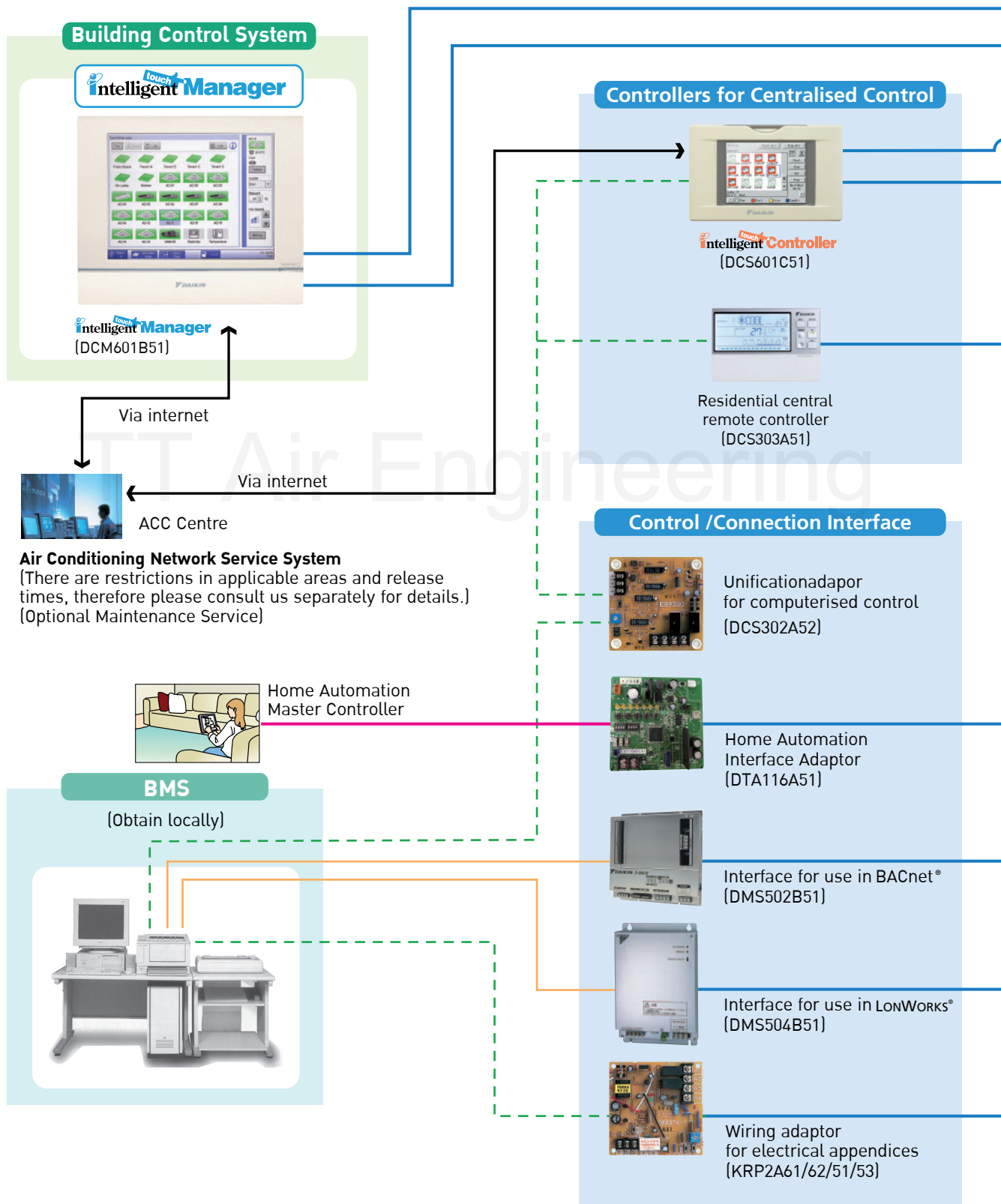


Control Systems

Individual control systems for **VRV** systems

The high speed transmission of DIII-NET enables more advanced control of the **VRV** system, providing you with enhanced comfort.



- BACnet®/Ethernet or LonWORKS® Network Communication Line
- Contact Signal Line
- RS485 Modbus® Line

The DIII-NET system provides for:

- Close control and monitoring by integrating a wide variety of air-conditioners in the entire building.
- Saves the in-building cabling using non-polar, two-wire cables. Easier wiring work with tremendously fewer wiring errors.
- Additional setups readily up and running. An extendable cabling up to 2 km in total.
- Different control equipment flexibly joined in the system for hierarchical risk diversification.
- Daikin's total heat exchangers and other devices under integral control.

DIII-NET (High Speed Multiple Transmission)

DIII-NET, Daikin's unique high speed multiple transmission system, links air conditioners and various other building equipment — in accordance with applications, scale and conditions — and transmits vast amounts of information between them.

VRV



Heat Reclaim Ventilator



Interface Adaptor for SkyAir Series (DTA112BA51)



SkyAir



* No adaptor is required for some indoor units.

Central Control Adaptor Kit (DTA107A55)



Packaged Air-conditioner



Interface Adaptor for DIII-NET use (KRP928BB2S)



Residential Air-conditioner



Di unit (DEC101A51)
Dio unit (DEC102A51)

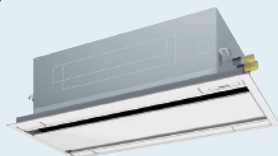


Building services equipment

- Electrical equipment
- Supply water and drainage equipment
- Automatic fire alarm
- Parking equipment
- Lift
- Ventilation equipment
- Lighting
- Crime and fire prevention equipment



VRV



Caution: Limitation may apply to some models and functions. Please contact your local sales office for details. Consultation is necessary before employing this control system. Please contact your local sales office before making a purchase.

Note: BACnet® is a registered trademark of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). LonWORKS® is a trademark of Echelon Corporation registered in the United States and other countries. Modbus® is a registered trademark of Schneider Electric S.A.

Control Systems

Individual control systems for **VRV** systems



Intelligent touch Manager

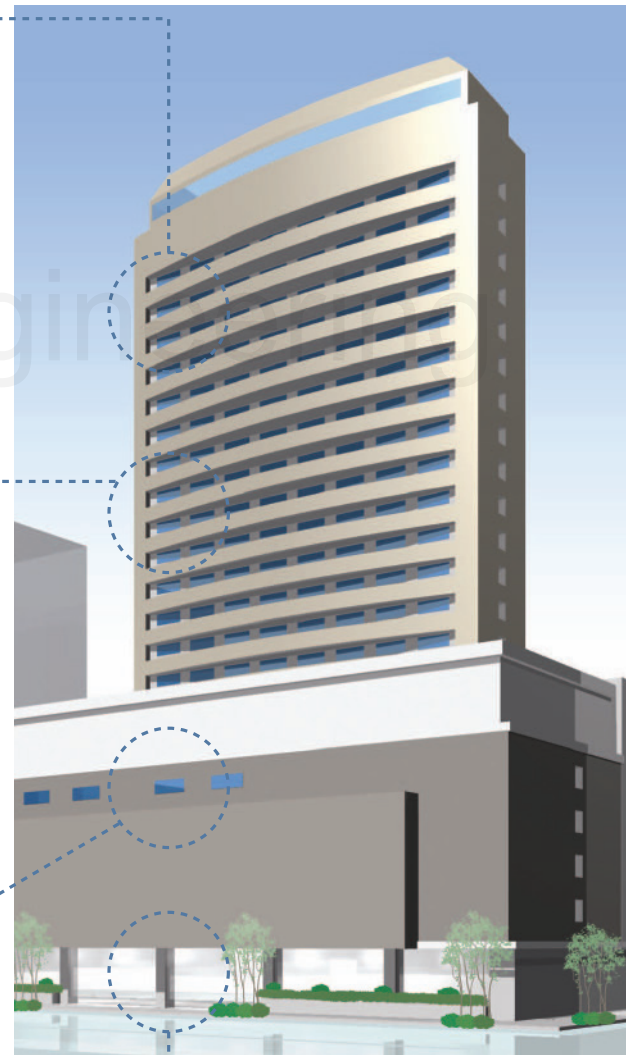
DCM601B51

Various types of equipment in a building can be controlled by a single controller.

One touch selection enables flexible control of equipment in a building.

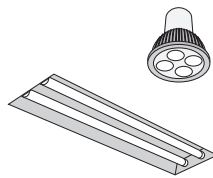
Individual air-conditioning control

The flexible control achieved by the **VRV** system precisely meets different air conditioning needs in each room [e.g. offices, conference rooms, hotel rooms].



Lighting control DALI-compatible

DALI-compatible LED lighting systems can be controlled and monitored. Lighting control is enhanced through an interlock function with air conditioners and other functions.



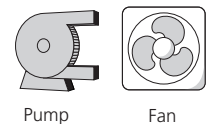
Air-conditioning control for large spaces

Air handling units can also be controlled. Large spaces, such as entrance halls and shopping malls, can be easily controlled to ensure comfort.



Building equipment control

Various types of equipment other than air conditioners, including ventilators, fans, and pumps, can also be controlled.



For energy saving & comfort

intelligent Touch Manager maximises the advantages of **VRV** features

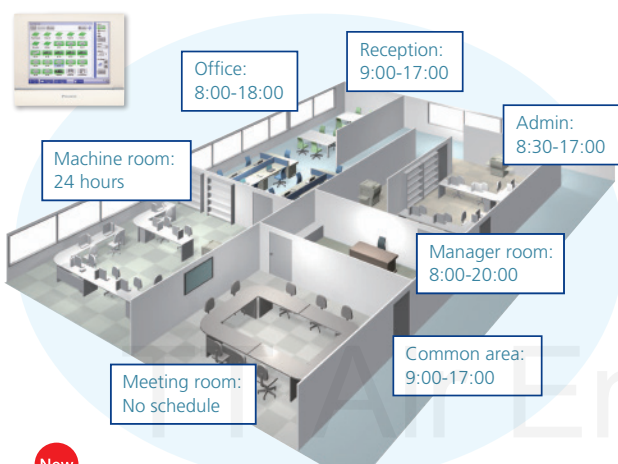
intelligent Touch Manager is an advanced multi-zone controller that provides the most cost-effective way to control and monitor the Daikin **VRV** system.

The 10.4" LCD touch screen is easy to use with three different screen views to include the floor plan layout view, icon view and list view and menus for system configurations.

It is also easy to use with standardized remote Web Access from your PC.

It can manage a total of 650 management points consisting of up to 512 Daikin indoor unit groups (up to 1024 indoor units) along with building equipment control / monitoring with Digital Inputs / Output (Di/Dio), Analog Inputs / Output (Ai/Ao) and Pulse input (Pi) optional devices.

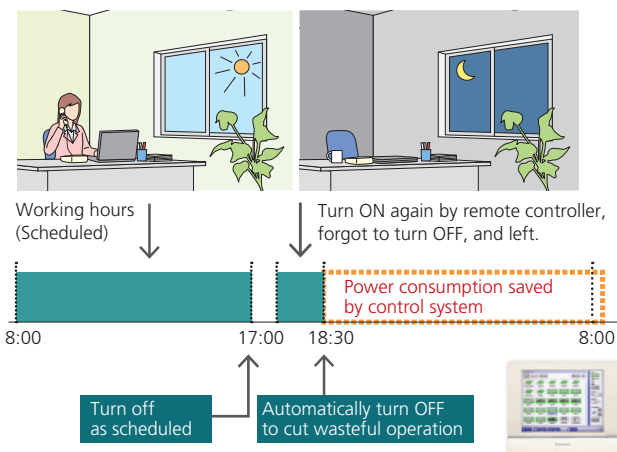
Schedule the operation time for each application.



New

Setting the I-demand function and nighttime quiet operation function is also possible.

Turn the unit OFF if a user didn't.

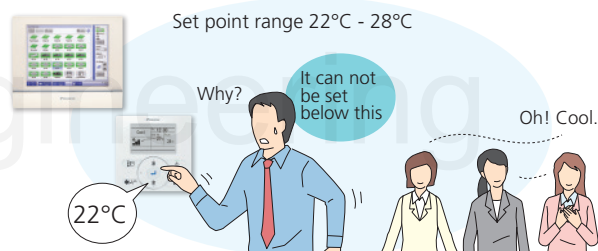


Define the setpoint range that users can change.

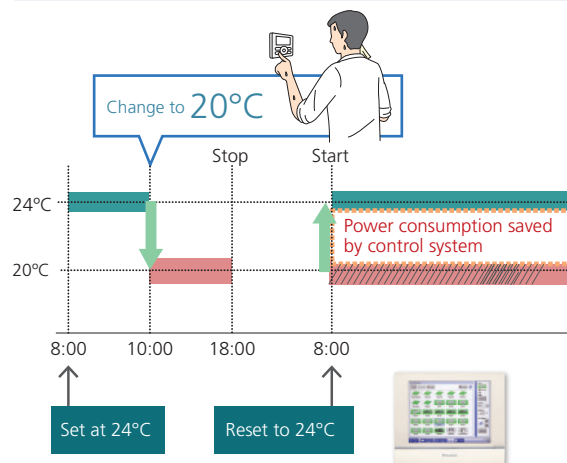
With Remote controller



With Control System



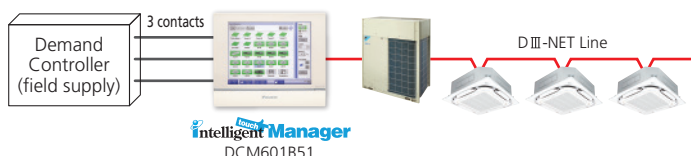
Reset setpoint regularly.



External contact demand control function

This function automatically controls outdoor and indoor unit capacity based on contact signals sent from demand controller (field supply) etc. to save power consumption during peak hours.

- You may set 3 levels that can be switched by ON/OFF signal of 3 contacts
- Control settings are pre-set for each level
- Outdoor unit: I-demand function for peak power cut-off
 Indoor unit: Set temperature shift, Forced thermostat OFF



Control Systems

Individual control systems for **VRV** systems

■ Lighting control (Option)

In addition to switching lights on and off, advanced lighting control, such as illuminance adjustment, can be achieved

Connection to DALI-compatible lighting control system

DALI-compatible

Please contact your local sales office for details.

Simple wiring (daisy chain) enables management of LED lighting by the *intelligent Touch Manager*. Various air conditioning and lighting control is enabled through the interlock with occupancy sensors and illuminance sensors.

Air conditioning and lighting for which power consumption is high can be efficiently controlled to promote energy conservation and cost reduction!

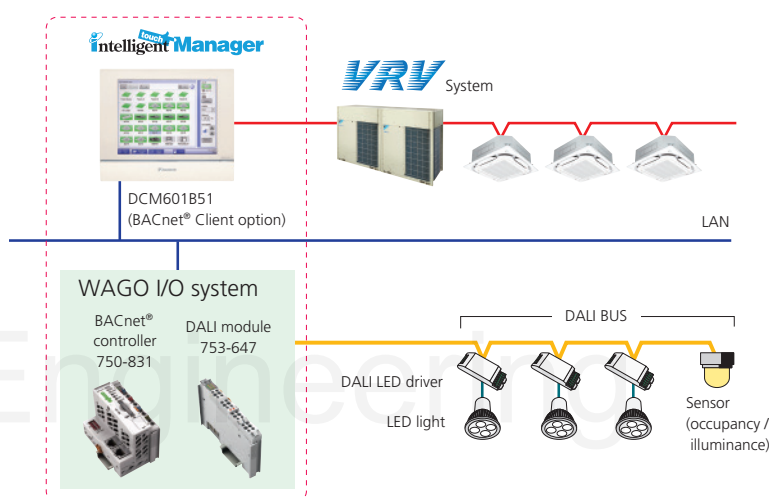
Lighting control achieved by the *intelligent Touch Manager*

[Operation]

- Switch-on/switch-off operation
- Illuminance (1–100%) control
- Various illuminance patterns can be registered
- Registered pattern can be selected from *intelligent Touch Manager*

[Monitoring]

- Switch-on/switch-off status monitoring
- Lighting abnormality monitoring
- Illuminance monitoring
- DALI occupancy sensor monitoring
- DALI illuminance sensor monitoring



Overview of control

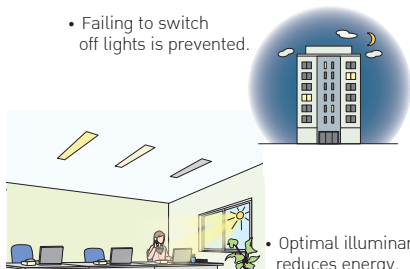
- Up to 5 DALI modules can be connected to a single BACnet® controller.
- Up to 64 DALI LED drivers (64 addresses) can be connected to a single DALI module.
- 64 DALI addresses can be freely assigned to up to 16 groups using a single DALI module. (Each group corresponds to a management point of the *intelligent Touch Manager*.)
- Up to 16 scenes can be set to a single DALI module.
- Up to 12 sensors (occupancy, illuminance) can be connected to a single DALI module.
- DALI BUS simplifies wiring and setting work by daisy chain wiring and automatic address setting.

Easy maintenance and energy saving by lighting control

Case 1

Switch-on / switch-off and illuminance are controlled based on a schedule to cut wasteful power consumption.

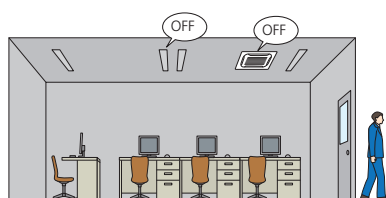
- Failing to switch off lights is prevented.



- Optimal illuminance reduces energy.

Case 2

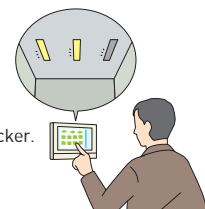
Occupancy sensors are used to eliminate both wasteful lighting and air conditioning. When a room is unoccupied, the air conditioning stops and the lighting is switched off.



Case 3

Lighting abnormalities (e.g. burned-out bulbs) can be checked on the *intelligent Touch Manager* screen.

Lighting maintenance becomes easier and quicker.



The layout screen enables quick identification of specific locations.

Tenant management

Reporting the power consumption of VRV system for each tenant (PPD* Option)

With the PPD function, power consumption can be calculated for each indoor unit (Option)

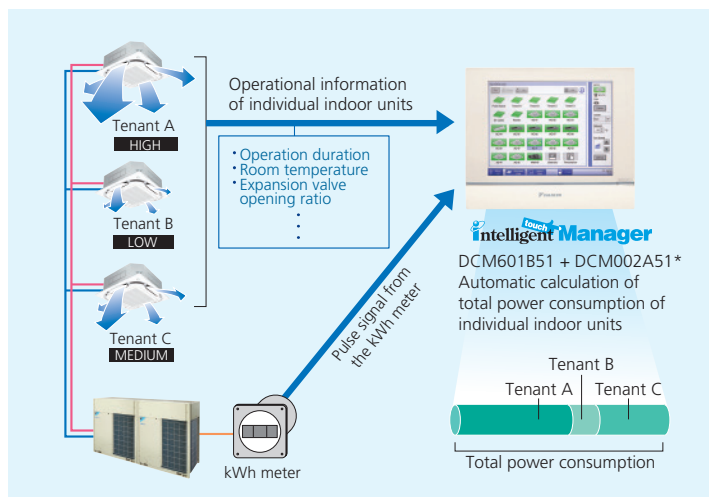
The energy consumption is proportionally calculated for each indoor unit. The data can be used for energy management and calculation of air conditioning usage fees for respective tenants.

Operational information of individual indoor units are monitored, based on distribution of power consumption of outdoor units.

Daikin's PPD keeps track of power distribution for each indoor unit. It performs air conditioning billing calculations quickly and automatically.

It is easy to output PPD data.

PPD data is output in CSV format to a PC or USB memory device and can be freely processed and managed.



*PPD (Power Proportional Distribution) is Daikin's proprietary calculation method.

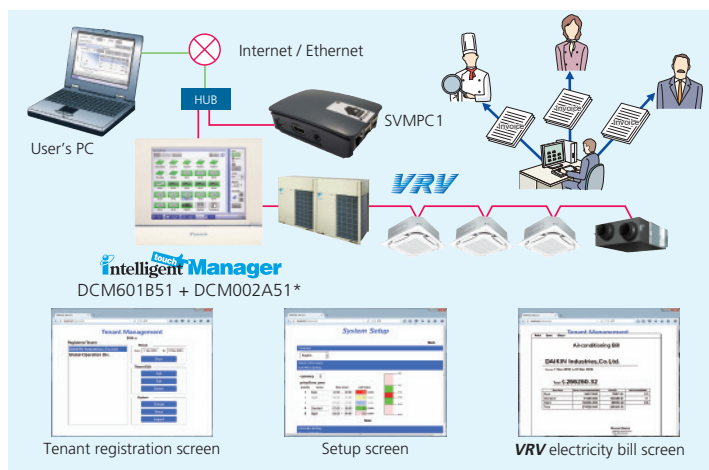
Air conditioning bills can be issued by one click (PPD* Option)

Electricity bills can be easily calculated for each tenant (Option)

The power consumption of VRV controlled by the *intelligent Touch Manager* can be easily managed for each tenant using a PC. The electricity bill settings facilitate billing work through easy calculation and issuance of VRV electricity bills.

Main functions

- Register tenants
- Set the electricity unit price for 5 time zones
- Calculate power consumption and electricity charge for each tenant
- Show aggregation results in the specified period for each tenant
- Output the results (Printout and CSV file)



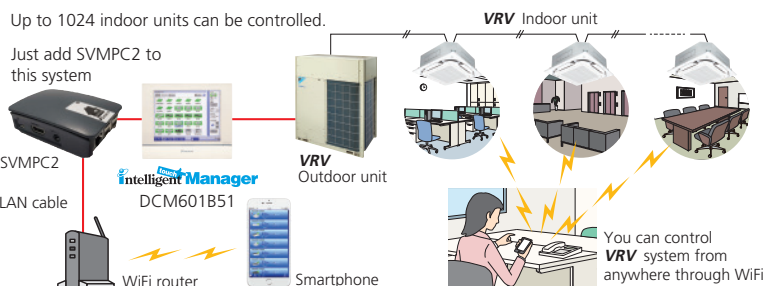
*PPD (Power Proportional Distribution) is Daikin's proprietary calculation method.

Effective service functions offered to tenants

Smartphone will be a remote controller of VRV system (Option)

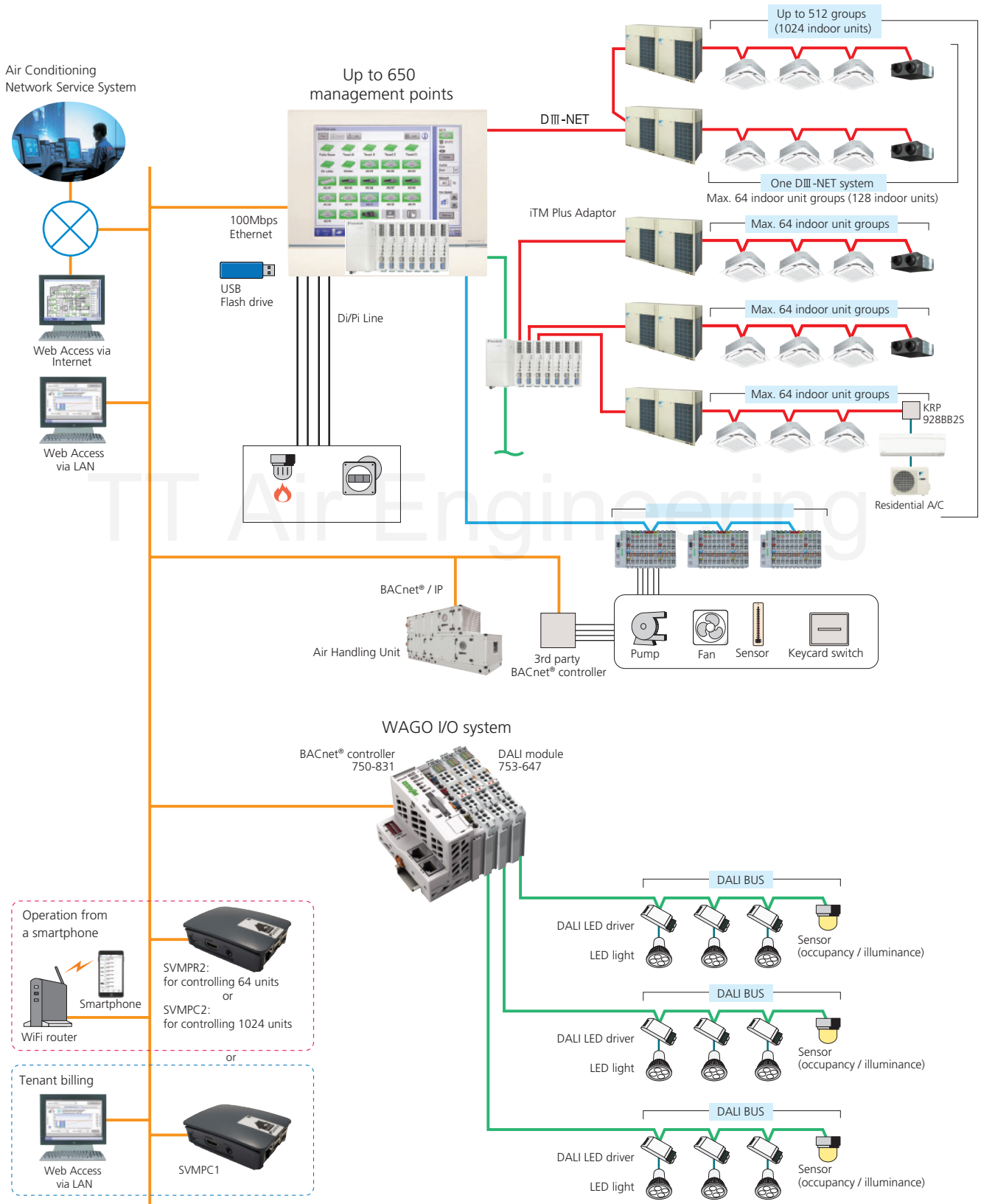
Users can operate and check the status of VRV system from their smartphones via WiFi. It is not necessary to move where a remote controller is located with this feature. VRV system in other rooms can be operated, and their status can be checked. It is also possible to check if air conditioners in other rooms remain switched on etc., helping achieve energy saving.

For buildings VRV Smartphone Remote Controller



Control Systems

intelligent Touch Manager system overview



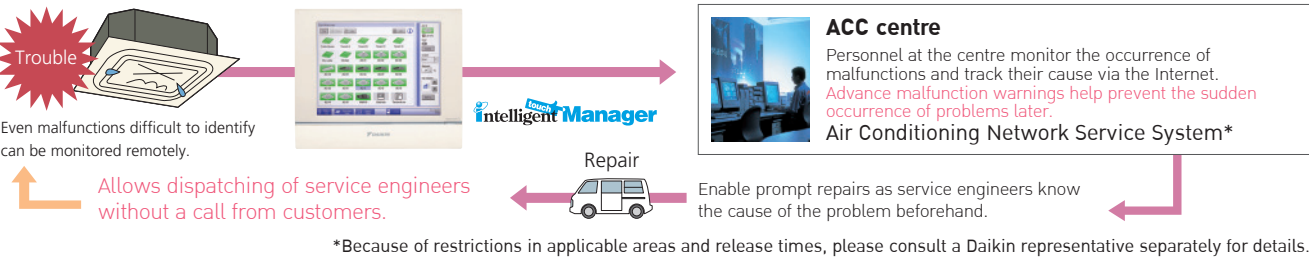
Air conditioning network service system

Preventive maintenance

The *intelligent Touch Manager* can be connected to Daikin's own Air Conditioning Network Service System for remote monitoring and verification of operation status for **VRV** system. By its ability to predict malfunctions, this service provides customers with additional peace of mind.

Enhanced convenience with link to the Air Conditioning Network Service System

The *intelligent Touch Manager* connects seamlessly to Daikin's 24-hour Air Conditioning Network Service System.



Daikin offers a variety of control systems

Convenient controllers that offer more freedom to administrators

Ease of use and expanded control functions

The user-friendly controller features colours, multilingual function, and icons in the display for ease of understanding. A wide variety of control methods can be accommodated, permitting administrators to monitor and operate the system even when they are away from the controller.

intelligent Controller



DCS601C51

Connect VRV system to your BMS via BACnet® or LONWORKS®

Compatible with BACnet® and LONWORKS®, the two leading open network communication protocols, Daikin offers interfaces that provide a seamless connection between **VRV** system and your BMS.



DMS502B51 (Interface for use in BACnet®)

BACnet®
Seamless connection between **VRV** system and BACnet® open network protocol.



DMS504B51 (Interface for use in LONWORKS®)

LONWORKS®
Facilitating the network integration of **VRV** system and LONWORKS®

Dedicated interfaces make Daikin air conditioners freely compatible with open networks

Notes: 1. BACnet® is a registered trademark of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).
2. LONWORKS® is a trademark of Echelon Corporation registered in the United States and other countries.

New Specialised solution for office, home and hotel with *Reiri* Series

Catering to different applications, ranging from 10 indoor units to 2048 indoor units



- For Office Building Automation System
- For Home Smart Home Solution
- For Hotel Air Conditioning Guestroom Interlocking Management



Reiri for Office (Touchscreen Controller)



- **Reiri for Office (Controller Extension)**
- **Reiri for Office (Multisite Extension)**
- **Reiri for Home**



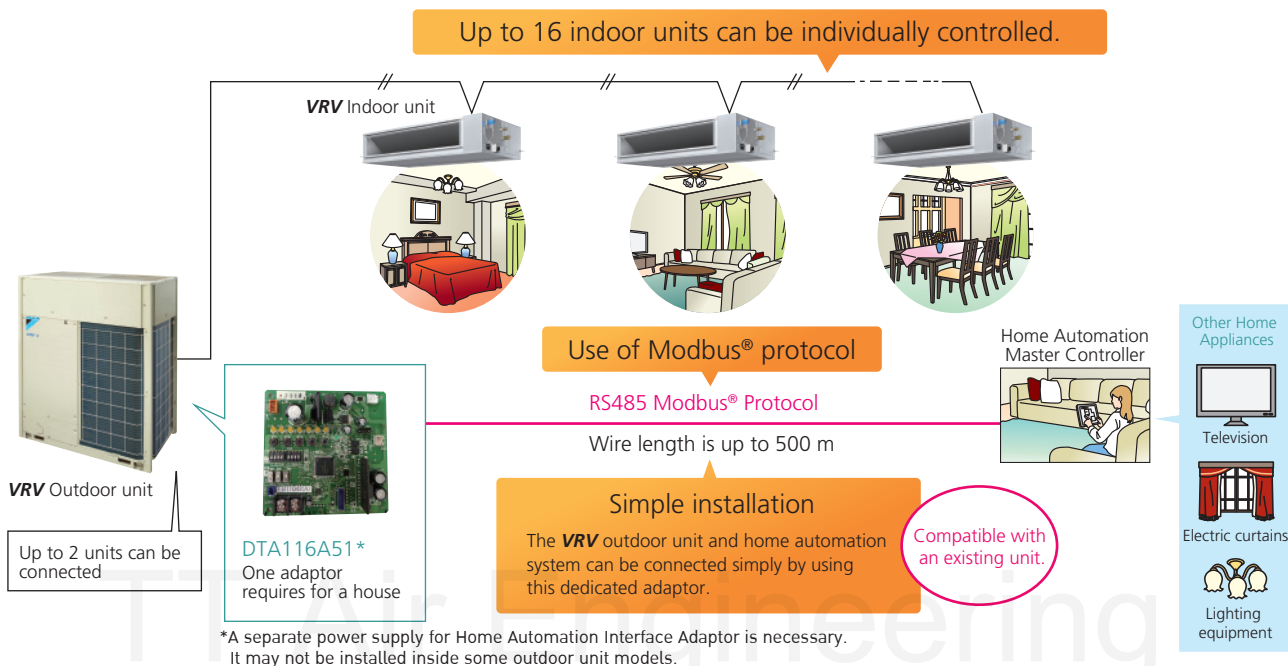
- **Reiri for Home (Lite Version)**
- **Reiri for Hotel**
- **Reiri for Resort**

Control Systems

Home automation interface adaptor

The **VRV** system can be operated from the home automation system.

Image to use home automation interface adaptor DTA116A51



Functions Monitor

On/Off	On/Off status of indoor units
Operation mode	Cooling, Heating, Fan, Dry, Auto (depend on indoor unit capability)
Setpoint	Setpoint of indoor units
Room temperature	Suction temperature of indoor units
Fan direction	Swing, Flap direction (depend on indoor unit capability)
Fan volume	L, M, H (depend on indoor unit capability)
Forced off status	Forced off status of indoor units
Error	Malfunction, Warning with Error code
Filter sign	Filter sign of indoor units
Communication status	Communication normal/error of indoor units

Control

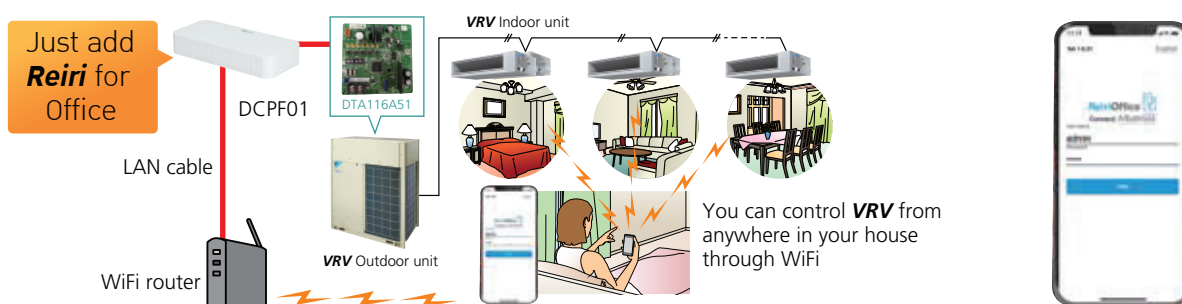
On/Off	On/Off control of indoor units
Operation mode	Cooling, Heating, Fan, Dry, Auto (depend on indoor unit capability)
Setpoint	Cooling/Heating setpoint
Fan direction	Swing, Stop, Flap direction (depend on indoor unit capability)
Fan volume	L, M, H (depend on indoor unit capability)
Filter sign reset	Reset filter sign of indoor units

Retrieve system information

Connected indoor units	DIII-NET address of connected indoor units can be retrieved.
Indoor unit capabilities	Indoor unit capabilities such as operation mode, fan control, setpoint HV can be retrieved.

VRV Smartphone Control System

VRV Smartphone Control System can be realized by **Reiri** which is a new product to utilize DTA116A51.



* Modbus® is a registered trademark of Schneider Electric S.A.

Complete control system for VRV systems



New Reiri

High value smart solution creation for different application

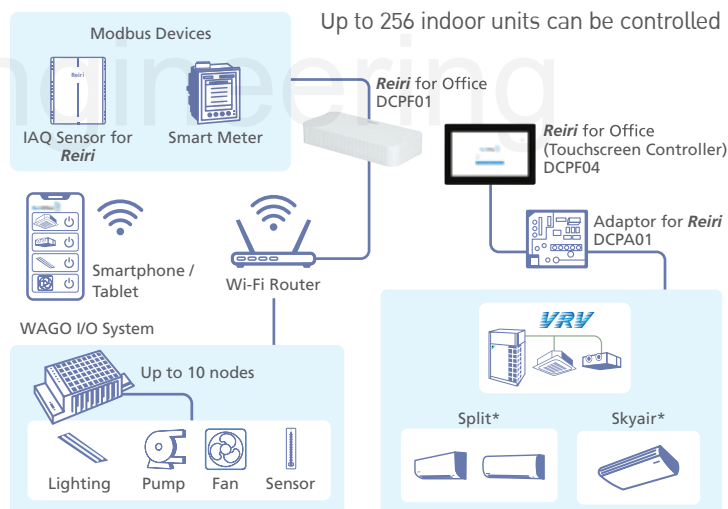
Office Air Conditioning Solution

(*Reiri for Office: DCPF01 / Reiri for Office (Touchscreen Controller): DCPF04*)

a simple office buildings air conditioning solutions with secured, cloud enabled platform, allowing greater ease of control and control while being energy-efficient. The flagship model DCPF04 offers the smart control system with a dedicated touch panel.

Intelligent Building Solution

- Easy to install and configure with dedicated Configuration Mobile App for installers.
- Remote control operation through mobile App from anywhere.
- Energy management through P.P.D. billing, Energy graph and real time energy display function
- IAQ Management via real time monitoring and trend graph for keeping record.
- Effective Air conditioning usage with setpoint range limitation, set back function, remote control prohibition.



Up to 256 indoor units can be controlled

*Additional Interface Adaptors may be required.

Specification

Category	Function	Description
Monitoring & Control	Status monitoring	On/Off, setpoint, operation mode, fan step, flap, error, error code, Room temperature
	Manual Operation	On/off, setpoint, operation mode, fan step, flap, scene control ¹
	Remote control prohibition	Individually prohibit operation of each local remote-control function
	Setpoint range limitation	To limit setpoint range for each indoor unit management point
Automatic Control functions	Automatic changeover ¹	Number of changeover groups: 100
	Off timer	Off timer duration can set from 5min to 120min with every 5min interval
	Setback ¹	Setback setpoint can selected within 24-35°C in cooling mode and 5-20°C in heating mode.
	Schedule	Number of programmes: 100; Up to 20 actions can be registered per pattern.
	Interlock ¹	Interlock operation depending on equipment status
Data Management	History, Report ¹	Operation data (latest information and operation report) and error report on daily/monthly basis.
	Trend graph ¹ , energy graph ¹	Chart on environmental changes and energy (and other meter) values.
	Real time energy display ^{1,2}	Daily/ Monthly real time energy consumption status on screen.
P.P.D Billing ^{1,2}		Generate Bill with Power Proportional Distribution data retrieved from the system.
System Setting		Language, Password setting, Account setting, Notification, Email Notification

¹ Optional software for *Reiri for Office, DCPF01*

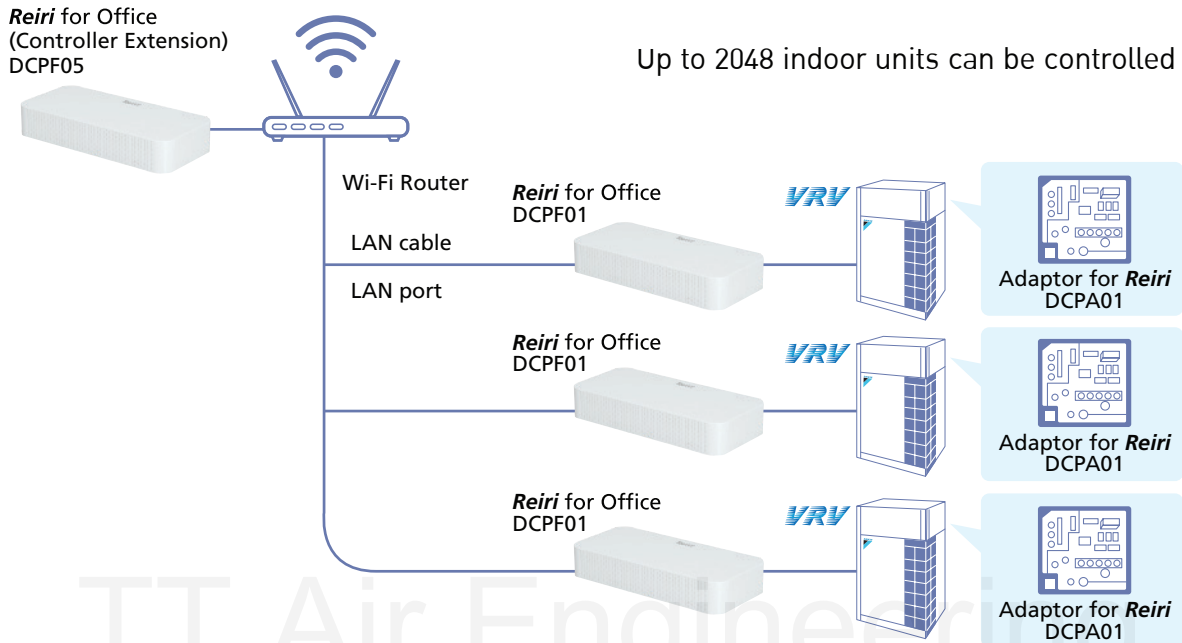
² Optional software for *Reiri for Office (Touchscreen Controller), DCPF04*

Control Systems

Office Expanded Solution (Reiri for Office (Controller Extension) :DCPF05)

A dedicated control solution for large scale office buildings through centralised control of multiple Reiri for office controller on a single secured and cloud-enabled platform.

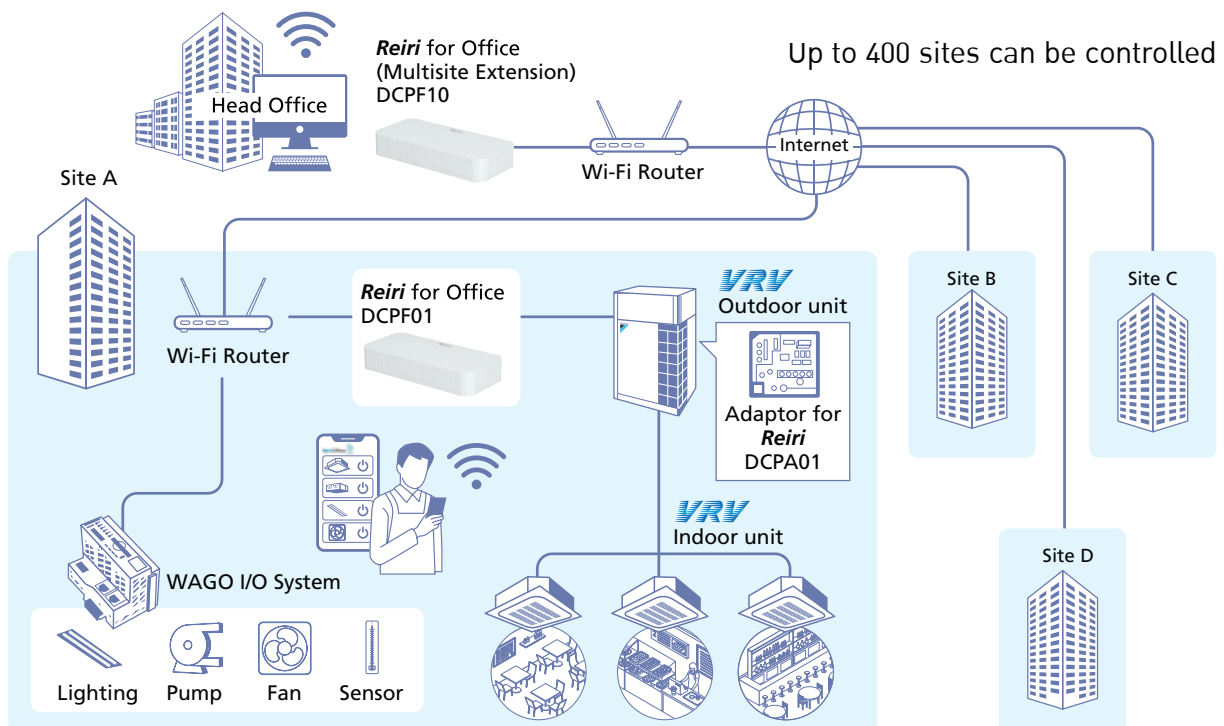
Note: P.P.D. & Tenant Billing Management and Real-Time Energy Monitoring (R.E.M.) are offered as optional software.



Multi Site Management Solution (Reiri for Office (Multisite Extension): DCPF10)

Centralised control and remote access for all devices in multiple buildings across different locations conveniently located on one secured platform.

Note: Multi-site Branch Expansion is offered as optional software.



Smart Home Solution (Reiri for Home: DCPH01)

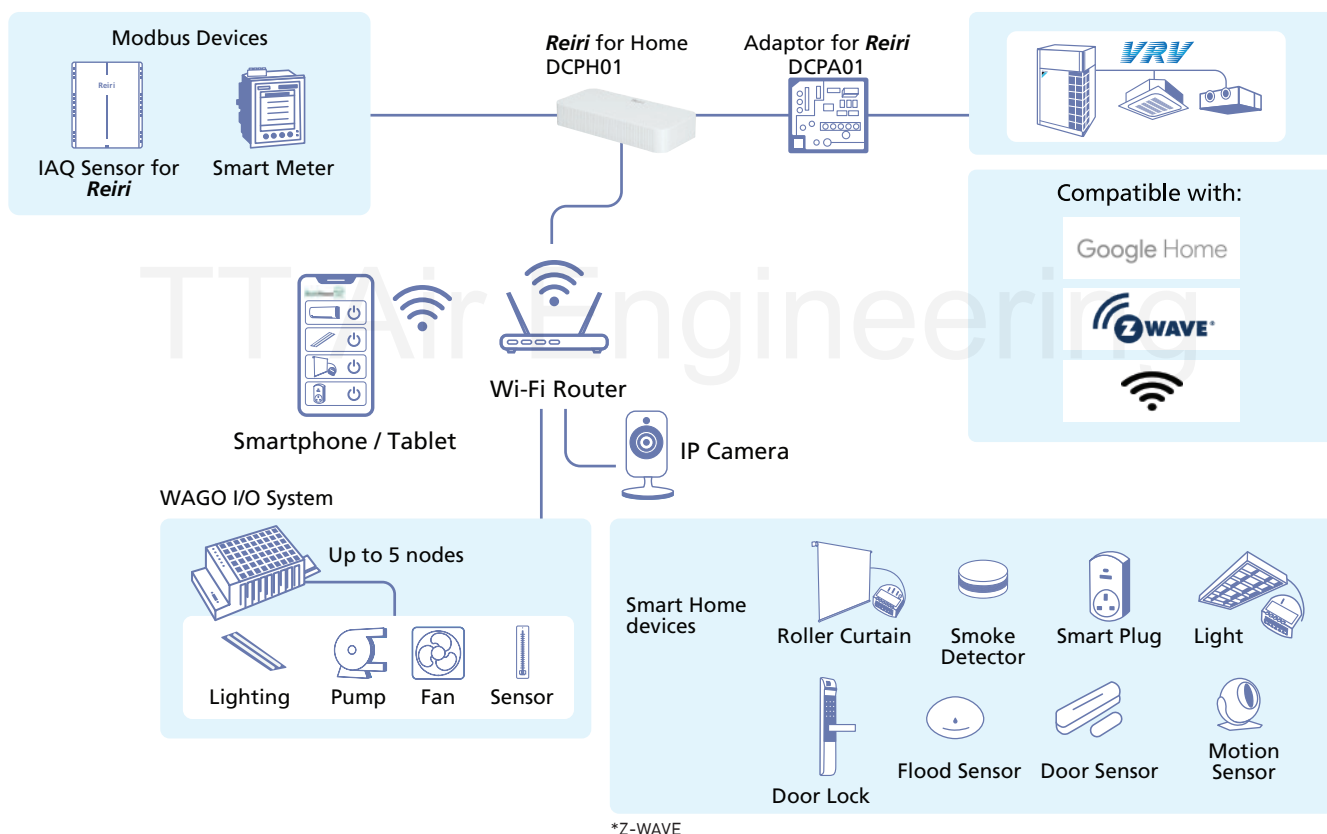
The complete smart home air conditioning solution for every homeowners with integration capabilities to allow ease and convenience of control for almost every smart devices

Complete Smart Home Solution

- Supports Zwave, WAGO, Modbus, LAN communication
- Convenience & Lifestyle
- IAQ Management
- Energy Management
- Home Security Solution
- Google Home Enabled

Note: Residential automatic control and system report is offered as optional software.

Up to 64 indoor units can be controlled

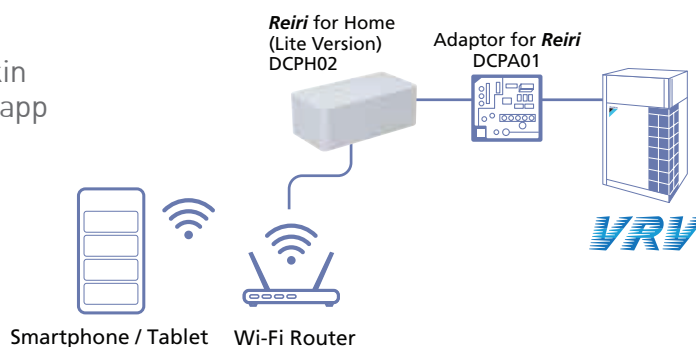


VRV Smart Centralised Control Solution (Reiri for Home (Lite Version) :DCPH02)

Designed to enhance the comfort and convenience for homeowners, offering complete control of core functions in Daikin Airconditioning system remotely through app access

Note: Residential automatic control and system report is offered as optional software.

Up to 30 indoor units can be controlled



Control Systems

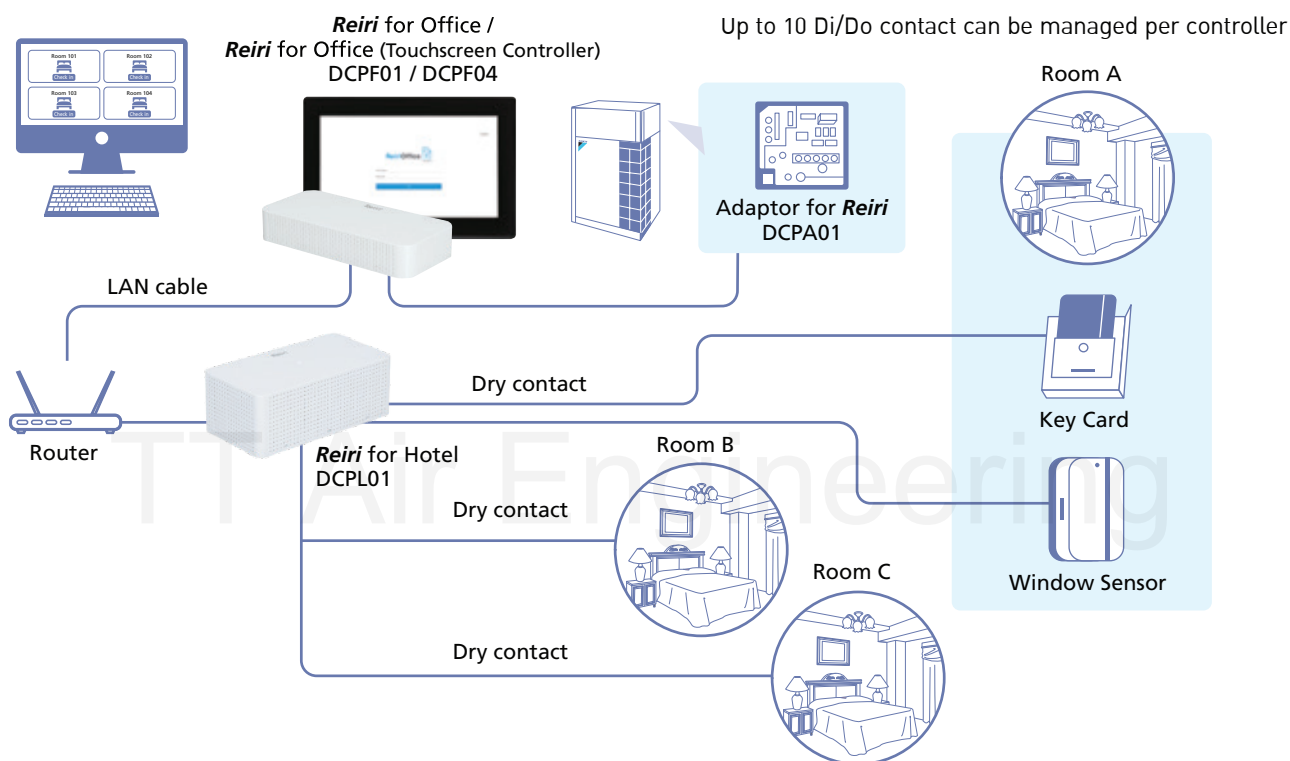
Hotel Air Conditioning Solution (Reiri for Hotel :DCPL01)

The smart hotel air conditioning solution for effective air conditioning operation that maximize guest comfort and minimize energy consumption in a hotel

Air Conditioning Guestroom Interlocking Management

- Automatic air conditioning control based on check in/out signal, key card signal and window open/close signal
- Guest comfort

Note: The **Reiri** for Hotel controller has to be used with **Reiri** for Office / **Reiri** for Office (Touchscreen Controller) / **Reiri** for Office (Controller Extension) controller as building controller.



Villa Air Conditioning Solution (Reiri for Resort :DCPR01)

Designed to enhance the comfort and convenience for each villa according to use by guests

- Automatic air conditioning control based on check in/out signal, key card signal and window open/close signal
- Guest comfort

