FSV Controllers

A wide variety of control options to meet the requirements of different applications.

ECONAVI
ECONAVI Sensor
CZ-CENSC1

Utilises ECONAVI Sensor and Control Program technologies to detect where energy is normally wasted and self-adjusts cooling power to reduce energy waste.

• Activity detection
• Absence detection

Panasonic
ECONAVI

Individual control systems

Operation system	Individual control systems			
Requirements	Simplified high-spec operation	High-spec operation	Normal operation	Operation from anywhere in the room
External appearance				
Type, model name	Simplified high-spec Wired Remote Controller with Bluetooth CZ-RTC6W/CZ-RTC6WBL/ *CZ-RTC6WBLW (White) CZ-RTC6/CZ-RTC6BL/ *CZ-RTC6BLW (Black) *Available for particular types of VRF indoor units.	High-spec Wired Remote Controller CZ-RTC5B	Timer Remote Controller (Wired) CZ-RTC4	Wireless Remote Controller Controller: CZ-RWS3 Receiver: CZ-RWRU3 CZ-RWRY3 CZ-RWRL3 CZ-RWRD3 CZ-RWRT3 CZ-RWRC3
Built-in thermostat	●	●	●	—
nanoe™ X on/off control *not applies to Floor Console	●	●	—	●
ECONAVI ON/OFF control	●	●	●	●
Number of indoor units which can be controlled	1 group, 8 units	1 group, 8 units	1 group, 8 units	1 group, 8 units
Use limitations	· CZ-RTC6(W) : Up to 2 controllers can be connected per group (only combination possible with CZ-RTC6(W)) · CZ-RTC6(W)BL/CZ-RTC6(W)BLW : Up to 1 controller can be connected per group	· Up to 2 controllers can be connected per group (When using ECONAVI sensor, only one remote controller is possible to connect at indoor unit)	· Up to 2 controllers can be connected per group (When using ECONAVI sensor, only one remote controller is possible to connect at indoor unit)	· Up to 2 controllers can be connected per group.
Function ON/OFF	●	●	●	●
Mode setting	●	●	●	●
Fan speed setting	●	●	●	●
Temperature setting	●	●	●	●
Air flow direction	●	●	●	●
Permit/Prohibit switching	—	—	—	—
Weekly program *	●	●	●	—

All specifications are subject to change without notice.
*(CZ-RTC6(W)BL/CZ-RTC6(W)BLW with H&C Control App)

Centralised control systems

Timer operation	Centralised control systems				BMS System PC Base	Connection with 3rd Party Controller
	Daily and weekly program	Operation with various functions from a central location	Only ON/OFF operation from a central location	Simplified load distribution ratio (LDR) for each tenant / 10.4 in. touch screen panel color LCD		
External appearance					P-AIMS Software Up to 1024 units CZ-CSWKC2	Seri-Para I/O unit for outdoor unit CZ-CAPDC2
Type, model name	Schedule Timer CZ-ESWC2	System Controller CZ-64ESMC3	ON/OFF Controller CZ-ANC3	Intelligent Controller CZ-256ESMC3 (CZ-CFUNC2)	Optional software CZ-CSWAC2 for Load distribution CZ-CSWWC2 for Web application CZ-CSWGC2 for Object layout display CZ-CSWBC2 for BACnet software interface *PC required (field supply)	Interface Adaptor CZ-CAPC3
Built-in thermostat	—	—	—	—		Seri-Para I/O unit for each indoor unit CZ-CAPBC2
nanoe™ X on/off control	—	—	—	—		
ECONAVI ON/OFF control	—	●	—	●		Communication Adaptor CZ-CFUNC2
Number of indoor units which can be controlled	64 groups, max. 64 units	64 groups, max. 64 units	16 groups, max. 64 units	64 units x 16 systems, max. 256 units		
Use limitations	· Required power supply from the system controller · When there is no system controller, connection is possible to the T10 terminal of an indoor unit.	· 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.	· Up to 8 controllers (4 main units + 4 sub units) can be connected to one system. · Use without remote controller is impossible.	· A communication adaptor (CZ-CFUNC2) must be installed for three or more links.		LonWorks Interface CZ-CLNC2
Function ON/OFF	—	●	●	●		
Mode setting	—	●	—	●		
Fan speed setting	—	●	—	●		
Temperature setting	—	●	—	●		
Air flow direction	—	●	—	●		
Permit/Prohibit switching	—	●	—	●		
Weekly program *	●	●	—	●		

Panasonic Total Air Conditioning Management System
P-AIMS

P-AIMS basic software / CZ-CSWKC2

Up to 1024 indoor units can be controlled by one PC
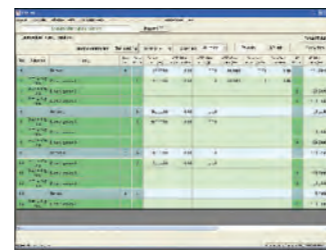
Functions of basic software

- Standard remote control for all indoor units
- Many timer schedule programs can be set on the calender
- Detailed information display for alarms
- CSV file output with alarm history, operating status.
- Automatic data backup to HDD

With 4 upgrade packages the basic software can be upgraded to suit individual requirements.
For Load Distribution software, digital power meter c/w pulse require (field supply)
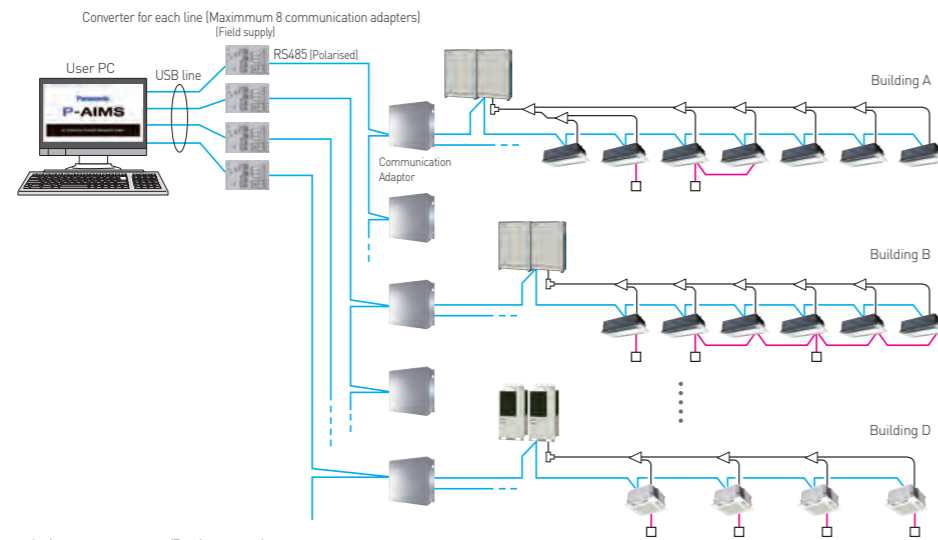
CZ-CFUNC2

The P-AIMS is ideal for large areas/buildings such as shopping centers, universities and office buildings.
Each line can have max.8 communication adaptors units, and control max.512 units.
In total, 1024 indoor units can be controlled by 1 "P-AIMS" PC.

Converter for each line (Maximmum 8 communication adapters)
(Field supply)

User PC   USB line   RS485 (Polarised)

Communication Adaptor

Building A

Building B

Building D

Recommended computer specs (Desktop type)

Operating system	Windows 10 Pro 64bit
CPU	Intel Core™ i5-6500 3.20GHz or higher (Recommended computer)
	Intel Core™ i7-7700 3.60GHz or higher
	(When installing Layout Display Software or using 512 or more indoor units)
Memory	8GB or larger
HDD	SSD (Solid State Drive) 250GB or larger
Monitor	1920 × 1080 (full HD) Recommended (1280 × 1024 (SXGA) minimum)
(Built-in speaker)	1920 × 1080 (full HD) Required (when installing Layout Display Software)
External HDD	500GB or larger (An external power supply type is preferable because the HDD will be used for backing up data.)
LAN	Network adaptor equipped machine
	(when Web Software or BACnet Communication Software installed)
UPS (Field Supply)	Select a UPS with a sine output wave form

Intelligent Controller (CZ-256ESMC3)

Touch panel   Dimensions
H 240 x W 280 x D 85 mm
Power supply   AC 100 to 240 V (50/60 Hz)
LCD: 10.4 in. TFT, XGA(1024 x 768), LED backlight
UPS (Field Supply):select UPS with a sine output wave form

Product features

- **10.4 in., large, easy-to-use color LCD**
  - With smartphone like operations, such as swiping and flicking
- **Enhanced energy-saving control functions**
  - Packed with demand functions
  - Set temperature auto return settings, Auto shutoff, Set temperature range limit settings
- **Energy visualization**
  - Displays electricity & gas usage distribution
  - Supports energy-saving plans with graph display function

New features

- Max 256 indoor unit [4 links x 64 units] can be controlled. In case of three or more links [more than 128 units], a communication adaptor CZ-CFUNC2 must be installed for three or more links.
- Operation is possible as batch, in zone units, and in group units.
- ON/OFF, operation mode setting, temperature setting, for fan speed setting,

air flow direction setting (when used without a remote controller) and remote controller local operation prohibition [prohibition 1,2,3,4] can be done
- Graph display [trends, comparisons]
- ECONAVI ON/OFF
- Outdoor unit quiet operation ON/OFF
- Energy-saving functions
- Event control [such as equipment linkage]
- Limitation contents for prohibited operation

Prohibition means limitation of the operation contents from the remote controller. It is also possible to change the prohibition items.

**Limitation contents
(Limitations can be user defined)**

Individual	There is no limitation for the operation of the remote controller. However, the contents will be changed to the contents of the controller operated last. (Last-pressed priority.)
Prohibition 1	The remote controller cannot be used for ON/OFF. (All other operations are possible from the remote controller.)
Prohibition 2	The remote controller cannot be used for ON/OFF, operation mode change and temperature setting. (All other operations are possible from the remote controller.)
Prohibition 3	The remote controller cannot be used for operation mode change and temperature setting. (All other operations are possible from the remote controller.)
Prohibition 4	The remote controller cannot be used for operation mode change. (All other operations are possible from the remote controller.)

- **Remote control**

  The LAN terminal on this unit enables you to connectit to a network. Connecting to internet will enable you to operate the unit and check the status using a PC from remote location.

- **Power Distribution function**

  You can view cumulative electrical consumption per indoor unit or in in a area.
  Digital power meter with pulse require (Field Supply) for this function
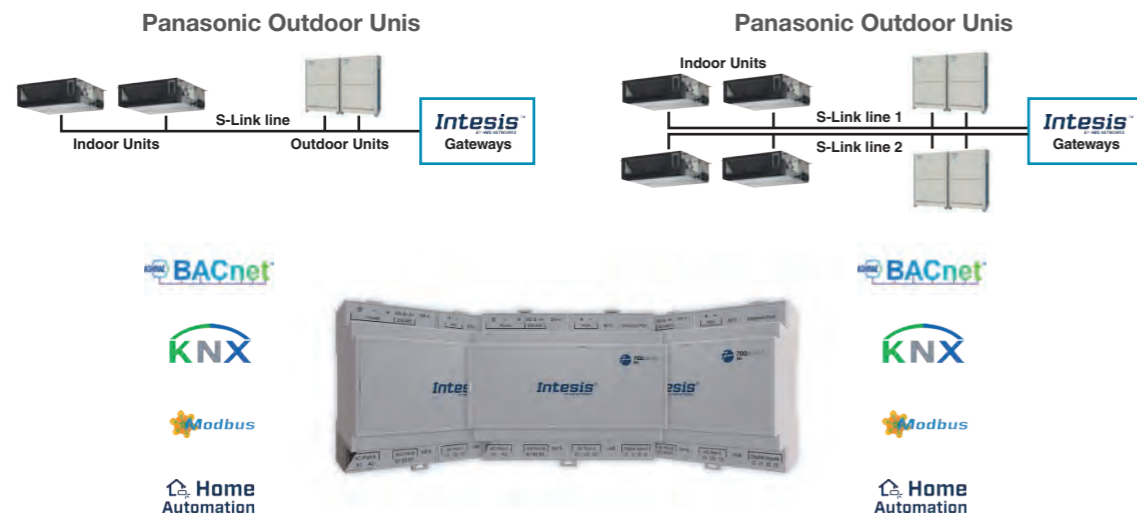
Gateways for Panasonic AC systems integration

INTESIS PORTFOLIO FOR PANASONIC AIR CONDITIONING SYSTEMS ENSURE THE PERFECT INTERCONNECTION BETWEEN THE MOST EXTENDED PROTOCOLS INTO BUILDING AUTOMATION AND PANASONIC SYSTEMS.

The products from Intesis make it easy to meet Panasonic integration needs, giving the possibility to control from domestic AC lines to the most recent FSV systems.
From the automation side, it does not matter the model of your Panasonic unit.

Multiple indoor unit gateways:

Connection to S-link bus from the outdoor units (one or two lines)

Connection	BACnet	KNX	Modbus	Home Automation	Note
S-Link (U1U2)	IN770PAN00SO000: Small version - Up to 16 Indoor Units, 30 Outdoor Units. IN770PAN00MO000: Medium version - Up to 64 Indoor Units, 30 Outdoor Units IN771PAN00LO000: Large version - Up to 128 Indoor Units, 60 Outdoor Units				Configuration tool MAPS the protocol of your controlling system: BACnet, Modbus, KNX or Home Automation

Connection with Panasonic AC indoor units

Individual Controllers:

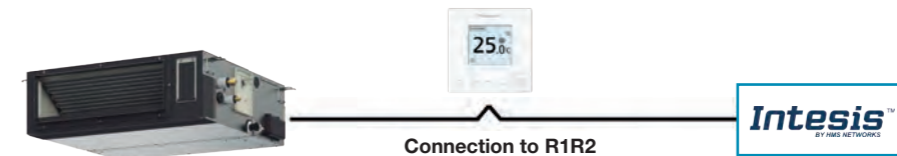• Infrared communication with IR receiver (bidirectional)

Connection	BACnet	KNX	Modbus	Home Automation	AC Cloud Control
Infrared (IR)	IN485UNI001I100 Universal Infrared AC Can be configured as BACnet MS/TP or Modbus RTU using MAPS. 1 Indoor unit	INKNXUNI001I000 Universal Infrared AC 1 Indoor unit 2 Binary inputs	IN485UNI001I100 Universal Infrared AC Can be configured as BACnet MS/TP or Modbus RTU using MAPS. 1 Indoor unit	INWMPUNI001I000 Universal Infrared AC 1 Indoor unit	INWFIUNI0011000 Universal Infrared AC 1 Indoor unit 1 Binary input

• Connection to CN-CNT port from the indoor unit

Connection to CN-CNT

Connection	BACnet	KNX	Modbus	Home Automation	AC Cloud Control
CN-CNT	INBACPAN001I000 IN485PAN001I000 AC units 1 Indoor unit	INKNXPAN001I000 AC units 1 Indoor unit, 4 Binary Inputs INKNXPAN001A000 Air to Water (Aquarea H) 1 Indoor unit	INMBSPAN001I100 AC units 1 Indoor unit INMBSPAN001A000 Air to Water (Aquarea H) 1 Indoor unit	INWMPPAN001I000 AC units 1 Indoor unit	INWFIPAN001I000 AC units 1 Indoor unit

• Connection to R1R2 port from the wired remote controller bus

Connection to R1R2

Connection	BACnet	KNX	Modbus	Home Automation	AC Cloud Control
R1R2	INBACPAN001R000 INBACPAN001R100 VRF and PAC Systems 1 Indoor unit	INKNXPAN001R000 VRF and PAC Systems 1 Indoor unit 4 Binary inputs	INMBSPAN001R000 VRF and PAC Systems 1 Indoor unit	INWMPPAN001R000 VRF and PAC Systems 1 Indoor unit	INWFIPAN001R100 VRF and PAC Systems 1 Indoor unit