



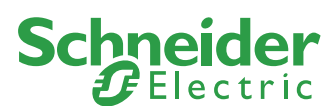


## Control and Connectivity

Panasonic has developed the largest range of control systems to offer the best option for commercial needs. From the individual remote controller for the residential single units up to the newest technology capable of controlling your building anywhere in the world. The simple to use cloud software can even be used from a portable device.



## VRF Smart Connectivity+



Through thorough energy management, Panasonic's VRF Smart Connectivity is a completely new, state-of-the-art solution providing energy saving and comfort as well as simple installation, operation and running.

VRF Smart Connectivity+ offers efficient energy management and a new air conditioning control solution with high IAQ (indoor air quality).

<b>Energy management system for rooms</b>	Each room is monitored by high-precision sensors, making it possible to make every room's temperature comfortable without wasting energy.
<b>Management system for the entire building</b>	A Building Energy Management System (BEMS) can also be connected for Plug & Play centralised control of the building's entire energy consumption.

### Advantages



#### **Dramatic reduction of OpEx with outstanding IAQ.**

- 3 Built-in sensors: Temperature, RH and occupancy
- ZigBee wireless sensors: CO<sub>2</sub> / temperature / RH%, window / door, ceiling / wall / water leakage
- Relay Pack, Hotel Room Controller



#### **User-/owner-friendly.**

- Colour touch screen
- Simple and easy to use
- 22 languages
- Easy-to-understand error description



#### **Ultimate customisation.**

- Customisable colour background
- Custom display/icons, messages
- Programmable logic (also stand alone)
- Various controls and various external connection devices



#### **Easy design and Plug & Play to reduce CapEx.**

- Simple Plug & Play VRF connection to Building Energy Management System (BEMS)
- Stand alone or BEMS connected
- Easy installation of ZigBee sensors

### VRF Smart Connectivity+: New SE8000.

## 1 Quality air control

Optimum IAQ is realized using the CO<sub>2</sub> and humidity sensors. The interior environment remains comfortable, while heating and cooling costs are minimized.

The CO<sub>2</sub> sensor can control ventilation systems, which contribute to improving the room's air quality.

## 2 Room key card / cardless solutions for hotels

Solutions are provided that meet the needs of various regions and hotel grades.

Whilst the previous model's automatic detection function offered optimal air conditioning with or without a hotel room key card, the latest model enables conventional key cards to control air conditioners and other devices coordinately. The increase in the types of devices that can be connected enables customized control of any hotel room.

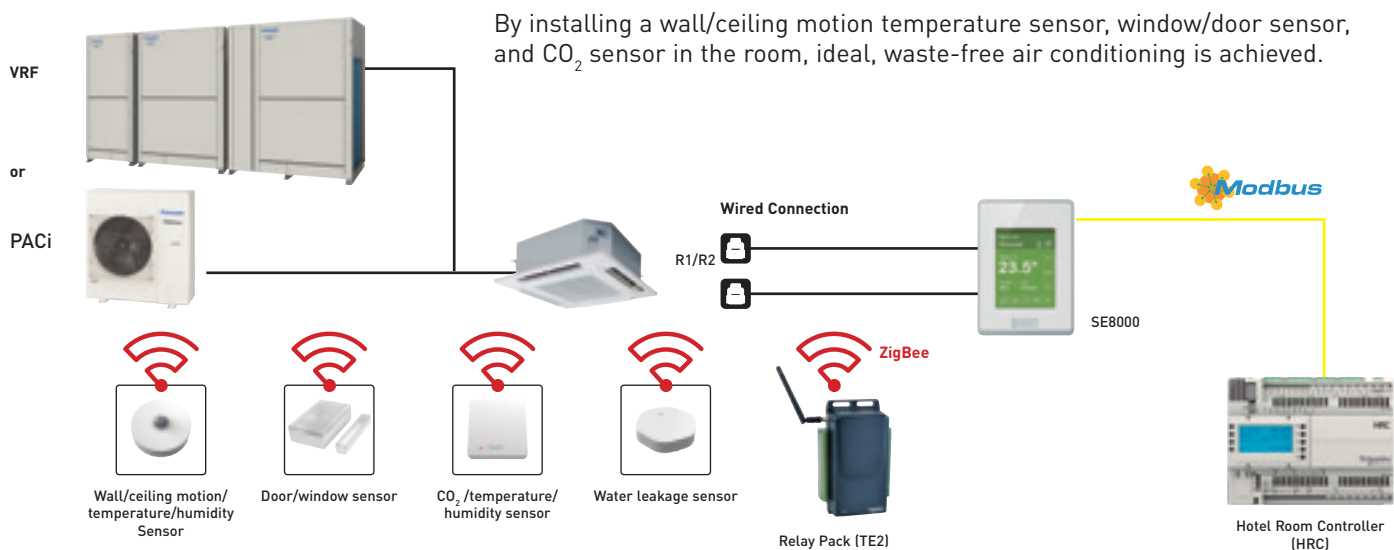
## 3 Other equipment control

One room controller manages various devices including lighting and the blinds.

A ventilation system and other external connection devices (Dry Contact input) can be connected by HRC or TE2 devices so that various control is possible with this controller alone, even without BEMS.



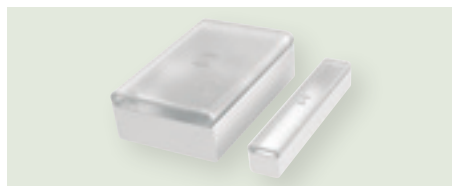
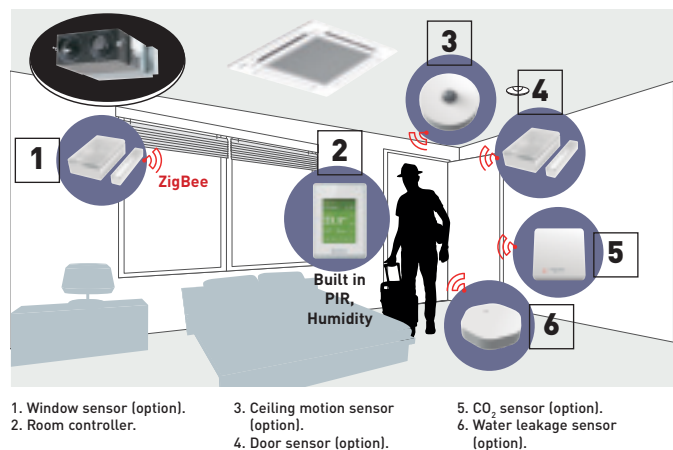
# Energy management system for rooms



## Sensing & Control technology

Using sensors from Schneider Electric, high-quality occupancy control and automatic IAQ control are realised. The sensors detect the presence or absence of occupants, and the opening and closing of doors and windows to achieve the most efficient energy management for exceptional air-conditioned comfort. Flexible installation is possible to match different applications and building features such as walls, ceilings and proximity to doors and windows. No wiring means extra installation versatility.

Batteries last for up to five years (10-year battery for CO<sub>2</sub> sensor) and are easy to install and replace.



### Door/window sensor.

Door and window contact detection sensor to monitor opening and closing.



### Wall/ceiling motion/temperature/humidity sensor.

Wall and ceiling sensor to detect the presence or absence of occupants.



### CO<sub>2</sub>/temperature/humidity sensor.

Monitor indoor air quality, review data on interfacing devices, and control fresh air inside customisable zones.



### Water leakage sensor.

Two sensing pads under the body activate when water is present between the two pads. Detecting the water, the sensor reports the event to the controller (and BEMS).



### Relay Pack (TE2).

Wireless programmable terminal equipment controllers for HVAC equipment and pulse counting. Includes local memory to store fail safe control sequence.



### Hotel Room Controller (HRC).

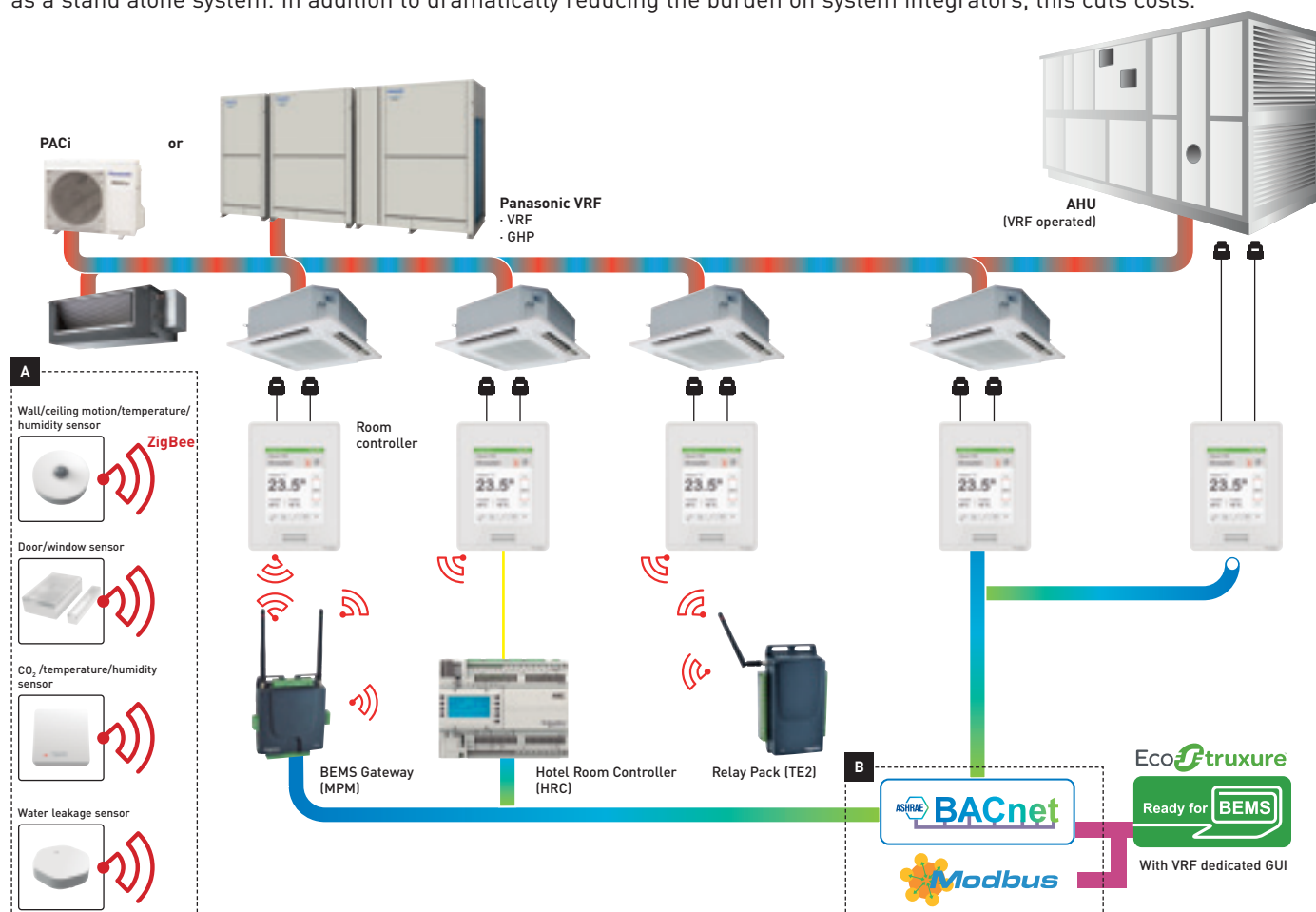
The Hotel Room Controller controls connected guest room devices and aggregates data, making it visible to guest room and property management systems.

# Management system for the entire building

The smarter solution to simplify energy management, optimise building efficiency and drive savings.

## Plug & Play BEMS connection

With the SE8000, connection to BEMS is extremely easy. Better still, a remote controller is all that's needed to enable use as a stand alone system. In addition to dramatically reducing the burden on system integrators, this cuts costs.



**A** SE8000 smart controller with direct hub to ZigBee® Pro sensors. Great occupancy and IAQ control. Ex: Hotel room occupancy check by PIR sensor, IAQ by CO<sub>2</sub> sensor, door / window contacts.

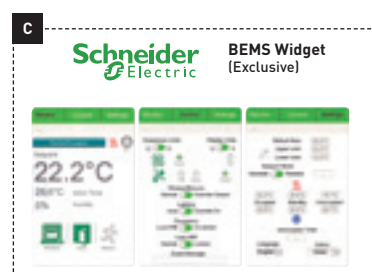
**B** BACnet MS/TP and Modbus RTU are embedded.

**C** For Schneider Electric BEMS connection, Panasonic VRF widgets enable easy Plug & Play. Better understanding for VRF as a chiller system.



### BEMS Gateway (MPM).

Multi-Purpose Management devices enable the control, monitoring, and management of entire sites via Schneider Electric's EcoStruxure™ BMS system.



\* Graphic shows combination of products from Panasonic, Schneider Electric and others. Please consult authorised dealer for more details.

Reference	Description
SER8150R0B1194	Pana Net Con, RH, No PIR, SE Brand, R1R2
SER8150R5B1194	Pana Net Con, RH, PIR, SE Brand, R1R2
VCM8000V5094P	Wireless ZigBee® Pro communication card
<b>TE2*</b>	
SEC-TEA-R-230-5045	Smart terminal controller ZigBee® Pro high power, external antenna, 4UI/4AO/5DO, 220-240 V AC
SEC-TEA-R-24-5045	Smart terminal controller ZigBee® Pro high power, external antenna, 4UI/4AO/5DO, 24 V AC
<b>MPM*</b>	
MPM-UN-014-5045	Universal network controller with Building Expert and StruXureWare integration, high power, 6 I / 6O, Modbus
MPM-RAEC-5045	Universal network controller cable extension

Reference	Description
<b>HRC*</b>	
HRCEP14R	Hotel room expansion module 14 indoor units
HRCPBG28R	Hotel room controller 28 indoor units
HRCPDG42R	Hotel room controller w/display 42 indoor units
<b>ZigBee Sensors</b>	
SED-CO2-G-5045	Sensor with room CO <sub>2</sub> , temperature and humidity
SED-TRH-G-5045	Sensor with room temperature and humidity
SED-WDC-G-5045	Door/window sensor
SED-MTH-G-5045	Wall/ceiling motion/temperature/humidity sensor
SED-WLS-G-5045	Water leakage sensor

Reference	Description
FAS-00	Cover frame. Silver
FAS-01	White
FAS-03	Glossy translucent white
FAS-05	Light tan wood
FAS-06	Dark brown wood
FAS-07	Dark black wood
FAS-10	Brushed steel finish

\* Those accessories require system integrator support on site.

# Smart management solutions

## 1 Hotels

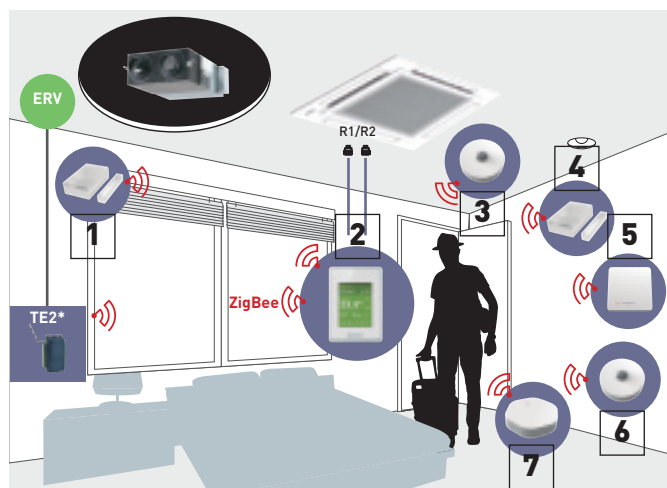
### Room key card or key cardless solutions for hotels.

The SE8000 and ZigBee sensor automatic detection function offer optimal air conditioning regardless of whether there is a hotel room key or not. Sensors detect the presence or absence of occupants and the opening and closing of doors and windows for the optimum air-conditioned environment guests expect. Automatic control ensures the most efficient operation when guests are away or when windows are open. This contributes to an appreciable reduction in operation costs.



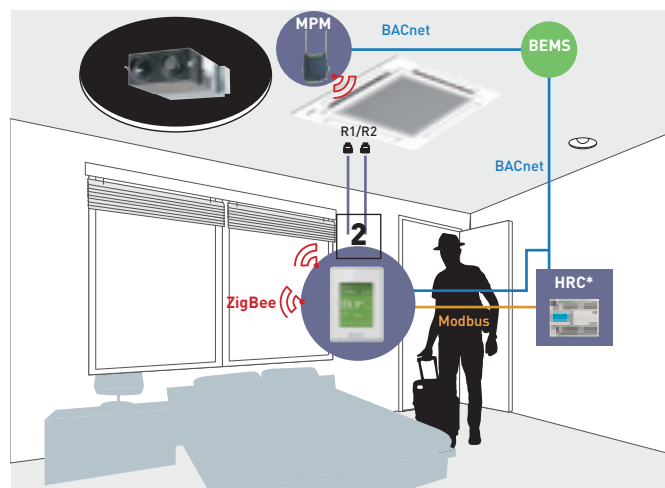
### 1. Remote sensing & IAQ control.

In addition to detecting a room's temperature, humidity and CO<sub>2</sub> concentration, ZigBee remote sensors detect the opening/closing of windows and doors, and the presence/absence of people in a room. Various IAQ controls and detailed energy savings are possible by using TE2 (Relay Pack) based on this detected information.



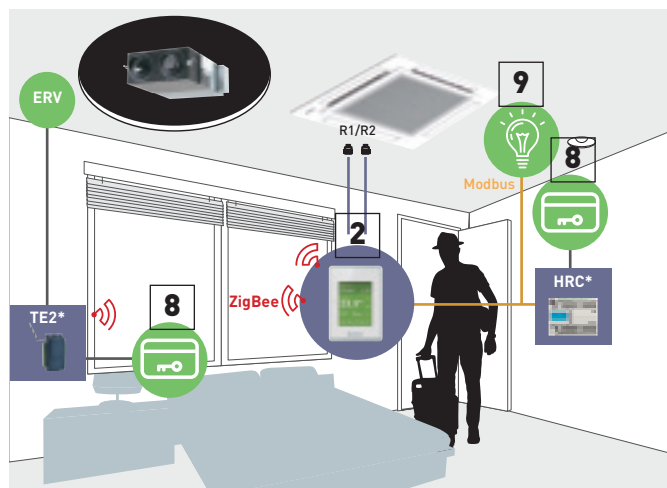
### 2. BEMS Connectivity.

With MPM as the BEMS gateway and by setting HRC as the guestroom controller, sensing, control and BEMS connection can be realized in coordination with SE8000!



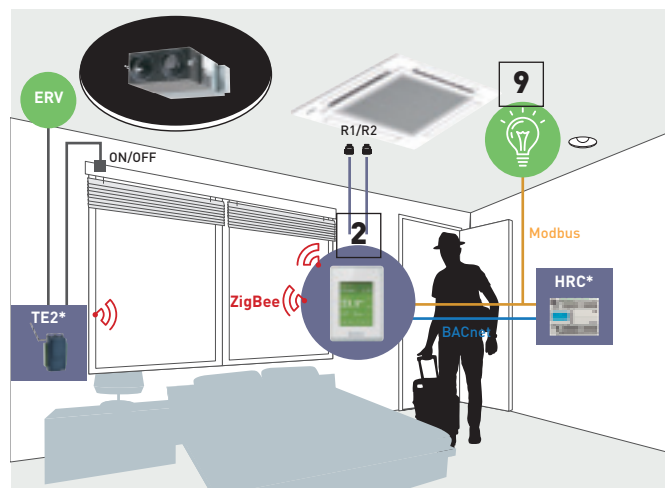
### 3. Key cardless control.

The introduction of TE2 and HRC enables conventional wired keycards to be connected to the system so that it is possible to meet the specific requirements of various hotel and room types.



### 4. Other control

The introduction of TE2 and HRC enables the ON/OFF control of devices having Dry Contact input, such as ventilation, lighting and blinds.



- 1. Window sensor\*.
- 2. Room controller (22 languages).
- 3. Ceiling motion sensor.

- 4. Door sensor\*.
- 5. CO<sub>2</sub>/Temp. + RH% sensor.
- 6. Wall motion sensor.

- 7. Water leakage sensor.
- 8. Key card (wired).
- 9. Light control.

\* In electrical distribution panel (field supply)



## 2 Small and medium offices

### CO<sub>2</sub> sensors (option) and humidity sensors.

CO<sub>2</sub> sensors (option) take measurements in units of ppm, and humidity sensors enable fine air quality control. This creates the most comfortable space for occupants while contributing to improved employee satisfaction.



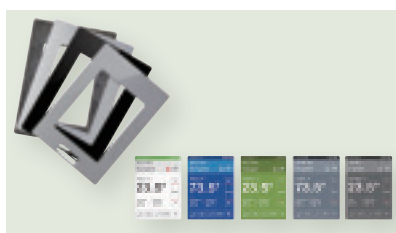
## 3 Super markets

### Humidity sensors.

Humidity sensors enable automatic dehumidification for the optimum IAQ regardless of climatic conditions. This creates an even more comfortable environment for customers, employees, and products themselves.



### Innovative and unrivalled advantages



#### Colour and design to match office interiors.

Colour combinations and design can be set to match different facilities.



#### Easy-to-understand error description.

Error description during an emergency is easy to understand, enabling staff to respond quickly.



#### Customisation in 22 languages possible.

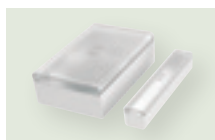
The display can be customised to match the native languages of guests to enable smooth, stress-free communication for hospitality at its finest.



#### Programmable logic.

Full customisation of remote controller logic possible, and updating to match conditions.

### Smart connectivity devices



**SED-WDC-G-5045**  
Door/window sensor.



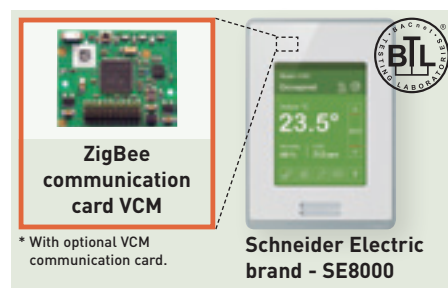
**SED-CO2-G-5045**  
CO<sub>2</sub> temperature/  
humidity sensor.



**SED-MTH-G-5045**  
Wall/ceiling motion/  
temperature/humidity  
sensor.



**SED-WLS-G-5045**  
Water leakage sensor.



### Features

- Up to 5 year battery life (batteries included)
- Battery life of CO<sub>2</sub> sensor up to 10 years.
- Battery level data point
- Sensor points visible when SE8000 is integrated via BACnet MS/TP
- Sensor status and battery level visible when SE8150 is integrated via ZigBee® Pro
- Integration to BMS only recommended when each MPM is connected to Ethernet and set as a ZigBee® coordinator node



# Panasonic AC Smart Cloud

With Panasonic AC Smart Cloud, have your business under control, and start saving!



## Flexible and scalable solution

- Energy saving
- Zero downtime
- Site(s) management

Centralise control of your business premises, from wherever you are, 24/7/365. It doesn't matter how many sites you have, or where they are! The AC Smart Cloud

system from Panasonic allows you to have complete control of all your installations from your tablet or from your computer. In a simple click, all your units from several locations, receive status updates in real-time of all your installations, reducing potential breakdowns and optimizing costs.

### Flexible solution for your business



Every time



Everywhere



Multiplatform



Internet browser

### Scalable solution for your business



Small to large



1 to multi sites



Upgrade features\*



PACi / ECOi / ECO G

\* Customized to meet user demand / Continuous upgrades: new functions and product introductions / IT smart management.

## Panasonic AC Smart Cloud offers continuous improvement always thinking about users

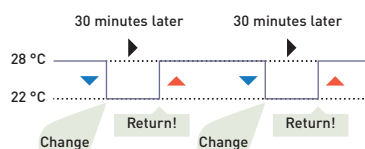
### e-CUT function

e-CUT functions are newly available in Panasonic AC Smart Cloud.

5 energy saving settings reduces automatically its energy consumption.

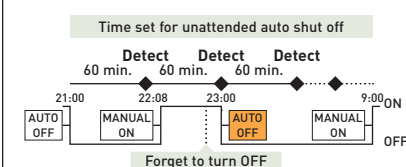
#### 1. Set temperature auto return.

When you want to return to the set temperature after a certain time even if the temperature is changed.



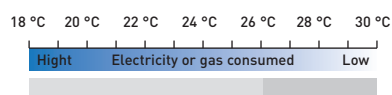
#### 2. Unattended auto shut off.

When you want to operate outside of a schedule but to monitor and stop automatically.



#### 3. Set temperature range limit.

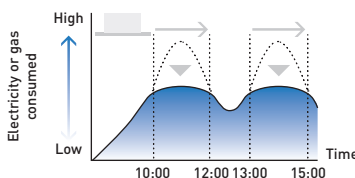
When you want to limit the temperatures that can be set.



Set temperature restricted to the range between 26 °C and 30 °C.

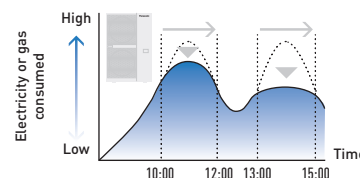
#### 4. Energy saving timer / efficient operation setting.

Specify time slots when you want operation capacity reduced.



#### 5. Demand / peak shaving settings/ peak cut settings.

Specify time slots when you want operation capacity of the outdoor units reduced.



## Key functions and uniqueness

### Multi site monitoring.

- It doesn't matter how many sites you have, easy to manage, operate, compare sites, locations, rooms.



### Schedule setting.

- Yearly / weekly / holiday timer setting as you want



### Powerful statistics for energy savings.

- Power consumption, capacity, efficiency level can be compared with different parameters (Yearly / monthly / weekly / daily bases)



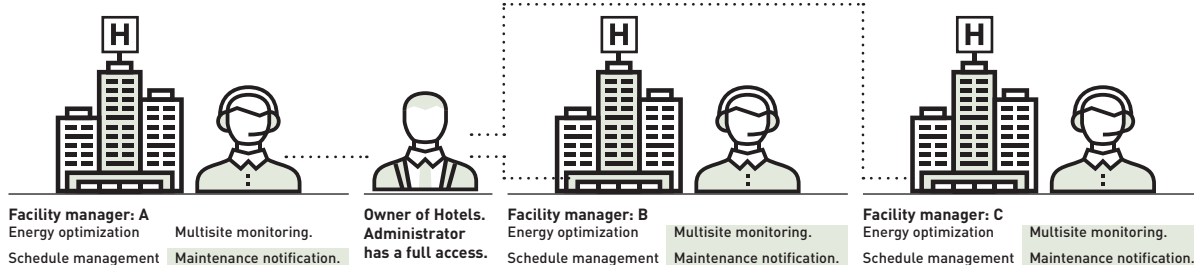
### Maintenance notification.

- Error notification by email and with floor layout
- Maintenance notification of ECOi / ECO G outdoor units
- Remote service checker function



### User customization <sup>1)</sup>.

Site administrator can create users as desired and assign customized profiles.



## Main functions per user type

Function / Main Tab	Sub-Tab	Basic type (Eg.: Owners, facility managers)	Professional type (Eg.: Installers, maintenance companies)
AC setting	I_U / O_U operation details	✓	✓
	Cloud adapter (CZ-CFUSCC1) details	✓	✓
	AC maintenance	✓	✓
	Map view	✓	✓
Energy saving function	NEW e-CUT	✓	✓
Schedule	Yearly, weekly schedule setting / view	✓	✓
	Power consumption	✓	✓
Powerful statistics	Capacity	✓	✓
	Efficiency ranking	✓	✓

Function / Main Tab	Sub-Tab	Basic type (Eg.: Owners, facility managers)	Professional type (Eg.: Installers, maintenance companies)
Maintenance function	Notification overview / details	✓	✓
	Maintenance settings	✓	✓
	Map view	✓	✓
	Remote service checker	✓	✓
User account <sup>1)</sup>	New / update user registration	✓	
	Distribution group overview / details	✓	
System setting	Cut OFF request	✓	
	Map editor		✓

## One of our uniqueness is “stable and secured communication package”

- Connectivity is included in the service. Customers do not have to take time to find and prepare suitable connectivity.
  - With an all inclusive service offering, the customer has peace of mind and a one stop shop for all AC Smart Cloud issues they may face including connectivity
- This reduces installation time, requiring no integration with existing IT network infrastructure.



## Remote service checker function

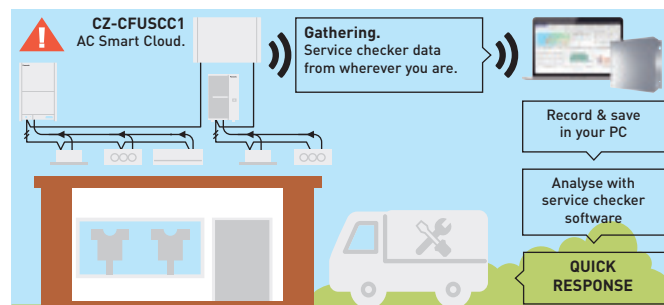
### Zero down time

- Quick analysis & response
- Time & Cost saving for service maintenance task



### Recording service checker parameters from wherever you are!

- Data duration: Max. 120 minutes
- Data frequency: 10 – 90 seconds
- Mode selection: With test run or Without test run
- Count down schedule setting available



## Panasonic AC Smart Cloud parts lists

\* Cloud service fee is additionally required. Please contact an authorized Panasonic dealer.

<b>CZ-CFUSCC1</b>	AC Smart Cloud communication adaptor. Up to 128 groups. 128 units control
<b>PAW-MVNOAC-V</b> <b>PAW-MVNOAC-K</b>	3G communication package (SIM card included). V, K: Depending on countries <sup>1)</sup>

<sup>1)</sup> Please contact an authorized Panasonic dealer.

# Commercial WLAN Adaptor


Panasonic

POWER  
LINK  
LINK

RESET

SETUP



Panasonic CZ-CAPWFC1 interface adaptor, allows connection of one or a group of indoor units to Panasonic Comfort Cloud App, which provides control, monitoring, scheduling and error alerts.

### Advanced smartphone control

Control PACi, ECOi and ECO G units with your smartphone from wherever and whenever you are, by using Panasonic Comfort Cloud App and Commercial WLAN Adaptor. This scalable solution is ideal for one system, one site or multiple locations. Coupling the adapter with the already feature rich systems, makes it an ideal solution for residential and commercial applications.

#### 1 From 1 to 200 units

User can control up to 10 different sites, with up to 20 units / groups per site.

#### 2 1 indoor or 1 group

One simple WLAN adaptor CZ-CAPWFC1 can be connected to 1 indoor unit or to a group (maximum 8 units).

#### 3 Multi user

The Panasonic Comfort Cloud App allows multi-user access control. Restrict user access to specific units.

#### 4 Easy scheduling

Complex weekly scheduling made simple. Not only for one unit, but across multiple sites and from a smartphone.

#### 5 Energy monitor

See the estimated power consumption and compare with other periods, to see how energy consumption can be reduced even more. Check list of units that provides consumption\*.

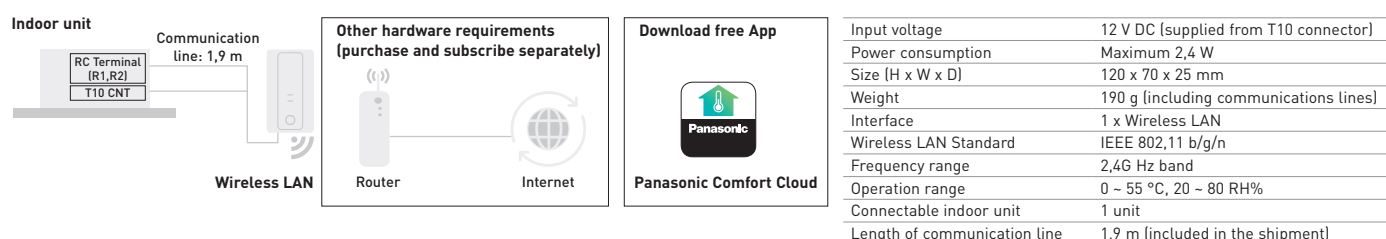
\* Function available depending on the model.

#### 6 Error codes

Error code notification through the App, provides early notification and allows for faster repair.

### Connection diagram

Commercial WLAN Adaptor wiring length is 1,9 m and connects to indoor unit thru T10 connector and R1/R2 terminal connectors.



### Cloud control is available for all indoor units with P-link

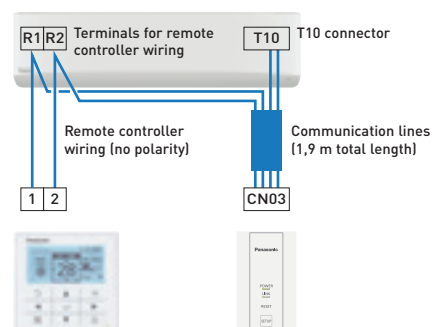
Compatible indoor units type: Model code starting with "S-" (excludes S-80/125MW1E5).

Incompatible indoor units type: Model code starting with "PAW-", "FY-" and S-80/125MW1E5.

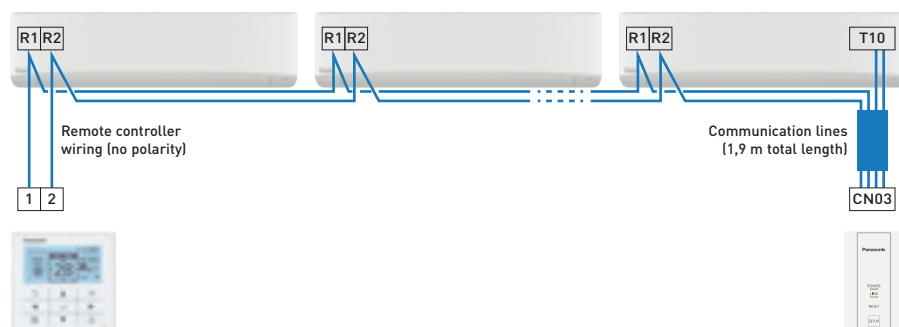
### Basic wiring diagram

If there is one indoor unit or if there are multiple indoor units, connect one WLAN adaptor and one remote controller. A remote controller must be connected and it should be set as the "main unit" in the main-sub remote controller settings.

Example when there is 1 indoor unit.



Example when there are multiple indoor units.





# New wired remote controller - CZ-RTC6 / CZ-RTC6BL / CZ-RTC6BLW

NEW  
2020

## 1 Intuitive control with stylish design profile

- Simple operation at a glance
- Clean face with full flat & black LCD display
- Compact body only 86x86

## 2 Control comfort with your smartphone for multi users

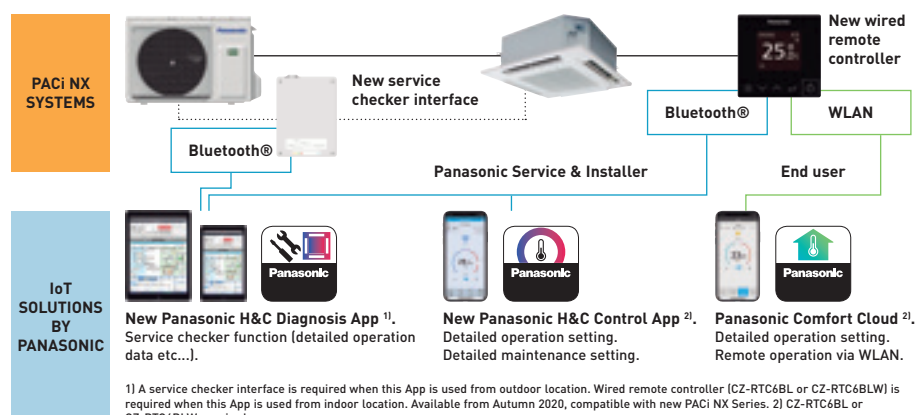
- Flexible control options with IoT integration
- New Panasonic H&C Control App for daily remote control operation
- Panasonic Comfort Cloud App for remote operation 24/7/365

## 3 Easy maintenance with service support App

- Quick and easy App set-up for system setting
- Panasonic H&C Diagnosis App enables the user to obtain detailed system operation data

### Flexible control option with IoT integration

New wired remote controller series are fully integrated with IoT solutions developed by Panasonic. Detailed operation, maintenance setting and service operation are all possible with smartphone or tablet.



This series give you comfort and control, meeting the varying needs of multi users. Accessible, flexible and convenient. Perfectly meeting modern control needs.



1. Mode Heat/Cool/Dry/Fan/ Auto
2. Fan speed (5levels)
3. Air flow direction
4. nanoe™ X / Econavi setting
5. Menu
6. Down
7. Up
8. Enter
9. ON/OFF

### Intuitive operation with simple & modern design panel

Sophisticated design with black flat panel and compact body. From residential to commercial, the wired remote controller series perfectly matches with all kinds of modern building.

It enables user to recognize each function with a simple glance.

\* Available functions can be referred in "Basic function list" below.

### Wired remote controller line-up

		WLAN	Bluetooth®
<b>CZ-RTC6</b>	Non-wireless	—	—
<b>CZ-RTC6BL</b>	Bluetooth®	—	✓
<b>CZ-RTC6BLW*</b>	WLAN & Bluetooth®	✓	✓

\* Available from Autumn 2020, compatible with new PACi NX Series.

### Basic specification

Model	CZ-RTC6 (Non-wireless)	CZ-RTC6BL (Bluetooth®)
Input voltage	V DC	16 (supplied from indoor unit)
Power consumption	TBC	
Size (H x W x D)	mm	86 x 86 x 25
Weight	kg	0,1
Operation range - Temperature / Humidity	0 ~ 40 °C / 20 ~ 80 %	
Temperature setting interval	°C	0,5
Connectable indoor units	Maximum 8 units (within remote control group)	
Clock	Precision	± 30 seconds/month (at normal temperature 25 °C)
	Holding time	24 hours
For Bluetooth® Apps	—	iOS: 10.0 or later Android™: 6.0 or later
Bluetooth®	—	Version 4.2 or later

### Basic function list

Control item	Controllability	CZ-RTC6	CZ-RTC6BL	CZ-RTC6BLW*
Outdoor compatibility	PACi (PZH2, PZ2 Series)	✓	✓	—
	New PACi (PZH3, PZ3 Series)	✓	✓	✓
	ECOi / ECO G	✓	✓	—
Basic operation	Operation, Mode, Temperature setting, Air flow volume, Air flow direction	✓	✓	✓
	Time display	—	✓	—
Timer function	Easy ON/OFF timer	—	✓	—
	Weekly program timer	—	✓	—
	Outing function	✓	✓	Coming soon
Energy saving	Temperature auto return	—	✓	Coming soon
	Temperature setting range limitation	—	✓	Coming soon
	Energy monitoring	—	✓	Coming soon

Control item	Controllability	CZ-RTC6	CZ-RTC6BL	CZ-RTC6BLW*
Maintenance	System failure information	✓	✓	—
	Alarm display	✓	✓	—
	Service contact registration	—	✓	—
	Filter sign reset	✓	✓	Coming soon
	Key lock	✓	✓	Coming soon
Others	Ventilation fan control	—	✓	—
	Display contrast adjustment	✓	✓	—
	Rotation control	—	✓	—
	Quiet operation mode	—	✓	—
	Wireless control	—	—	—

\* Available from Autumn 2020.

### New Panasonic H&C Control App

Panasonic H&C Control App for daily remote control operation and quick system setting via Bluetooth®.

\* User interface image may be updated without notification.

Home screen



Basic settings



Statistics



Weekly timer



Advanced settings



### New service checker interface

The new service checker interface provides easy access to service parameters and service checker data via Bluetooth®.

- A new service checker interface\* for PACi NX Series
- Bluetooth® connection
- Panasonic H&C Diagnosis App

\* Available as a spare part, compatible with new PACi NX Series.

Input voltage	220-240 V ~ 50-60 Hz (supplied from outdoor unit)
Power consumption	Maximum 2,4 W (including outdoor units)
Size (H x W x D)	175 x 125 x 50 mm
Weight	—
Interface	Bluetooth® 4.2 or later
Frequency range	2,4 GHz band
Operation range - Temperature / Humidity	0 ~ 40 °C / 20 ~ 80 % (no condensation)

\* Frequency band in which the ratio equipment operates; 2402 - 2480 MHz.

\* Maximum radio-frequency power transmitted in the frequency bands in which the ratio equipment operates; +0 dBm.



## Remote controller with Econavi





Easy to use, attractive, clear design, with new demand control functions and energy consumption display! This useful feature makes this remote controller unique!

## Design

The CZ-RTC5B wired remote controller is ideal for integration into the most demanding interior architectures. The touch panel features a very sleek and easy to use display, which with its compact display is only 120 x 120 x 16 mm.

## Display of information

The information is mainly based on pictograms to ensure easy understanding. The minimal amount of text is available in 6 languages (English / German / French / Spanish / Italian / Polish).

## Basic function (operation display & indication)

All functions are easily available on the remote controller.

- OFF/ON timer · Weekly timer · Quiet operation · Remote controller sensor · Operation prohibit · Filter sign · Energy saving · Centralized control indication · Mode change prohibit · Automatic temperature return · Temperature range limitation · OFF remind · Schedule demand control · Ventilation · Out Function

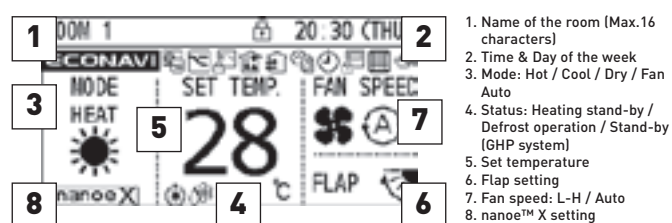
## Key functions

- Easy setup of the timer and settings of the indoor unit
- Energy consumption display (for all R32 PACi line-up)
- Limitation of the energy consumption (Demand control) by timer.

The screen is back lit to enable reading even during the night.

## Easy access to the menus.

With the new pictograms, the navigation, the selection and the settings are simple and easy to follow.



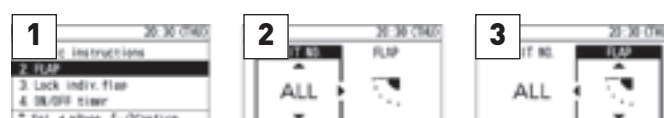
## Easy operation and quick access to all menus

1. Set temperature will be selected, when any arrow button is touched
2. Select the item (Mode or Fan speed) by left/right ◀▶ key
3. Change the setting by up/down ▲▼ key



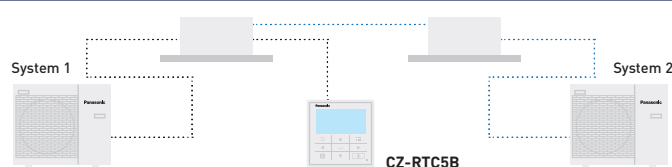
## Example of easy access to the functions: air direction setting

1. Select "Air direction" and press "Enter" key
2. Select the unit number by up/down ▲▼ key
3. Select the flap position by up/down ▲▼ key
4. Press "Return" key to go back the Menu display



## Backup control by using CZ-RTC5B

Group wiring of 2 systems of PACi can do auto individual control: Rotation operation, backup operation and support operation.



## Functions available on the CZ-RTC5B

Control item	Controllability	Indoor units	
		PACi	VRF
Basic operation	Operation, Mode, Temperature setting, Air flow volume, Air flow direction	✓	✓
	Time display	✓	✓
Timer function	Easy ON/OFF timer	✓	✓
	Weekly program timer	✓	✓
	Outing function	✓	✓
	Temperature auto return	✓	✓
	Temperature setting range limitation	✓	✓
Energy saving	OFF remind	✓	✓
	Energy saving mode	✓	✓
	Schedule demand control	✓ <sup>1)</sup>	✓
	Energy monitoring - R32	✓	—

Control item	Controllability	Indoor units	
		PACi	VRF
Maintenance	System failure information	✓	✓
	Service contact registration	✓	✓
	Filter sign (rest time display) & Reset	✓	✓
	Auto-address, Test run	✓	✓
	Sensor value monitor	✓	✓
	Simple / Detail setting mode	✓	✓
Others	Key lock	✓	✓
	Ventilation fan control	✓	✓
	Display contrast adjustment	✓	✓
	Remote controller sensor	✓	✓
	Quiet operation mode	✓ <sup>1)</sup>	—
	Prohibit setting control from central controller	✓	✓

All specifications subject to change without notice.  
 1) Not available with PACi Standard R410A line up.



# Datanavi

FAST  
AND  
INTUITIVE

EASY  
ACCESS TO  
MANUAL  
DATABASE

ACCURATE  
SERVICE DATA  
ON YOUR  
SMARTPHONE



datanavi

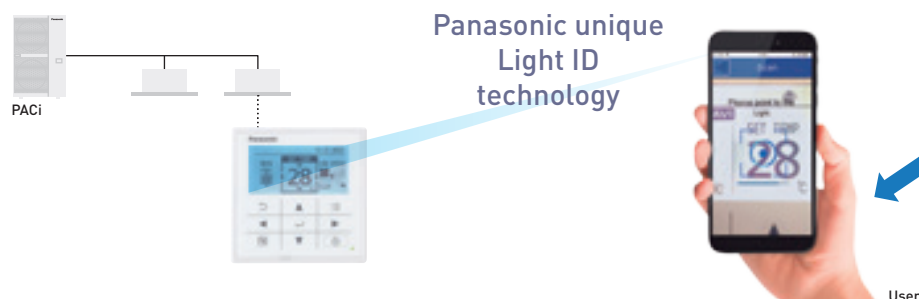


Datanavi, a new way to connect.  
Simple and easy support tool with your smartphone.



### Overview of datanavi system

Just holding up your smartphone to the LED display on a remote controller (CZ-RTC5B) to receive useful AC system information super fast by Panasonic Light ID Technology. Datanavi also connects to Panasonic Cloud Server for the quick view of manuals, saving data received by Light ID.



### Key functions

- Scan & Save AC system info
- Easy access to manual database
- Commissioning, F-Gas check data history

What is the Light ID technology developed by Panasonic?  
Visible light transmission technology, which enables to transmit information by high-speed and invisible flashing of an LED light source.

### User / administrator (person in charge of AC) functions

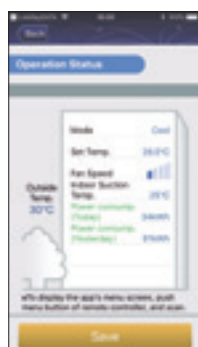
- **Fast and intuitive.** Regular operation data, energy consumption data display
- **Easy access to data base.** Getting manuals related on demand
- **No idea what to do when an error happens?** You can share error information and contact service easily

### Installer / service company functions

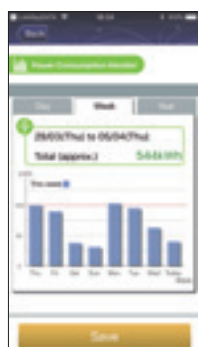
- **Getting technical data depends on your need**  
Service manual. Q & A list. Test run information
- **Accurate error information**



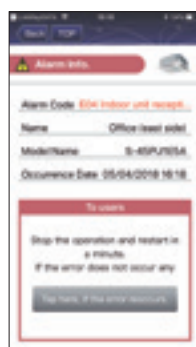
#### Regular operation



#### Energy management



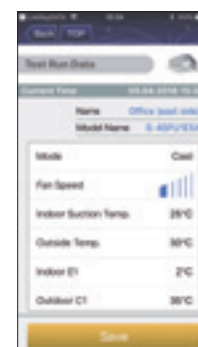
#### Malfunction notice



#### Operating manual



#### Test run info



#### Service data



\* User interface image may be updated without notification.

- Simple F-gas regulation check list
- Repair speed check list

Download free Apps, try datanavi!  
2 free Apps are necessary to use datanavi.





## Intelligent controller



This controller is the smart solution for your advanced requirement in buildings.

### Intuitive operation

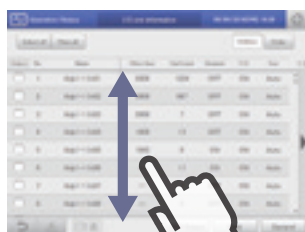
The screens used for operations all follow a common pattern, with the screens being easy to read and easy to use.

- Enlarged screen (10,4 inch) with colour LCD
- Smartphone-like gestures (flick, swipe, touch)

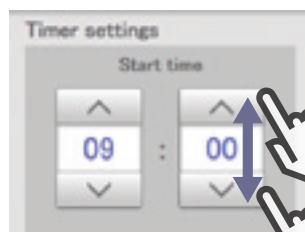
Large screen display. Enlarged by 60 %.



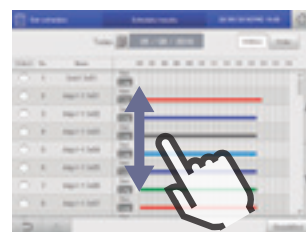
Easy swipe or flick operation.



**Swipe.**  
This is an operation where the finger is slid in a direction (up or down) on the touch panel. This is used to scroll slowly.



**Select.**  
This is an up and down movement of the finger touching the screen, used to pick settings in elements such as spin boxes.

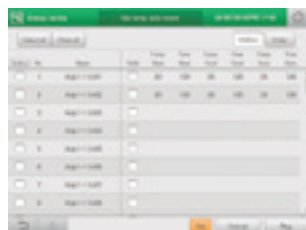


**Pull out.**  
This is an operation where the finger on the touch panel is flicked in a direction (up or down). This is used to scroll quickly.

### Enhanced functions for energy saving as standards

- Set temperature auto return settings, Auto shut OFF, set temperature range limit settings
- Demand control function

Screen of set temperature auto return setting.



Auto shut OFF.



Screen of outdoor demand control.

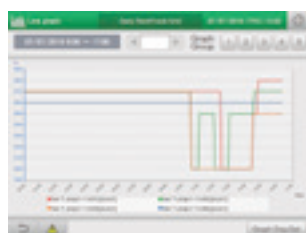


- Outdoor demand input and timer settings possible
- Indoor can be set at  $\pm 1$  °C/  $\pm 2$  °C or thermostat OFF
- Indoor units controlled in sequence at 10-minute intervals

### Energy visualization

- Energy saving plans are supported with graph display function
- Displays electricity & gas usage distribution

Screen of graph display.



Useful parameters are shown for your better energy saving.  
Ex.) Bar graph:

Indoor unit: Total operating time, thermostat ON operation time (Min.)  
Amount used (electricity, gas)  
Electricity or gas charges  
Outdoor unit: Outdoor unit operation cycles (# cycles)  
Engine time in operation (Hrs.)  
Cumulative Inverter power output  
Cumulative PV power output

Pulse value selection per different data intervals 1 hour/1 day/ 1 month compared with last year.

### Main function

Gesture function (flick, swipe, touch)	✓
Graph display (trends, comparisons)	✓
Web functions (Max. 64 users)	✓
Recipient setting for warning email	✓ (Maximum 8)
Automatic return to setting temperature	✓
Limitation of setting temperature range	✓
Left-on prevention	✓
Quiet operation of outdoor unit	✓
Occupant sensor linkage	✓
Demand function	✓
Charge calculation	✓
Log display	Warning 10000 items Status change 50000 items
Linked control Event definition 50 events, input: 32, output: 32	✓
Under maintenance (under inspection registration)	✓



## Econavi Sensor



The Econavi sensor detects presence in the room, and quietly adapts the PACi or VRF air conditioning system in order to improve comfort and energy savings.

- Detects human activity and adjusts temperature by 2 degrees (up or down) to optimize comfort and efficiency
- If there is no activity detected for a set time period, the Econavi will stop the unit or move to a new temperature previously set
- The Econavi device is installed independently of the indoor unit, and is located in the area best suited for detection

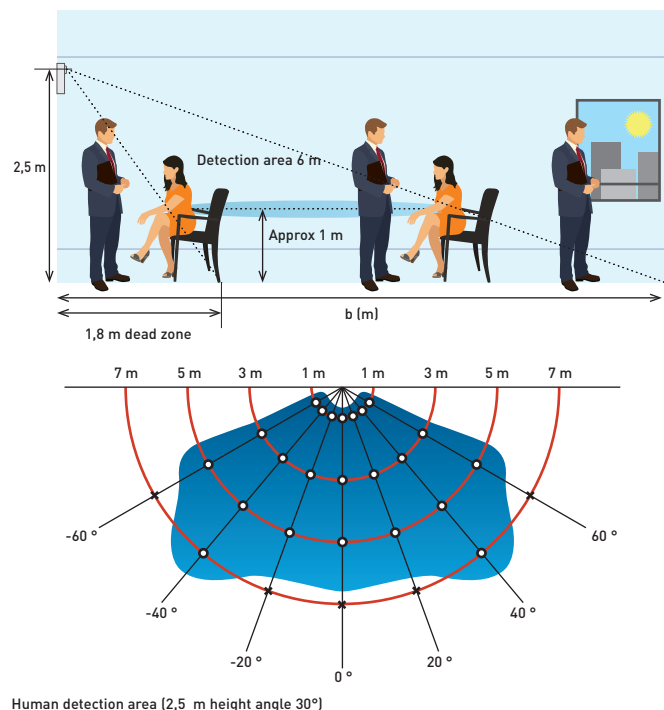
### Applications

**Saving energy for offices:** If the air conditioning is left on after the last employee leaves the office, Econavi will automatically react, reducing or stopping the system. **Increased comfort in hotel rooms:** When presence is detected in the room, the temperature is automatically adjusted to achieve best comfort.

### Key points

- Compatible with Cassette, Wall Mounted, Hide Away and Ceiling units
- Improves efficiency
- Better comfort
- Can be installed in the best location within the room for detection purposes

### Sensor location image



Providing outstanding energy saving performance, Panasonic's Inverter system can be connected to Econavi to detect when energy is being wasted. Econavi senses the presence or absence of people and the level of activity in each area of an office. When unnecessary heating or cooling is detected, indoor units are individually controlled to match office conditions for energy saving operation.

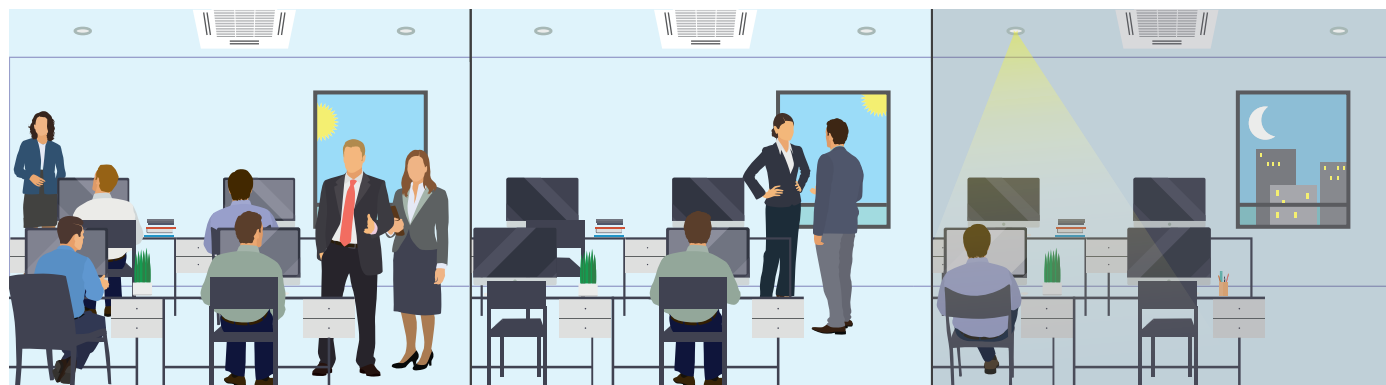
### Detection of the level of activity enables precise power saving.

Presence or absence of people at their desks and the level of activity in the office are detected in real time. Set temperature is automatically adjusted to optimise the lower power consumption.



### Remote Econavi sensor allows optimum energy operation.

Pillars, walls, cabinets and other fittings obstruct the sensor, reducing the area of detection and lowering the energy saving effect. Taking into consideration blind spots, Panasonic enables the optimum layout for sensors in any office.

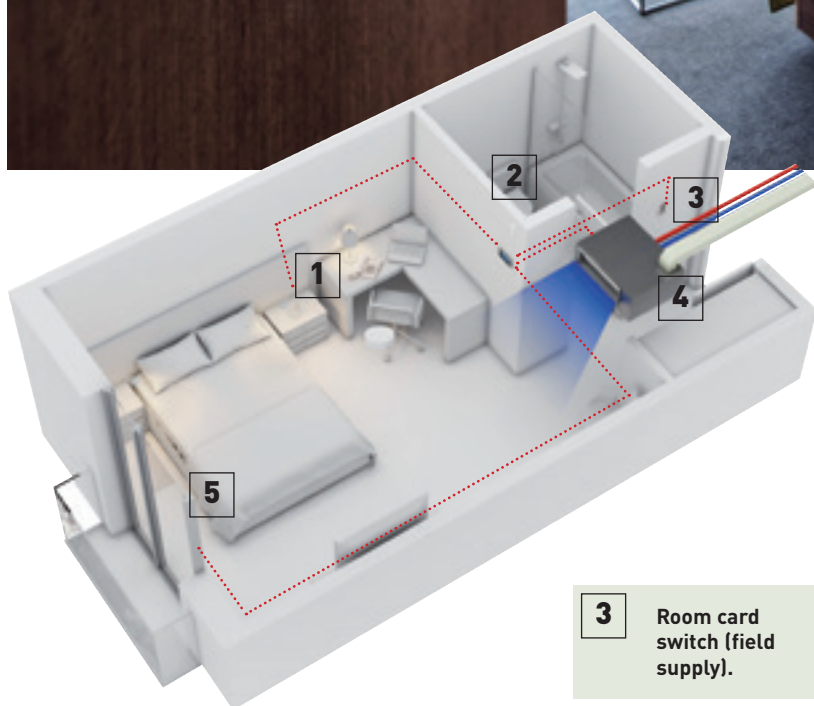
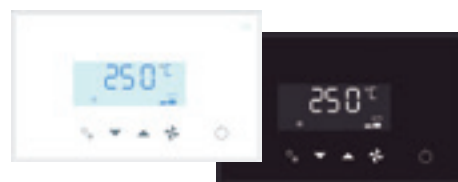


**In the morning.**  
Thorough cooling when there is a high level of activity

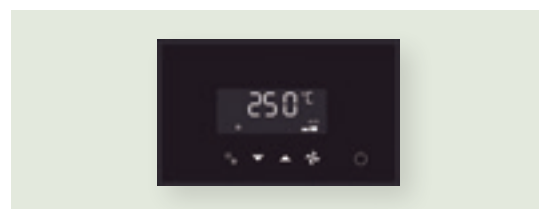
**In the afternoon.**  
Reduced cooling when there are fewer people

**At night.**  
Automatic Thermo OFF depending on conditions at the end of the day

# Controller for hotel application



**3** Room card switch (field supply).



**Controller to integrate all room hotel needs in one device.**  
Card switch. Heating and cooling control. Light control. Window control. Possible to connect to Modbus.



**1** Lighting control.



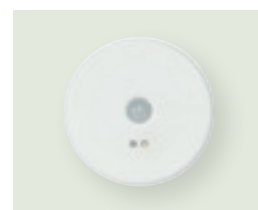
**2** Wall sensor PAW-WMS-AC (-DC).



**4** Indoor unit. Variable static pressure hide away.



**5** Window contact PAW-DWC.



Ceiling motion sensor PAW-CMS-AC (-DC).

Innovative line up of room controllers specially designed for hotel applications. With a modern cosmetic that match room interiors and simple operation for hotel guests.

- Easy to install
- Cost effective installation as all electrical cable are centralized on this remote: The lighting, card contact, motion detector, window contact and the air conditioning are controlled
- Architect inspired attractive design with 2 colors: black or white
- Stand alone and Modbus
- Bespoke finish as special order

#### Energy saving functions included on the device.

Turns OFF air conditioning and lighting when room is unoccupied. Disables air conditioning when window is open. Maximum/minimum setpoint temperature configurable.

#### Easy remote controller.

The hotel guest will have access to limited functions to control the air conditioning: ON/OFF, Temperature and Fan speed.

#### Easy set up.

Stand alone model with easy configuration menu to access all parameters. A pre-define scenario can be uploaded on the remote controller connected to a computer to make installation on site Plug & Play (only on the Modbus models).

#### New NFC fast set up.

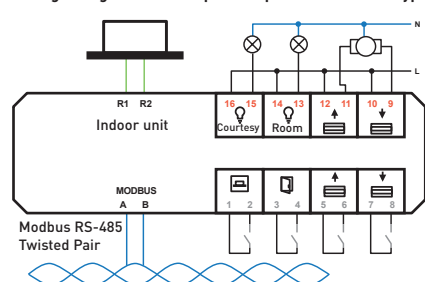
With the new touch display control and touch room controller setting are quicker than ever. Just touching smartphone with NFC capability the settings will be saved. This function is also possible even when the control is not wired. Giving flexibility to save the setting even before installation.

Type	Model	Colors	Digital inputs	Digital output	BMS	Inst. set up	T. sensor
Touch display controller	PAW-RE2D4-WH	White	2			NFC	Built-in
	PAW-RE2D4-BK	Black	2			NFC	Built-in
Touch room controller	PAW-RE2C4-MOD-WH	White	4	4	Modbus	NFC	Built-in
	PAW-RE2C4-MOD-BK	Black	4	4	Modbus	NFC	Built-in

#### Room controller: 4 digital inputs & 4 digital output

Room controller offers flexibility and easy installation thanks to 4 preconfigured options. This is available in Modbus type. Modbus references: PAW-RE2C4-MOD-WH, PAW-RE2C4-MOD-BK.

Wiring configuration example for option 2 in Modbus type.



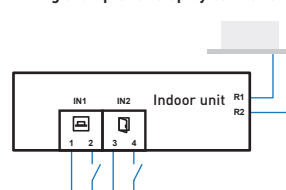
Configurations	4 options available I/O configurations: Inputs				Available I/O Configurations: Outputs			
	Digital 1-2	Digital 3-4	Digital 5-6	Analog 7-8	Relay 15-16	Relay 13-14	Relay 11-12	Relay 9-10
Option 1	Card	Window	Lighting	Temperature	Courtesy	Lighting	Not used	Valve actuator
Option 2	Card	Window	Blinds up	Blinds down	Courtesy	Lighting	Blinds up	Blinds down
Option 3	Motion sensor	Window	Door contact	Temperature	Courtesy	Lighting	Not used	Valve actuator
Option 4	Lighting	Window	Blinds up	Blinds down	Not used	Lighting	Blinds up	Blinds down

#### Display: 2 digital inputs

Display control allows to handle 2 inputs to perform most common operation in room hotels.

References: PAW-RE2D4-WH, PAW-RE2D4-BK.

Wiring example for display controller.



Configurations	3 options available: Inputs	
	IN1 (1-2)	IN2 (3-4)
Option 1	Card	Window
Option 2	Motion sensor	Window
Option 3	Motion sensor	Door contact

Hotel room controller	
PAW-RE2C4-MOD-WH	Modbus RS-485 touch room controller with I/O, white
PAW-RE2C4-MOD-BK	Modbus RS-485 touch room controller with I/O, black
PAW-RE2D4-WH	Touch display control with 2 digital inputs, white
PAW-RE2D4-BK	Touch display control with 2 digital inputs, black

Accessories sensors	
PAW-WMS-DC	Wall silent motion sensor 24 V
PAW-WMS-AC	Wall silent motion sensor 240 V AC
PAW-CMS-DC	Ceiling silent motion sensor 24 V
PAW-CMS-AC	Ceiling silent motion sensor 240 V AC
PAW-24DC	Power supply 24 V
PAW-DWC	Door or window contact



## BMS interface with P-Link



BMS interface with Panasonic communication bus helps you to get significant savings.

In addition to reducing the time of configuration and installation, the potential mistakes can be avoided.

Easy to use and reliable interfaces for a straightforward integration.



Modbus®



## 1 Direct connection to P-Communication bus

- No need for additional gateway (CZ-CFUNC2)
- Significant 50 % cost saving for BMS interface\*
- Avoid mistakes and reduce configuration time.

\* In the case of PAW-AC2-BAC-16P by Panasonic calculation.

## 2 Upgraded specifications and easy configuration

- Base PCB board with MCU, Ethernet, RS485, RS232 & USB
- Configuration by IP or USB
- New single configuration tool for all models (IntesisBox MAPS)
- Modular expansion PCBs (KNX, RS485, DALI, MBUS, LON, ANYBUS)

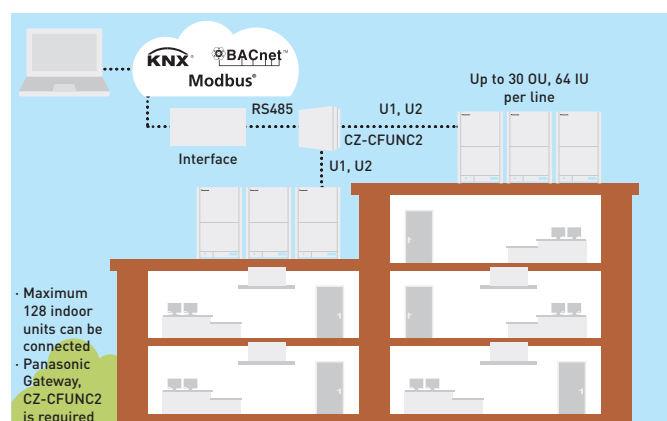
## 3 BTL certified for BACnet

- BACnet: Version 14 and BTL certified

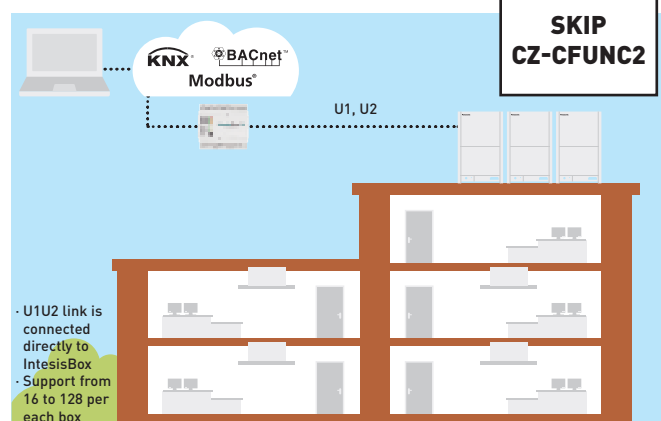
### Direct connection to P-Communication bus

The interface can provide faster, cheaper, easier solution in your projects!

Conventional interface.



Interface with P-communication bus.



### Upgraded specifications and easy configuration

- Base PCB board with MCU, Ethernet, RS485, RS232 and USB
- Modular expansion PCBs (KNX, RS485, DALI, MBUS, LON, ANYBUS)
- Frontal PCB with all LEDs, buttons and USB console port
- New single configuration tool for all models (IntesisBox MAPS)
- Improved version of the current communication stacks, BTL and KNX Certifications will be possible
- Recovery of current configuration project working in V6
- Local logging of interface data via USB without the need for a PC

- Configuration by IP or USB (old generation RS232)
- CB certification for EU, US, CA and AU. Also UL marked product



Model for BACnet	Maximum number of indoor units connected
PAW-AC2-BAC-16P	16 indoor units
PAW-AC2-BAC-64P	64 indoor units
PAW-AC2-BAC-128P	128 indoor units
Model for Modbus	Maximum number of indoor units connected
PAW-AC2-MBS-16P	16 indoor units
PAW-AC2-MBS-64P	64 indoor units
PAW-AC2-MBS-128P	128 indoor units
Model for KNX	Maximum number of indoor units connected
PAW-AC2-KNX-16P	16 indoor units
PAW-AC2-KNX-64P	64 indoor units

Version	Connectable indoor units	Connectable outdoor units	Nr. of P- Communication bus port
16	1-16	1-16	1
64	1-64	1-30	1
128	128 (1-64 / P- Communication bus port)	60 (1-30 / P- Communication bus port)	2

# Control and Connectivity

## Centralized control systems

### BMS system. PC base.



**CZ-CSWKC2**  
P-AIMS. Basic software.  
Up to 1024 groups. Controls 1024 units.

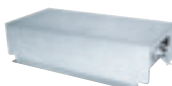
### Connection with 3rd party controller.



**CZ-CAPDC2**  
Seri-Para I/O unit  
for outdoor unit.  
Up to 4 outdoor  
units.



**CZ-CAPC3**  
ON/OFF control for  
external devices such  
as ERV.  
Controls 1 unit.



**CZ-CAPBC2**  
Mini Seri-Para I/O Unit  
0 - 10 V.  
Controls 1 indoor unit or a  
group of 8 indoor units.



**CZ-CFUNC2**  
Communication  
adaptor.  
Up to 128 groups.  
Controls 128 units.

### AC Smart Cloud.



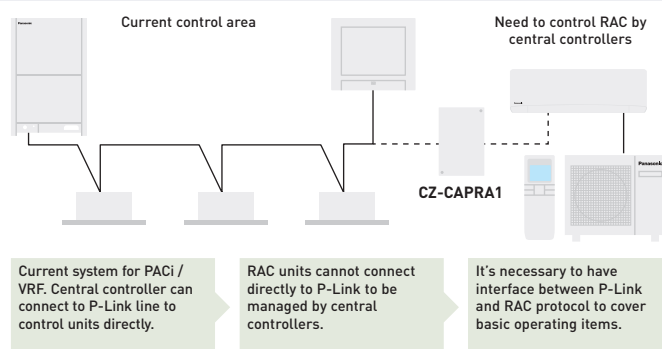
**CZ-CFUSCC1**  
Cloud internet control.  
Up to 128 groups. Controls 128 units.

## Domestic integration to P-Link - CZ-CAPRA1

Can connect RAC range to P-Link. Full control is now possible.

### Integrates any unit in big system control.

- TKEA / PKEA server room integration
- Small offices with domestic indoors
- Tender for refurbishment (old system domestic and VRF in one installation)



**Basic operation items:** ON/OFF, Mode select, Temperature setting, Fan speed, Flap setting, Remote control prohibit.

**External input:** ON/OFF control signal, abnormal stop signal.

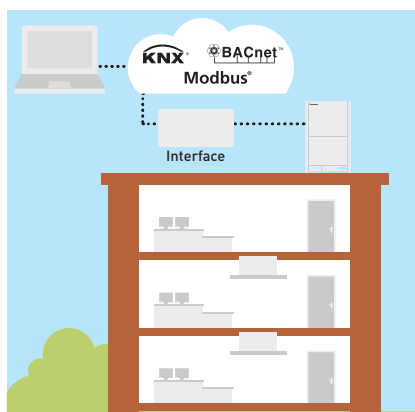
**External output for Relay <sup>1)</sup>:** Operation status (ON/OFF), alarm status output.

1) Because current CN-CNT connector can not provide the power for external output relay, additional input power for external relay is necessary.










## Easy connection to KNX, Modbus, LonWorks and BACnet

Great flexibility for integration into your KNX / Modbus / LonWorks / BACnet projects allows fully bi-directional monitoring and control of all the functioning parameters.

**For more information, contact Panasonic.**



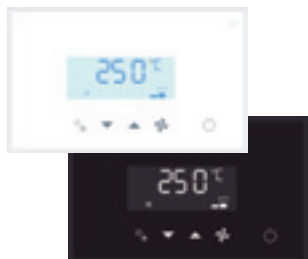


			Econavi control	Built-in thermostat	Indoor units which can be controlled	Use limitations	Function ON/OFF	Mode setting	Fan speed setting	Temperature setting	Air flow direction	Permit/Prohibit switching	Weekly program	BMS protocol
<b>Individual controllers</b>														
Touch room controller for hotel with Dry Contacts		<b>PAW-RE2C4-MOD-WH</b> <b>PAW-RE2C4-MOD-BK</b> WH: White, BK: Black. Bespoke finish available on request.	—	✓	1 indoor unit	—	✓	✓	✓	✓	—	✓	—	Modbus + 4 digital I/O signals
Touch display control for hotel with Dry Contacts		<b>PAW-RE2D4-WH</b> <b>PAW-RE2D4-BK</b> WH: White, BK: Black. Bespoke finish available on request.	—	✓	1 indoor unit	—	✓	✓	✓	✓	—	✓	—	Stand alone + 2 digital inputs
Design wired remote controller		<b>CZ-RTC5B</b>	✓	✓	1 group, 8 units	· Up to 2 controllers can be connected per group	✓	✓	✓	✓	✓	—	✓	—
Wired remote controller		<b>CZ-RTC6</b> Non-wireless	✓	✓	1 group, 8 units	· Up to 2 controllers can be connected per group	✓	✓	✓	✓	✓	—	—	—
		<b>CZ-RTC6BL</b> With Bluetooth®	✓	✓	1 group, 8 units	· Up to 1 controller can be connected per group	✓	✓	✓	✓	✓	—	✓	—
		<b>CZ-RTC6BLW</b> With WLAN & Bluetooth® (available from Autumn 2020)	✓	✓	1 group, 8 units	· Up to 1 controller can be connected per group	✓	✓	✓	✓	✓	—	✓	—
Wired remote controller		<b>CZ-RTC2</b> For Floor-standing (MP1) indoor units	—	✓	1 group, 8 units	· Up to 2 controllers can be connected per group	✓	✓	✓	✓	✓	—	✓	—
Infrared remote controller		<b>CZ-RWS3 + CZ-RWRU3W</b> <b>CZ-RWS3</b> <b>CZ-RWS3 + CZ-RWRL3</b> <b>CZ-RWS3 + CZ-RWRD3</b> <b>CZ-RWS3 + CZ-RWRT3</b> <b>CZ-RWS3 + CZ-RWRC3</b>	✓	—	1 group, 8 units	· Up to 2 controllers can be connected per group	✓	✓	✓	✓	✓ <sup>1)</sup>	—	—	—
<b>Centralized controllers</b>														
Central controller with weekly timer		<b>CZ-64ESMC3</b>	✓	—	64 groups, maximum 64 units	· Up to 10 controllers, can be connected to one system · Main unit/sub unit (1 main unit + 1 sub unit) connection is possible · Use without remote controller is possible	✓	✓	✓	✓	✓ <sup>1)</sup>	✓	✓	—
Only ON/OFF operation from central station. ON/OFF controller		<b>CZ-ANC3</b>	—	—	16 groups, maximum 64 units	· Up to 8 controllers (4 main units + 4 sub units) can be connected to one system · Use without remote controller is impossible	✓	—	—	—	—	✓	—	—
Intelligent controller (touch screen panel)		<b>CZ-256ESMC3</b>	✓	—	Main unit: 128. Up to 256 units can be expanded	· Communication adaptor CZ-CFUNC2 is necessary for connection with more than 128 units	✓	✓	✓	✓	✓ <sup>1)</sup>	✓	✓	—

1. Setting is not possible when a remote controller unit is present (use the remote controller for setting). \* All specifications subject to change without notice.

## Individual controllers

### Room controller for hotel rooms



#### PAW-RE2C4-MOD-WH // PAW-RE2C4-MOD-BK

- Easy to install
- Cost effective installation as all electrical cables are centralised on this remote
- Architect inspired attractive design
- Direct connection to the Indoor unit with all primary functions of indoor unit available
- 2 options available: Stand alone and Modbus communication
- Colours: WH: White. BK: Black
- Room controller: 4 digital inputs and 4 digital outputs

#### From this remote controller.

The lighting, card contact, motion detector, window contact and the air conditioning are controlled.

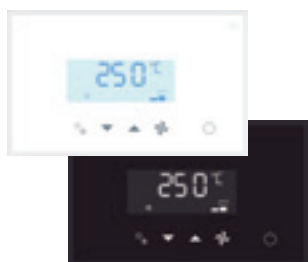
#### Energy saving functions included on the device.

- Turns OFF air conditioning and lighting when room is unoccupied
- Disables air conditioning when window is open
- Maximum/minimum setpoint temperature configurable

#### Fast and simple set up.

Set up is simple and easy for room controllers. But it is extremely easy and quick with touch models, which can be set up by using smartphone with NFC technology, even when control is not yet installed / powered.

### Display control for hotel rooms



#### PAW-RE2D4-WH // PAW-RE2D4-BK

- Easy to install
- Cost effective installation as all electrical cables are centralised on this remote
- Architect inspired attractive design
- Direct connection to the Indoor unit with all primary functions of indoor unit available
- Stand alone communication
- Colours: WH: White. BK: Black
- Basic hotel function: 2 digital inputs

#### From this remote controller.

The card contact, motion detector, window contact and the air conditioning are controlled.

#### Energy saving functions included on the device.

- Disables air conditioning when window is open
- Maximum/minimum setpoint temperature configurable

#### Fast and simple set up.

Set up with smartphone with NFC technology, even when control is not yet installed/powerd.

### New wired remote controller



NEW  
2020

#### CZ-RTC6 // CZ-RTC6BL // CZ-RTC6BLW <sup>1)</sup>

- 3 line-up. CZ-RTC6: Non-wireless, CZ-RTC6BL: Bluetooth®, CZ-RTC6BLW: WLAN & Bluetooth®
- Intuitive control with stylish design profile
- Clean face with full flat & black LCD display
- Dimension (H x W x D): 86 x 86 x 25 mm

#### Panasonic H&C Control App <sup>2)</sup>.

- Daily remote control operation via Bluetooth®
- Quick and easy App set-up for system setting

#### Panasonic H&C Diagnosis App <sup>3)</sup>.

- Easy access to service parameters and service checker data via Bluetooth®

#### Basic operation.

- Mode setting: Heat / Cool / Dry / Fan / Auto
- Temperature setting
- Fan speed: 5 levels
- Air flow direction
- nanoe™ X & Econavi setting
- Weekly program <sup>4)</sup>

<sup>1)</sup> Available from Autumn 2020, compatible with new PACi NX Series.  
<sup>2)</sup> CZ-RTC6BL or CZ-RTC6BLW required.

<sup>3)</sup> A service checker interface is required and available from Autumn 2020. Compatible with new PACi NX Series.

<sup>4)</sup> Can be set from Panasonic H&C Control App.

## Design wired remote controller



**datanavi**

**nanoeX**

**ECONAVI**

### CZ-RTC5B

- Power consumption monitor (only for PACi)
- Flat face design & touch sensor switch for stylish design and operating usability
- New functions such as for energy saving & monitoring and for service use are available on the full dot LCD (3,5" display)
- Improved illumination
- White LED backlit
- Blink when alarm occurs

### Datanavi

- Scan & save AC system info
- Easy access to manual database
- Commissioning, F-Gas check data history

\* Panasonic App is required on your smartphone.

### Basic Operation.

- Operation
- Mode
- Temperature setting
- Air flow volume
- Air flow direction

### Timer function.

- Outing function
- Weekly program timer
- Easy ON/OFF timer
- Time display

### Energy saving.

- Outing function
- Temperature setting range limitation
- Temperature auto return
- OFF remind
- Schedule demand control
- Energy saving mode
- Energy monitoring

### Others.

- Key lock
- Ventilation fan control
- Display contrast adjustment
- Remote controller sensor
- Quiet operation mode
- Prohibit setting control from central controller
- Rotation / backup control

\* Power consumption monitoring is available for all PACi systems except R410A PACi Standard.

\* Rotation and backup control with CZ-RTC5B is available for all PACi systems.

## Wired remote controller



### CZ-RTC2 (for Floor standing (P1) indoor units)

- Time function 24 hours real time clock (week day indicator)
- Weekly programme function (a maximum of 6 actions can be programmed for each day)
- Sleeping function (this function controls the room temperature for comfortable sleeping)
- Maximum 8 indoor units can be controlled from one remote controller
- Remote controller by main remote controller and sub controller is possible (maximum 2 remote controllers (main remote controller and sub controller) can be installed for one indoor unit)
- Possible to connect to the outdoor unit using PAW-MRC cable for servicing purposes
- Outing function (this function can prevent the room temperature from dropping or rising when the occupants are out for a long time)

### Basic remote controller ON/OFF.

- Operation mode changeover (Cooling, Heating, Dry, Auto, Fan)
- Temperature setting (Cooling / Dry: 18 ~ 30 °C Heating: 16 ~ 30 °C)
- Fan speed setting High / Medium / Low and Auto
- Air flow direction adjustment
- Dimensions (H x W x D): 120 x 120 x 16 mm



# Individual controllers

## Infrared remote controller



### CZ-RWS3 + CZ-RWRU3W // CZ-RWS3 // CZ-RWS3 + CZ-RWRL3 // CZ-RWS3 + CZ-RWRD3 // CZ-RWS3 + CZ-RWRT3 // CZ-RWS3 + CZ-RWRC3

- Easy installation for the 4 Way Cassette type simply by replacing the corner part
- 24 hour timer function
- Remote controller by main remote controller and sub controller is possible (Max. 2 remote controllers (main remote controller and sub controller) can be installed for one indoor unit)

- When CZ-RWS3 is used, infrared control becomes possible for all indoor units (1: when a separate receiver is set up in a different room, control from that room also becomes possible. 2: automatic operation by means of the emergency operation button is possible even when the remote controller has been lost or the batteries have been exhausted)
- Operation of separate energy recovery ventilators (when commercial ventilation fans or heat-exchange ventilation fans have been installed, they can be operated with this remote controller (interlocked operation with the indoor unit or independent ventilation ON/OFF)



CZ-RWS3 + CZ-RWRU3W  
For 4 Way 90x90 Cassette.



CZ-RWS3  
For Wall Mounted and 4 Way  
60x60 (with a panel) and  
Floor Console.



CZ-RWS3 + CZ-RWRL3  
For 2 Way Cassette.



CZ-RWS3 + CZ-RWRD3  
For 1 Way Cassette.



CZ-RWS3 + CZ-RWRT3  
For Ceiling.



CZ-RWS3 + CZ-RWRC3  
For all indoor units.

## Remote sensor



### CZ-CSRC3

- This remote sensor can be connected to any PACi or VRF unit. Use it to detect the room temperature when no remote controller sensor or body sensor is used (connection to a system without a remote controller is possible)
- For joint use with a remote controller switch, use the remote controller switch as main remote controller
- Batch group control for up to 8 indoor units

- Appearance design based on simplified remote controller chassis
- Dimensions (H x W x D): 120 x 70 x 17 mm
- Weight: 70 g
- Temperature/Humidity range: 0 °C to 40 °C / 20 % to 80 % (no condensation) (indoor use only)
- Power source: 16 V DC (supplied from indoor unit)
- Maximum number of connectable indoor units: Up to 8 units

Control contents	Part name, model No.	Quantity
Standard control	High spec wired remote controller: CZ-RTC5B Infrared remote controller: CZ-RWS3 + CZ-RWRU3W // CZ-RWS3 + CZ-RWRL3 // CZ-RWS3	1 unit each
(1) Group control	High spec wired remote controller: CZ-RTC5B Infrared remote controller: CZ-RWS3 + CZ-RWRU3W // CZ-RWS3 + CZ-RWRL3 // CZ-RWS3	1 unit
(2) Main/sub remote controller	Main or sub.: High spec wired remote controller: CZ-RTC5B Infrared remote controller: CZ-RWS3 + CZ-RWRU3W // CZ-RWS3 + CZ-RWRL3 // CZ-RWS3	As required

# Centralised controllers

## System controller with schedule timer



Sample display image /  
Operation status display

Operation Status ALL



Operation Status ZONE



Operation Status GROUP



### CZ-64ESMC3

**Operation with various functions from central station.**

**Panasonic unveils state-of-the-art digital controller.**

Panasonic's innovative and easy to use interface that offers full functionality with an integrated schedule timer and system controller, making managing heating and cooling systems easier than ever before. The CZ-64ESMC3 includes Panasonic's popular schedule timer, which gives users full flexibility over when they want their property heated or cooled. Users can adjust the system for holidays, pausing operations for long periods of time so that energy isn't wasted heating or cooling an empty home or office. The controller also allows six operations per day to be programmed.

### Mix of current 2 controllers: System controller + schedule timer.

System controller will be designed by taking priority on these 2 operations with following technical key points:

- Same operation feeling as wired remote controller by touch-key panel
- High visibility and usability by full-dot LCD
- Based on high wired remote controller
- Maximum 64 group of indoor units, individual control for 64 units
- 4 zone control; 1 zone = maximum 16 groups
- Several energy saving function (based on CZ-RTC5B)
- 6 time program per day for 1 week (7 days) operation (total 6 x 7 = 42 programs)
- Basic setting items (Temperature, Mode, Fan speed, Flap position) can be set by same manner as CZ-RTC5B

### Function list:

Central control functions:

- Central control / individual setting
  - Start-stop prohibition for remote controller
  - Start-stop / Mode change / Temperature setting prohibition for remote controller
  - Mode change / Temperature setting prohibition for remote controller
  - Mode change prohibition for remote controller
  - Select items for prohibition
- Filter information
  - Filter sign
  - Filter sign reset
- Ventilation setting

Timer functions and external I/O:

- Weekly timer
  - Timer setting enable / disable
  - Copy of timer setting
- Maintenance
  - External signal (Start / Stop) [Demand control]
  - Centralized control master-slave setting
  - Alarm history
- Initial setting
  - Clock

Energy saving, maintenance and operating functions:

- Energy saving control
  - Econavi ON/OFF
- Filter information
  - Filter sign and hour counter display
- Maintenance
  - Service contact
- Initial setting
  - Clock display setting
  - Name Setting
  - Operation lock setting
  - Operation sound setting
  - LCD contrast setting
  - LCD backlight setting
  - Select displayed language (EN/FR/IT/ES/DE)
  - Administrator password
- Setting information list

## ON/OFF controller



### CZ-ANC3

**Only ON/OFF operation from central station.**

- 16 groups of indoor units can be controlled
- Collective control and individual group (unit) control can also be performed
- Up to 8 ON/OFF controller (4 main, 4 sub) can be installed in one link system
- The operation status can be determined immediately
- Dimensions (H x W x D): 121 x 122 x 14 + 52 mm (embedding dimension)

Power supply: 220 to 240 V AC.

I/O part: Remote input (effective voltage: within 24 V DC): All ON/OFF.

Remote output (allowable voltage: within 30 V DC): ON, Alarm.

Note: As operation mode and temperature settings are not possible with the ON/OFF controller, it must be used together with a remote controller, a system controller etc.

# Centralised controllers

## Intelligent controller (touch screen panel)



### CZ-256ESMC3

#### Simplified load distribution ratio (LDR) for each tenant.

Dimensions (H x W x D): 240 x 280 x 20 (+60) mm.  
 Power supply: Single Phase 100-240 V ~ 50/60 Hz.  
 Maximum number of connectable indoor units:  
 256 units (maximum per link: 64 units).  
 Maximum number of connectable outdoor units:  
 120 units (maximum per link: 30 units).  
 · Central control device: Up to 10 units  
 Enlarged display screen: 10,4 inch touch-panel  
 colour LCD. Pursuing visibility, ease of use.  
 Retrieve data from USB memory: Place the USB  
 port inside the panel (USB memory available in  
 stores). Communication adaptor: CZ-CFUNC2\*.

\* CZ-CFUNC2 is required to connect more than 128 indoor units.

#### Functions:

- Graph display (trends, comparisons)
- Econavi ON/OFF
- Outdoor unit quiet operation ON/OFF
- Energy saving functions: Set temperature auto return settings, Auto shut OFF, Set temperature range limit settings, Energy saving for PAC current value, etc.
- Event control (such as equipment linkage)
- Performs closing at end of any period

#### Operation and status.

You can check to operational status (ON/OFF, operating mode, alarms, etc.) of all indoor units and outdoor units in real time.

You can also select indoor units to change their settings.

#### Operation scheduling.

You can register daily operation schedules (ON/OFF time, operating modes, set temperatures, etc.) for individual indoor units or groups of indoor units.

Operations can be schedule for up to 2 years in advance.

#### Load distribution calculation for each tenant.

- Air-conditioner load distribution ratio is calculated for each unit (tenant) with used energy consumption data (m<sup>3</sup>, kWh)
- Calculated data is stored as a CSV type file
- Data from the last 365 days is stored

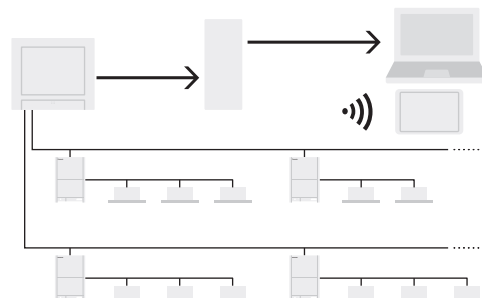
#### Web application. Web access & control from remote station.

- Accessing from remote PC
- You can monitor/operate system by using web browser

#### Remote controller.

The LAN terminal on this unit enables you connect it to a network. Connecting to Internet will enable you to operate the unit and check the status using a PC from a remote location\*.

\* Remote access rights and additional IT infrastructure / programming may be required.



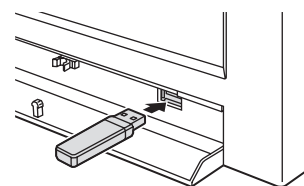
#### Backup tool to save your commissioning time.

Various data such as distribution, setting, log history etc. can be saved by CSV file.

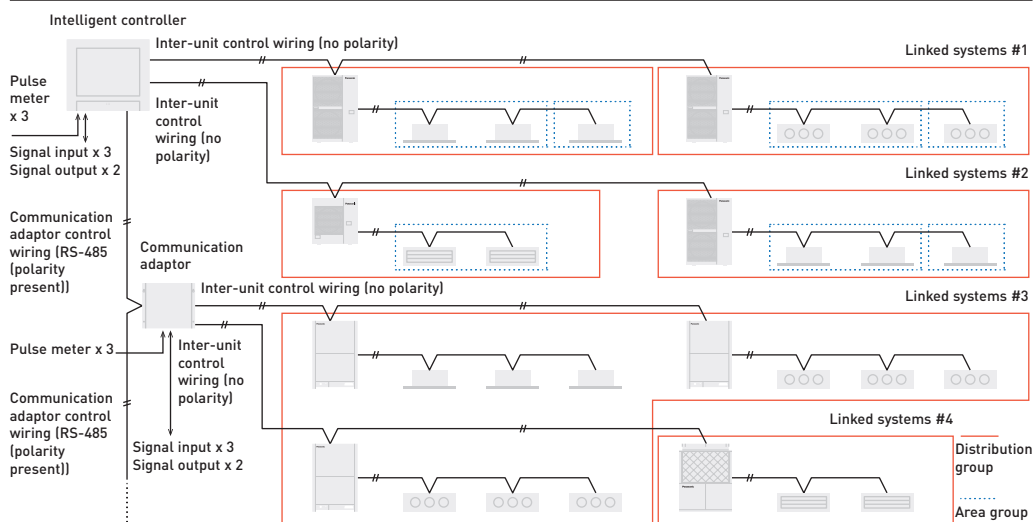
Setting data of CSV file is available to edit and import to the controller again.

You can save time for commissioning and change setting flexibly and easily by your PC.

- Customize data
- Data recovery
- Data can be imported again by general USB.



#### System configuration example.





## P-AIMS. Panasonic Total Air conditioning Management System



### CZ-CSWKC2 / P-AIMS Basic software.

Up to 1024 indoor units can be controlled by one PC.

#### Functions of basic software.

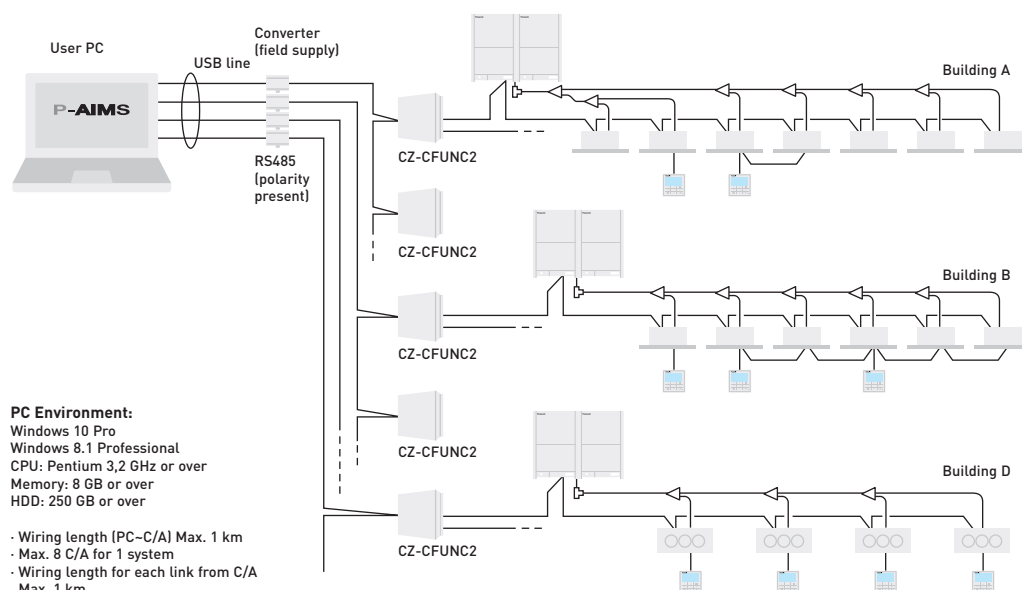
- Standard remote controller for all indoor units.
- Many timer schedule programs can be set on the calendar.
- Detailed information display for alarms.
- CSV file output with alarm history, operating status.

- Automatic data backup to HDD.

P-AIMS is suitable for large shopping centers and universities with many areas/ buildings. 1

"P-AIMS" PC can have 4 independent systems at once.

Each system can have maximum 8 C/A units, and control maximum 512 units. In total, 1024 indoor units can be controlled by 1 "P-AIMS" PC.



### P-AIMS optional software CZ-CSWAC2 for load distribution. Load distribution calculation for each tenant.

- Air-conditioner load distribution ratio is calculated for each unit (tenant) with used energy consumption data (m<sup>3</sup>, kWh)
- Calculated data is stored as a CSV type file
- Data from the last 365 days is stored

### P-AIMS optional software CZ-CSWWC2 for web application.

#### Web access & control from remote station.

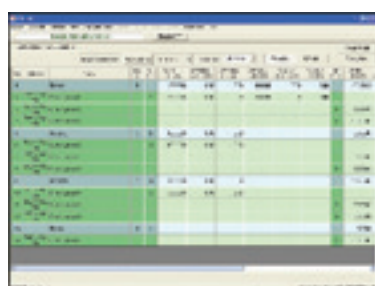
- Accessing P-AIMS software from remote PC
- You can monitor/operate ECOi System by using web browser (Internet Explorer)

### P-AIMS optional software CZ-CSWGC2 for object layout display. Whole system can be controlled visually.

- Operating status monitor is available on the layout display
- Object's layout and indoor unit's location can be checked at once
- Each unit can be controlled by virtual remote controller on the display
- Max. 4 layout screens are shown at once

### P-AIMS optional software CZ-CSWBC2 for BACnet software interface. Connectable to BMS system.

- Can communicate with other equipment by BACnet protocol
- ECOi System can be controlled by both BMS and P-AIMS
- Maximum 255 indoor units can be connected to 1 PC (that has P-AIMS basic & BACnet software).



With 4 upgrade packages the basic software can be upgraded to suit individual requirements.

# Centralised controllers

## Seri-Para I/O unit for outdoor unit



**CZ-CAPDC2 for ECOi / CZ-CAPDC3 for Mini ECOi and PACi.**

**Connection with 3rd party controller.**

- This unit can control up to 4 outdoor units
- From the central control device, mode changing and batch operation/batch stop are possible
- Required for demand control

Dimensions (H x W x D): 80 x 290 x 260 mm.  
Power supply: Single phase 100/200 V (50/60 Hz), 18 W.

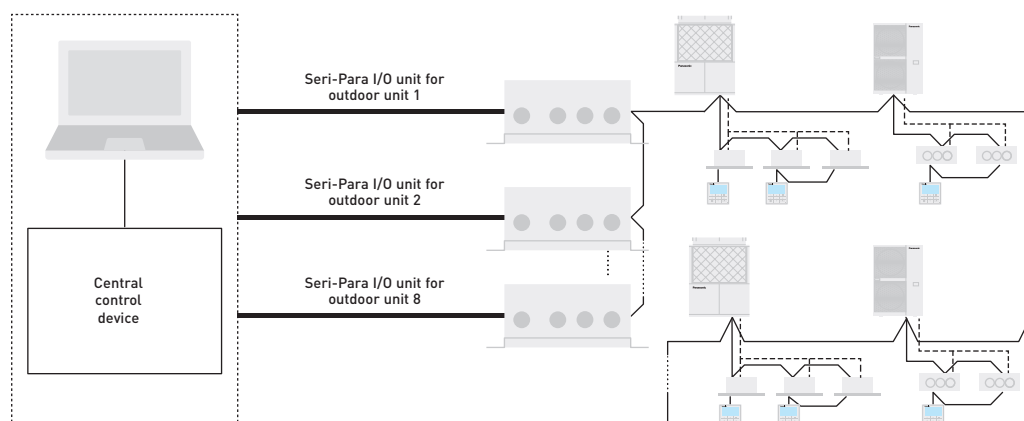
Input: Batch operation/Batch stop (non-voltage contact/24 V DC, pulse signal). Cooling/Heating (non-voltage contact/static signal). Demand 1/2 (non-voltage contact/static signal) (local stop by switching).

Output: Operation output (non-voltage contact).

Alarm output (non-voltage contact).

Wiring length: Indoor/outdoor operation lines:

Total length 1km. Digital signal: 100 m or shorter.



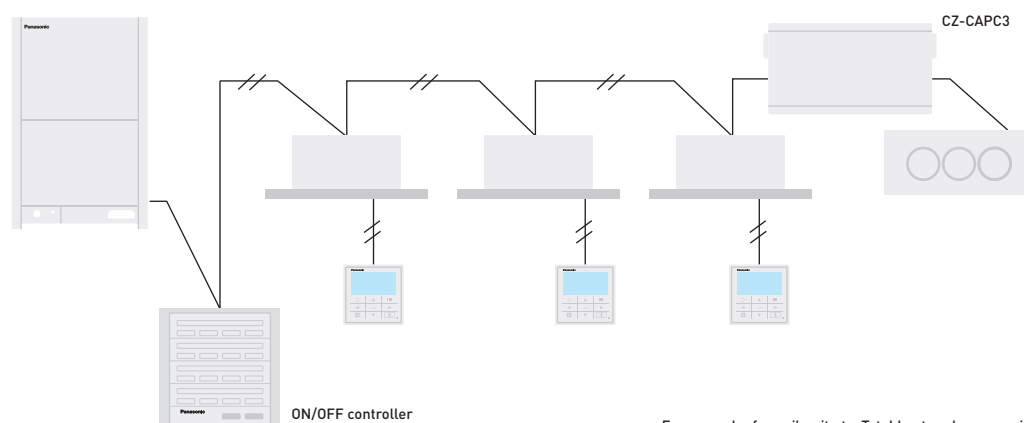
## Local adaptor for ON/OFF control



**CZ-CAPC3**

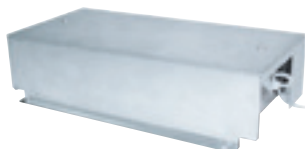
**Connection with 3rd party controller.**

- Control and status monitoring is possible for individual indoor unit (or any external electrical device up to 250 V AC, 10 A) by contact signal



For example: fan coil unit etc. Total heat exchanger unit.

## MINI Seri-Para I/O Unit 0 -10 V



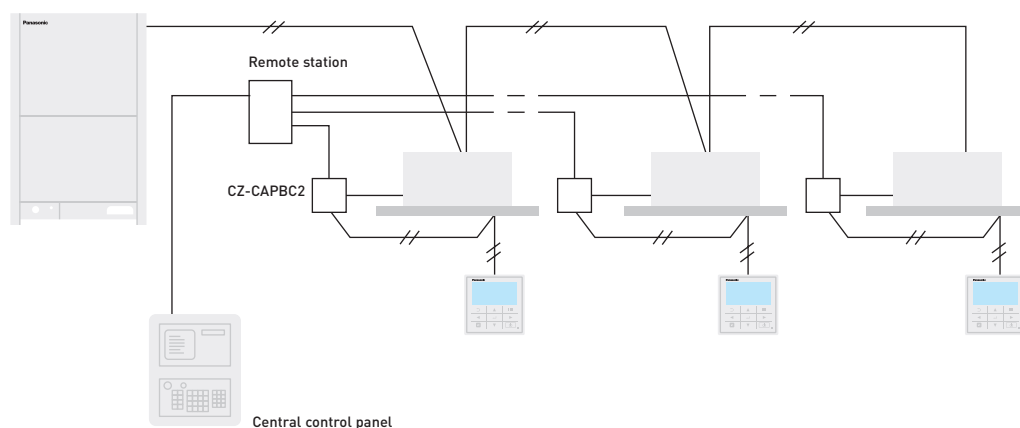
### CZ-CAPBC2

#### Connection with 3rd party controller.

- Control and status monitoring is possible for individual indoor unit (1 group)
- In addition to operation and stop, there is a digital input function for air speed and operation mode
- Temperature setting and measuring of the indoor suction temperature can be performed from central monitoring

- Power is supplied from the T10 terminal of the indoor units
- The analog input for demand of the outdoor capacity by 20 steps (from 40 % to 120 %) by 0-10 V
- The analog input for temperature setting is 0 to 10 V, or 0 to 140 Ohm
- Separate power supply also is possible (in case of suction temperature measuring)

\* Ask to your distributor.



## Communication adaptor for VRF connectivity



### CZ-CFUNC2

This communication interface is required to connect a ECOi and GHP systems to a BMS. An additional interface is needed to convert the information into KNX / Modbus / BACnet language. CZ-CFUNC2 is very easy to operate and to connect to the Panasonic P-Link, which is the ECOi bus. From the CZ-CFUNC2, all the indoor and outdoor units of the installation can be easily control. Two linked wiring systems can be connected to one CZ-CFUNC2.

Dimensions (H x W x D): 260 x 200 x 68 mm

\* As this is not a splash-proof design, it must be installed indoors or in the control panel, etc.

## PACi and VRF control and connectivity





Controls and connectivities are the key to offer better comfort and price. Panasonic offers its customers cutting-edge technology, specially designed to ensure our air conditioning systems deliver optimal performance.



### PACi, ECOi and ECO G connectivity

The interface has been designed specifically for Panasonic and provides complete monitoring, control and full functionality of the line-up from IntesisHome, KNX, Modbus, BACnet and LonWorks installations. This connectivity solution with "PAW" model names is made by a third party company, please contact Panasonic for more information.

	Room controller	Interface	BMS Type	Maximum number of indoor units connected
<b>ECOi / PACi indoor units</b>	SER8150R0B1194 / SER8150R5B1194		Modbus / BACnet	1 Unit/group
		PAW-RC2-KNX-1i	KNX	1 (1 Group of indoor units)
		PAW-RC2-MBS-1	Modbus RTU <sup>1)</sup>	1 (1 Group of indoor units)
		PAW-RC2-MBS-4	Modbus	4 Indoor/groups
		PA-RC2-WIFI-1	IntesisHome	1 (1 Group of indoor units)
<b>PACi / ECOi / ECO G P-Link</b>		PAW-RC2-BAC-1	BACnet	1
		PAW-AC2-KNX-16P	KNX	16
		PAW-AC2-KNX-64P	KNX	64
		PAW-AC2-MBS-16P	Modbus	16
		PAW-AC2-MBS-64P	Modbus	64
		PAW-AC2-MBS-128P	Modbus	128
		PAW-TM-MBS-RTU-64	Modbus RTU <sup>2)</sup>	64
		PAW-TM-MBS-TCP-128	Modbus TCP <sup>2)</sup>	128
		PAW-AC2-BAC-16P	BACnet	16
		PAW-AC2-BAC-64P	BACnet	64
		PAW-AC2-BAC-128P	BACnet	128
		CZ-CLNC2	LonWorks	16 Groups of maximum 8 indoor units, in total maximum 64 indoor units

1) Interface Modbus RTU/TCP is needed in case if Modbus TCP connection. PAW-MBS-TCP2RTU (ModBus RTU Slave devices). 2) Interface CZ-CFUNC2 needed.

### Airzone. Control of the Hide Aways

Airzone has developed interfaces to easily connect to Panasonic Commercial Hide Away units. Ensuring optimum performance, comfort and energy savings, the new system is efficient and easy to install.

**Airzone full range of accessories for any duct project.**



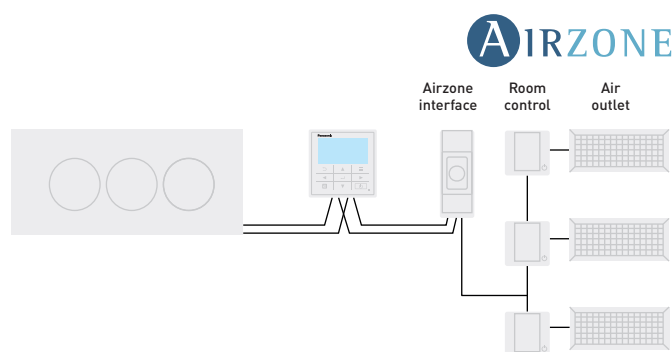
Different type of outlets



Also plenum automatic doors



Full range of remote controls (wired / Infrared, ...)



# ECOi, ECO G and PACi connectivity indoor units

## PCB's and cables for ECOi, ECO G and PACi indoor units.

Name of the cables	Function	Comment
<b>CZ-T10</b>	All T10 functions	Requires field supplied accessory
<b>PAW-FDC</b>	Operate external fan	Requires field supplied accessory
<b>PAW-OCT</b>	All option monitoring signals	Requires field supplied accessory
<b>CZ-CAPE2</b>	3-Pipe control PCB	Requires additional wires from spare part supply
<b>PAW-EXCT</b>	Forced Thermo OFF/Leakage D.	Requires field supplied accessory

Name of the PBC	Function	Comment
<b>PAW-T10</b>	All T10 functions	Allows easy connection "Plug & Play"
<b>PAW-PACR3</b>	Redundancy of 2 or 3 systems; for ECOi and PACi	Redundancy of 2 or 3 ECOi or PACi systems including temperature monitoring, error indication, backup, alternative run

## T10 connector (CN061)



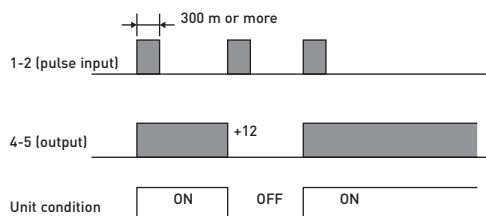
### CZ-T10

Panasonic has developed an optional accessory (consisting of plug + wires) called CZ-T10 to enable an easy connection to this T10 connector.

Connecting an ECOi indoor unit to an external device is easy. The T10 terminal featured in the electronic circuit board of all indoor units enables digital connection to external devices.

### T10 terminal Specification (T10: CN015 at indoor unit PCB).

- Control items: 1. Start/stop input
- 2. Remote controller prohibit input
- 3. Start signal output
- 4. Alarm signal output

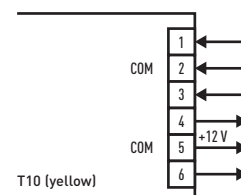


NOTE: The wire length from indoor unit to the relay must be within 2,0 m. Pulse signal changeable to static by cutting jumper JP001.

### Condition

- 1-2 (Pulse input): Unit ON/OFF condition switching with a pulse signal. (1 pulse signal: shortage status more than 300 msec. or more)
- 2-3 (Static input): Open / Operation with remote is permitted (Normal condition) Close / Remote controller is prohibited
- 4-5 (Static output): 12 V output during the unit ON / No output at OFF
- 5-6 (Static output): 12 V output when some errors occur / No output at normal

### Example of wiring



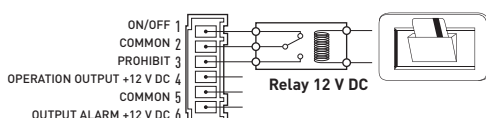
### Usage example.

#### Forced OFF control.

Term 1 & 2: Free contact for ON/OFF signal (cut \*JP1\* for static signal) when the hotel card is it connected the contact must be close (the unit can be used).

Term 2 & 3: Free contact to prohibit all function in the remote controller install in the room when the hotel card is it removed the contact must be closed (the unit can not work).

#### Terminal = T10

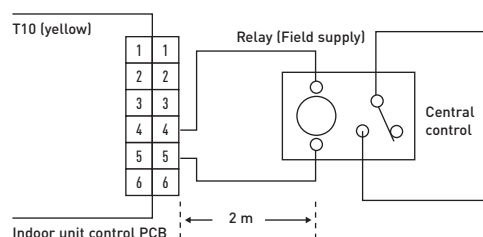


### Operation ON/OFF signal output.

#### Condition:

- 4-5 (Static output): 12 V output during the unit ON / No output at OFF

#### Example of wiring



Note: The wire length from indoor unit to the Relay must be within 2,0 m. Pulse signal changeable to static by cutting jumper JP001.

\* PACi-NX series is not compatible.

## Fan drive connector (CN032)



### PAW-FDC

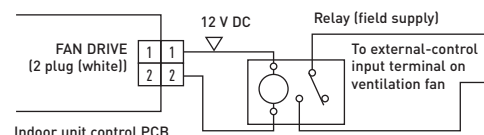
Panasonic has developed an optional accessory (consisting of plug + wires) called PAW-FDC to enable an easy connection to this fan drive connector (CN032).

Operating the ventilation fan from the remote controller

- Start / stop of external ventilation and total heat exchanger fans
- Works even if indoor unit is stopped
- In case of group control → all fans will operate; no individual control



External fan ON/OFF



## Option connector (CN060) output external signals

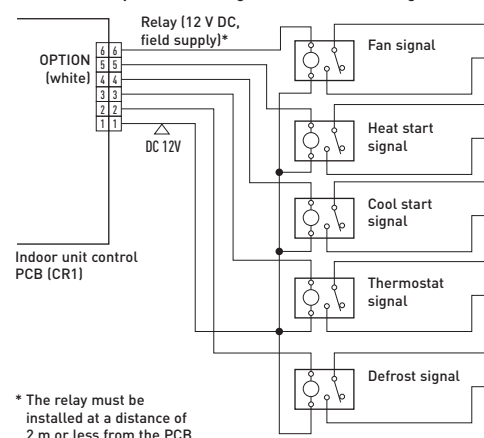


### PAW-OCT

Panasonic has developed an optional accessory (consisting of plug + wires) called PAW-OCT to enable an easy connection to this Option Connector (CN060).

With the combination of the T10 and the option CN060 an external control of the indoor units is possible!

6P (white): Outputs external signals as shown in the figure below



## EXCT connector (CN009)

### PAW-EXCT

Panasonic has developed an optional accessory (consisting of plug + wires) called PAW-EXCT to enable an easy connection to this EXCT Connector (CN009).

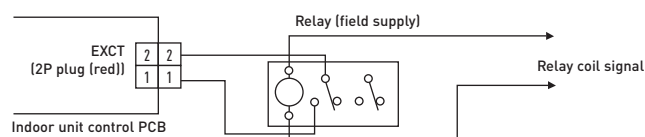
#### A) With static input.

##### → STATIC INPUT → THERMO OFF → ENERGY SAVING

2P plug (red): Can be used for demand control. When input is present, forces the unit to operate with the thermostat OFF.

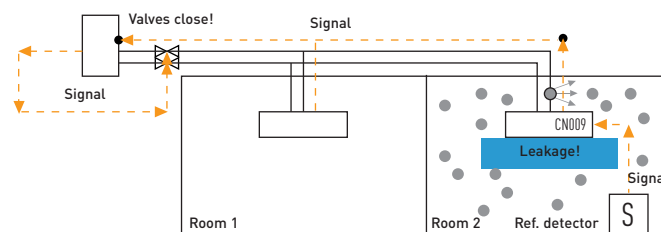
Note: The length of the wiring from the indoor unit control PCB to the relay must be 2 m or less.

#### · Examples of wiring:



#### B) Example: In connection with a refrigerant sensor.

- Signal from leakage detector: non voltage, static.
- Indoor unit setting: Code 0b → 1
- Connector for leak detector: EXCT
- Outdoor unit setting:
  - Code C1 → 1 power output if alarm from O2 connector 230 V
  - Code C1 → 2 power output if alarm from O2 connector 0 V
- Displayed alarm message P14



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Do not add or replace refrigerant other than the specified type. Manufacturer is not responsible for the damage and deterioration in safety due to usage of the other refrigerant.  
The outdoor units in this catalogue contains fluorinated greenhouse gases with a GWP higher than 150.

