Solutions for server rooms applications

Effectively protect your IT related spaces, 24/7, with a complete range of solutions offering redundancy control. High efficiency products provide reliable cooling all year round.

NON STOP OPERATION 24/7 365

YKEA server room solution.

- Perfect solution for smaller server rooms
- Compact design
- Reaching SEER value of 9,6 (A+++) [1]
- High seasonal performance
- Range of capacities available
- Operation down to -25 °C ambient

1) For 3,5 kW unit.

PACi NX solution.

- Scalability for larger applications
- Twin, triple and double-twin options [1]
- Increased piping lengths of up to 90 m [2]
- Increased sensible capacity options available
- Flexible and adaptable control options

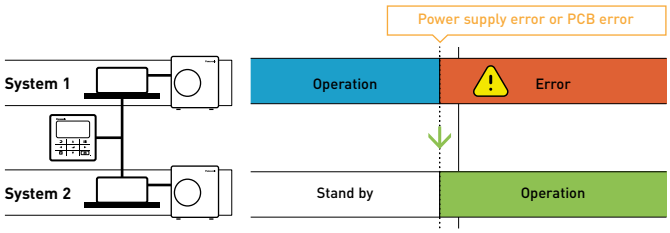
1) Compatible with PAW-PACR4 only. 2) For Big PACi NX 20 kW unit.

Redundancy ensured by three different functionalities.

Computer and server rooms are very sensitive areas of application. Any downtime caused by high room temperatures must be avoided by any means. Air conditioner redundancy is one of the key points to ensure a reliable nonstop cooling operation.

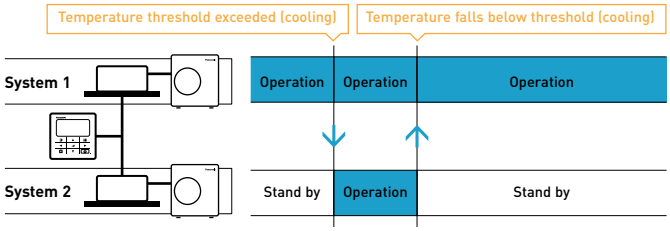
1 Backup operation

When an air conditioner fails for whatever reason, another one will awake from standby mode and cover the room's cooling load.



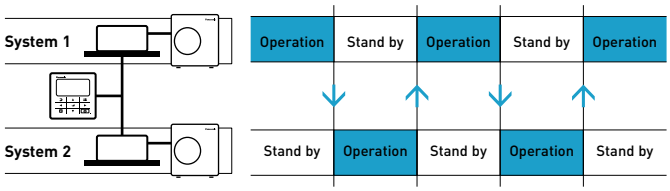
2 Support operation

Support operation, also called cascade control, makes sure that the capacity required to cool the room is delivered by one or more units whenever required. When the capacity of 1 air conditioner is not sufficient, another one will be started to support the operation.



3 Rotation operation

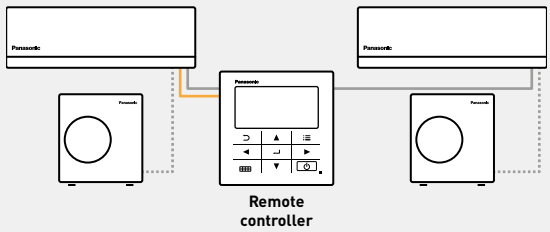
Backup and support operation are key functions for a redundant operation in computer rooms. This concept implies a main system and a sub system. In order to avoid an imbalance of the operating hours of the systems, the redundancy control equalises the operation time by rotating the main and the sub systems, thus providing a "rotation operation".



Redundancy control options for 24/7/365 applications

YKEA integral solution

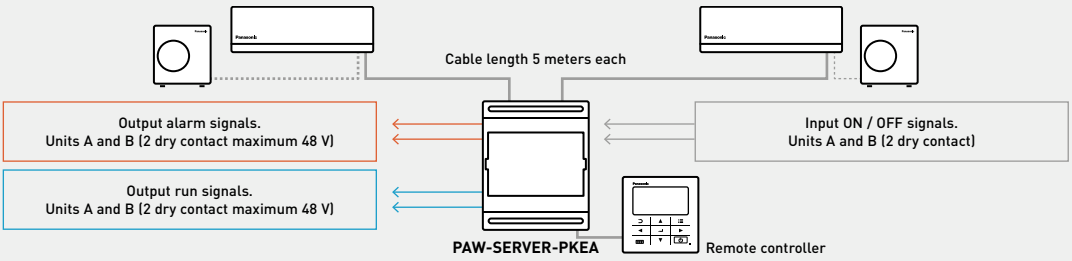
- Ideal solution for small server rooms, providing full redundancy functionality integrated in YKEA's remote controller (requires optional CZ-RCC5 cable set)
- Up to 2 YKEA systems connectable to 1 remote controller
- Individual alarm display for each system
- Operation can be monitored by Panasonic Comfort Cloud App (via WLAN)
- No digital inputs/outputs



Optional interface for YKEA units

PAW-SERVER-PKEA

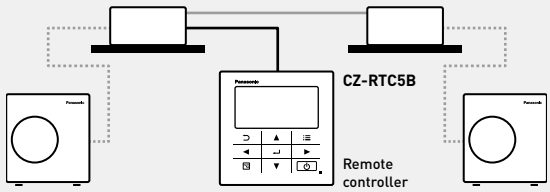
- Ideal solution for small server rooms, providing full redundancy functionality
- Up to 2 YKEA systems connectable to PAW-SERVER-PKEA
- Additional benefits: Operation and alarm outputs for each system, ON / OFF inputs for each system for connection to external BMS



PACi NX integral solution

CZ-RTC5B / CZ-RTC6W / CZ-RTC6 / CZ-RTC6WBL / CZ-RTC6BL / CZ-RTC6WBLW2 / CZ-RTC6BLW2

- Full redundancy functionality
- Quick and easy installation using PACi NX group control
- Up to 2 PACi NX systems connectable to 1 remote controller
- Delta T setting for support operation selectable from 4 to 10 K
- Connectable to Panasonic centralised control systems
- Optional interfaces for connection to external BMS (Modbus, BACnet, KNX)

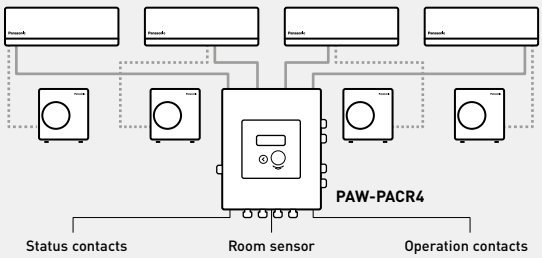


Optional interface up to 4 indoor units PACi NX or VRF

PAW-PACR4

- Redundancy control up to 4 indoor unit groups
- Actual unit operation / alarm status can be displayed
- Common digital alarm / operation status output
- For each support operation level, individual temperature thresholds can be set (cascade control)
- Room temperature display (by device's own temperature sensor)
- Modbus connection (up to 4 PAW-RC2-MBS-1)
- Available external inputs (ON / OFF, heating/cooling change*, fire prevention contact)

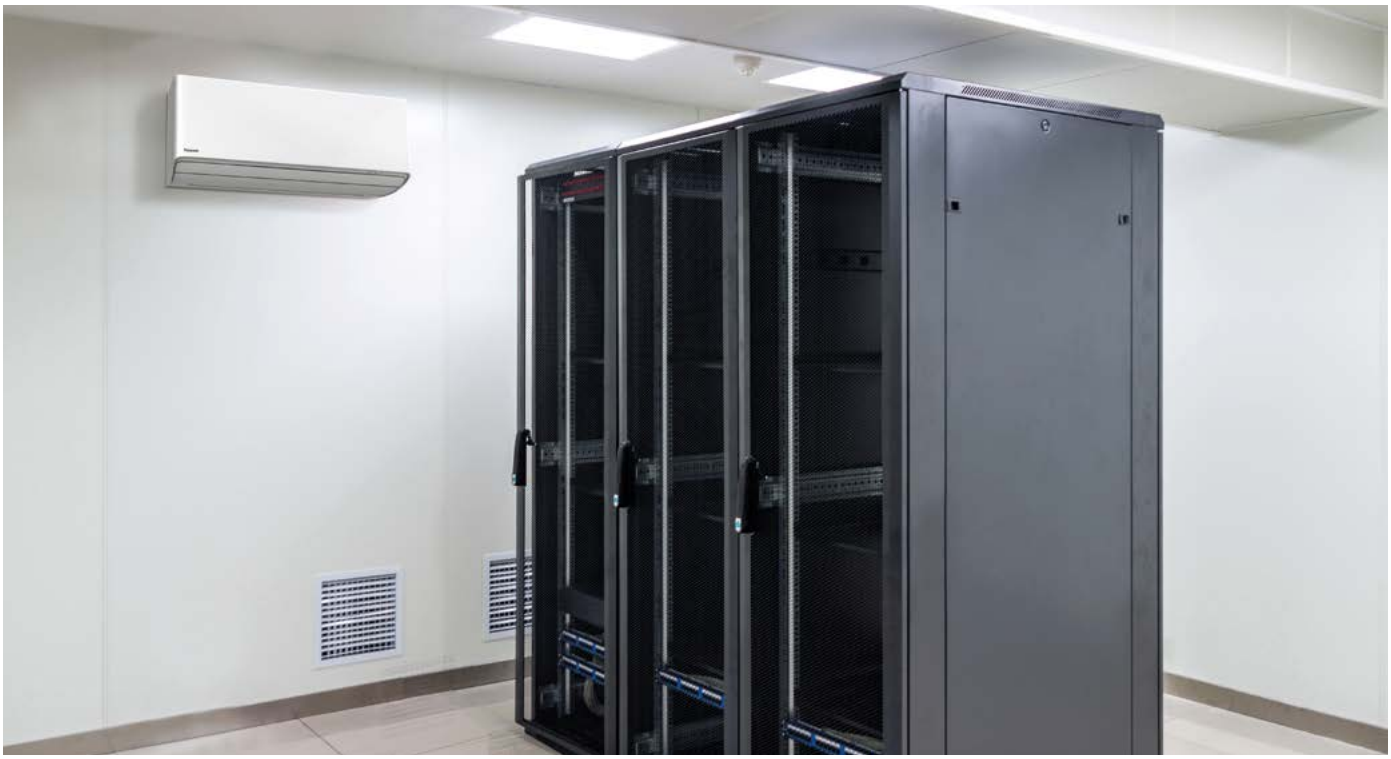
* External input heating/cooling change only for the interface control logic, not for the indoor unit mode change.



YKEA series for server rooms

High efficiency products for 24/7 applications. Panasonic has developed a complete range of solutions for server rooms which efficiently protect your servers, keeping them at an appropriate temperature even when the outdoor temperature is below -25 °C.

NON STOP OPERATION 24/7 365

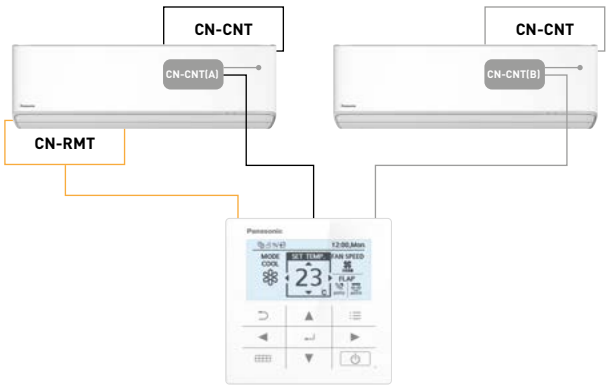


1 Designed for 24h/7d a week operation

High efficiency all year round. This wall-mounted air conditioner is designed for professional, critical applications such as computer rooms where reliable cooling inside the room is necessary even with extreme ambient conditions.

2 Remote controller for better usability

Wired remote controller, which can assure the operation 24/7 of two server room units, thanks to the integrated duty rotation mode. This function manages rotation and backup of two units and it is available when connecting an optional CN-CNT cable (CZ-RCC5) between the controller and each of the two indoor units.



Not compatible with PACi NX outdoors and accessories. Domestic range sales conditions may apply. Check with your sales representative.

3 Highest energy rating in cooling

The SEER and SCOP of the Server room unit has been further improved to achieve top class energy efficiency. The 3,5 kW unit reaches now the SEER value of 9,6 (A+++).

4 Built-in Wi-Fi and compatible with Voice Assistant

The unit is ready to connect to the internet and to be controlled by smartphone with Panasonic Comfort Cloud App. Control, monitor energy consumption statistics and easily identify errors in case of failure.

Wall-mounted Professional -25 °C · R32

· Designed for 24h/7d a week operation
· Wired remote controller, with optional duty rotation mode
· Improved SEER / SCOP to achieve top class energy efficiency
· Aerowings 2.0, for a better control of the air flow
· Built-in Wi-Fi for smart control via Panasonic Comfort Cloud App
· Compatible with Google Assistant and Amazon Alexa
· Chassis and parts designed for easier installation

Kit			KIT-Z25-YKEA-1	KIT-Z35-YKEA-1	KIT-Z42-YKEA-1	KIT-Z50-YKEA-1	KIT-Z71-YKEA-1
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,50)	3,50 (0,85 - 4,20)	4,20 (0,85 - 5,00)	5,00 (0,98 - 6,00)	7,10 (0,98 - 8,50)
EER [1]	Nominal (Min - Max)	W/W	4,90 (4,72 - 3,98)	4,12 (4,72 - 3,68)	3,82 (4,72 - 3,25)	3,68 (3,92 - 3,16)	3,23 (2,33 - 2,83)
SEER [2]			**9,5 A+++**	**9,6 A+++**	**8,6 A+++**	**8,6 A+++**	**6,5 A++**
Pdesign		kW	2,50	3,50	4,20	5,00	7,10
Input power	Nominal (Min - Max)	kW	0,51 (0,18 - 0,88)	0,85 (0,18 - 1,14)	1,10 (0,18 - 1,54)	1,36 (0,25 - 1,90)	2,20 (0,42 - 3,00)
Annual energy consumption [3]		kWh/a	92	128	171	203	382
Heating capacity	Nominal (Min - Max)	kW	3,40 (0,85 - 5,00)	4,00 (0,85 - 5,80)	5,30 (0,85 - 6,80)	5,80 (0,98 - 8,00)	8,20 (0,98 - 10,20)
Heating capacity at -7 °C		kW	3,05	3,40	4,11	4,80	6,31
COP [1]	Nominal (Min - Max)	W/W	4,86 (4,72 - 3,97)	4,44 (4,72 - 3,87)	3,93 (4,72 - 3,66)	4,08 (4,26 - 3,35)	3,71 (2,45 - 3,29)
SCOP [2]			**4,6 A++**	**4,6 A++**	**4,5 A+**	**4,6 A++**	**4,1 A+**
Pdesign at -10 °C		kW	2,70	3,20	3,60	4,20	5,50
Input power	Nominal (Min - Max)	kW	0,70 (0,18 - 1,26)	0,90 (0,18 - 1,50)	1,35 (0,18 - 1,86)	1,42 (0,23 - 2,39)	2,21 (0,40 - 3,10)
Annual energy consumption [3]		kWh/a	822	974	1120	1278	1878
Indoor unit			**CS-Z25YKEA-1**	**CS-Z35YKEA-1**	**CS-Z42YKEA-1**	**CS-Z50YKEA-1**	**CS-Z71YKEA-1**
Power supply		V	230	230	230	230	230
Recommended fuse		A	16	16	16	16	20
Connection indoor / outdoor		mm²	4x1,5	4x1,5	4x1,5	4x2,5	4x2,5
Air flow	Cool / Heat	m³/min	11,4 / 13,8	12,7 / 14,8	13,2 / 15,2	17,4 / 19,1	19,0 / 19,9
Moisture removal volume		L/h	1,5	2,0	2,4	2,8	4,1
Sound pressure [4]	Cool (Hi / Lo / Q-Lo)	dB(A)	39 / 25 / 21	42 / 28 / 21	43 / 32 / 29	44 / 37 / 30	47 / 38 / 35
	Heat (Hi / Lo / Q-Lo)	dB(A)	41 / 27 / 22	43 / 30 / 22	44 / 35 / 29	44 / 37 / 30	47 / 38 / 35
Sound power	Cool / Heat (Hi)	dB(A)	55 / 57	58 / 59	59 / 60	60 / 60	63 / 63
Dimension	H x W x D	mm	295 x 870 x 229	295 x 870 x 229	295 x 870 x 229	295 x 1040 x 244	295 x 1040 x 244
Net weight		kg	11	11	11	12	13
Outdoor unit			**CU-Z25YKEA-1**	**CU-Z35YKEA-1**	**CU-Z42YKEA-1**	**CU-Z50YKEA-1**	**CU-Z71YKEA-1**
Air flow	Cool / Heat	m³/min	27,6 / 27,6	29,8 / 29,8	29,8 / 31,0	39,8 / 36,9	44,7 / 45,8
Sound pressure [4]	Cool / Heat (Hi)	dB(A)	46 / 48	48 / 50	48 / 51	48 / 50	52 / 54
Sound power	Cool / Heat (Hi)	dB(A)	61 / 63	63 / 65	63 / 66	63 / 65	66 / 68
Dimension [5]	H x W x D	mm	542 x 780 x 289	542 x 780 x 289	542 x 780 x 289	695 x 875 x 320	695 x 875 x 320
Net weight		kg	30	30	30	40	45
Piping diameter	Liquid	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
	Gas	Inch (mm)	3/8 (9,52)	3/8 (9,52)	1/2 (12,70)	1/2 (12,70)	5/8 (15,88)
Pipe length range		m	3 ~ 20	3 ~ 20	3 ~ 20	3 ~ 30	3 ~ 30
Elevation difference (in / out)		m	15	15	15	15	20
Pre-charged pipe length		m	7,5	7,5	7,5	7,5	10
Additional gas amount		g/m	10	10	10	15	25
Refrigerant (R32) / CO_2 Eq.		kg / T	0,89 / 0,60	0,89 / 0,60	0,97 / 0,65	1,13 / 0,76	1,35 / 0,91
Operating range	Cool Min ~ Max	°C	-25 ~ +43	-25 ~ +43	-25 ~ +43	-25 ~ +43	-25 ~ +43
	Heat Min ~ Max	°C	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24

1) EER and COP calculation is based in accordance to EN 14511. 2) Energy Label Scale from A+++ to D. 3) The annual energy consumption is calculated in accordance to EU/626/2011. 4) The sound pressure of the indoor unit shows the value measured of a position 1 m in front of the main body and 0,8 m below the unit. For outdoor unit 1 m in front and 1 m in rear side of main body. The sound pressure is measured in accordance with JIS C 9612. Q-Lo: Quiet mode. Lo: The lowest set fan speed. 5) Add 70 mm for piping port. * Not compatible with PACi NX outdoors and accessories. Domestic range sales conditions may apply. Check with your sales representative.

Accessories	
CZ-RCC5	CN-CNT cables x2 for server room application, control of 2 units, rotation, backup, etc.
PAW-WTRAY	Tray for condenser water compatible with outdoor elevation platform

Accessories	
PAW-GRDBSE20	Outdoor base ground support for noise and vibration absorption
PAW-GRDSTD40	Outdoor elevation platform 400 x 900 x 400 mm

R32 REFRIGERANT | A+++ 9,6 SEER | A++ 4,6 SCOP | INVERTER | R2 ROTARY COMPRESSOR | 21 dB(A) | AEROWINGS | -25 °C COOLING MODE | -15 °C HEATING MODE | R22 R410A → R32 R22 / R410A RENEWAL | INTEGRATION TO S-LINK | BUILT-IN WI-FI | BMS CONNECTIVITY | 5 YEARS COMPRESSOR WARRANTY

SEER: For KIT-Z35-YKEA-1. SCOP: For KIT-Z25-YKEA-1, KIT-Z35-YKEA-1 and KIT-Z50-YKEA-1. SUPER QUIET: For KIT-Z25-YKEA-1. INTERNET CONTROL: Built-in Wi-Fi.

Rating conditions: Cooling indoor 27 °C DB / 19 °C WB. Cooling outdoor 35 °C DB / 24 °C WB. Heating indoor 20 °C DB. Heating outdoor 7 °C DB / 6 °C WB. (DB: Dry Bulb; WB: Wet Bulb).
Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.