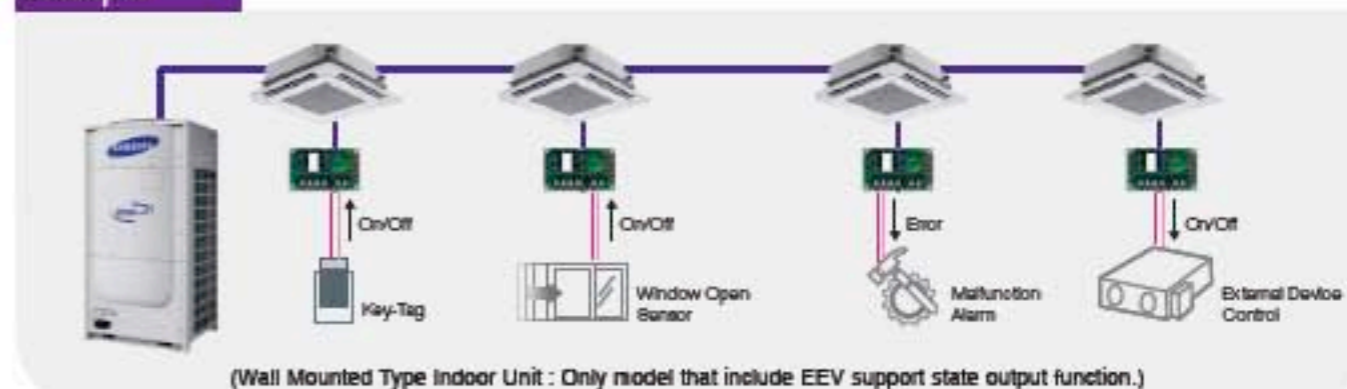
External Contact Interface Module



MIM-B02

- Direct indoor unit control by external contact signal
- Window-synchronized indoor unit control
- Emergency control with simple contact input
- Indoor unit operation / error state output through relay contacts

Example



DVM-PRO

DVM Pro will help you select the products, accessories, and other things you require to customize your air conditioning system.

DVM-Pro sales mode

- **Workspace:** Creation 'Project' & 'Workspace (DVM, FJM, CAC)
- **Indoor Unit:** Indoor unit and accessory selection
- **Outdoor Unit:** Automatic selection and capacity simulation
- **Piping:** Basic, standard, or manual selection with system check
- **Wiring:** Automatic diagram with communication wiring of indoor/outdoor/control units and electric power meters
- **Control system:** Automatic control unit selection
- **Report:** Specifications, diagrams, and quotation



Download!

www.dvmsystem.com → Download Center → DVM-Pro

DVM-Pro CAD mode

- **Quick, Easy, Precise Design**
- **Compatibility with AutoCAD**
- **Automatic Calculation:** Refrigerant & drain pipe size
- **Automatic Selection:** Refnet joint, header & distributor kit
- **System Check:** Installation regulation & refrigerant addition
- **Simulation:** System capacities
- **Easy Control System Selection**
- **Automatic Report:** Piping installation diagram, equipment list & quotation



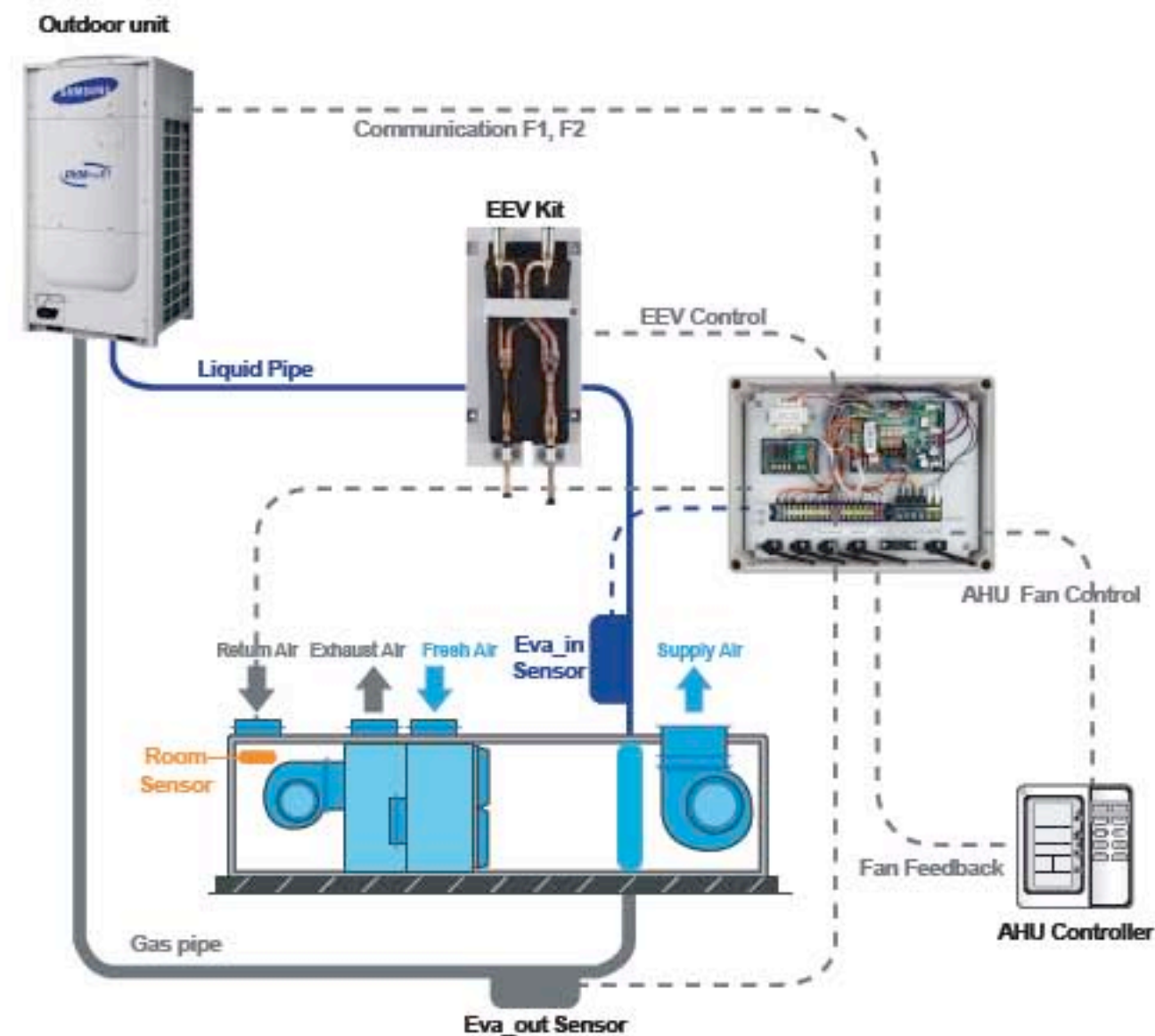
Contact to Samsung HQ or Distributors for DVM-Pro CAD!

Wide Application

Samsung provides a kit that allows DVM PLUS IV outdoor units to connect to AHU (Air Handling Units).

AHU Kit

- IP54 is Satisfied
- Variable Capacity
- 2.5HP / 5HP / 7.5HP / 10HP
- Simple BMS can be applied
- 0-10V control



Learn more by visiting
www.dvmsystem.com

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■ Specification may be subject to change without prior notice
for the continuous product improvement.

Ver.1.0