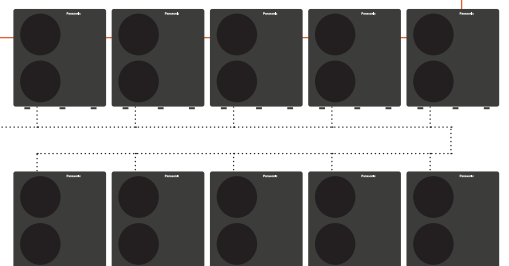# Cascade manager

Designed for central heating projects, small hotels, supermarkets and restaurants, the cascade manager manages the demand for energy-efficient heating and cooling balancing working hours.

New **2024**

Up to 10 heat pumps (up to 300 kW)

· **Cascade up to 10 units**
· **Heating and cooling control**
· **Domestic hot water (DHW) control**
· **Management up to 75 °C (L or M Series)**
· **Provides total energy consumption and generation**
· **All components in one case**
· **BMS integration**

New cascade manager

PAW-A2W-CMH-3
Cascade up to 10 heat pumps, getting up to 300 kW, with a large, easy-to-use touch screen display, providing intuitive control.
· Photovoltaics integration (PV optimised algorithm)
· Control of 3 way valves for cooling (2 buffer tanks)
· Heating/cooling 0-10 V demand signal – controls target outlet temperature
· Energy meters compatibility
  - Meters communication with Modbus RTU
  - Pre-configuration of 4 market popular meters
· BMS integration via Modbus TCP
· Working mode: entire system in heating/cooling or DHW by priority

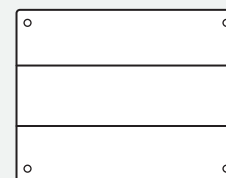**Compatible with Aquarea Heat Pumps from H Series onwards [1].**

1) Requires 1 CZ-NSMB or 1 PAW-AZAW-MBS-M per each Aquarea Heat Pump.

New Aquarea Cascade Edge

PAW-A2W-CME4 and PAW-A2W-CME10
Cascade up to 4 or 10 Aquarea Heat Pumps, also in combination with ECOi-W AQUA chillers and heat pumps, and get up to 750 kW [1]. Remotely control your units with a local web visualization via smartphone, tablet or PC.
· Local web visualization of the cascade controller
· Easy connection with smartphone, tablet or PC thanks to the Wi-Fi access point on the device
· 2 possible online management solutions:
  - P-Smart Nexus: easy access and global visualization of all your sites
  - Via customer VPN or MyDNS configuration
· Data ownership thanks to local data storage (no cloud storage)
· BMS Integration via BACnet IP
· Smaller buffer tank or smaller capacity unit thanks to 2 possible logic working modes
  - Possibility to combine all the heat pumps between heating/cooling and DHW, providing both simultaneously
  - Entire system in heating/cooling or DHW by priority
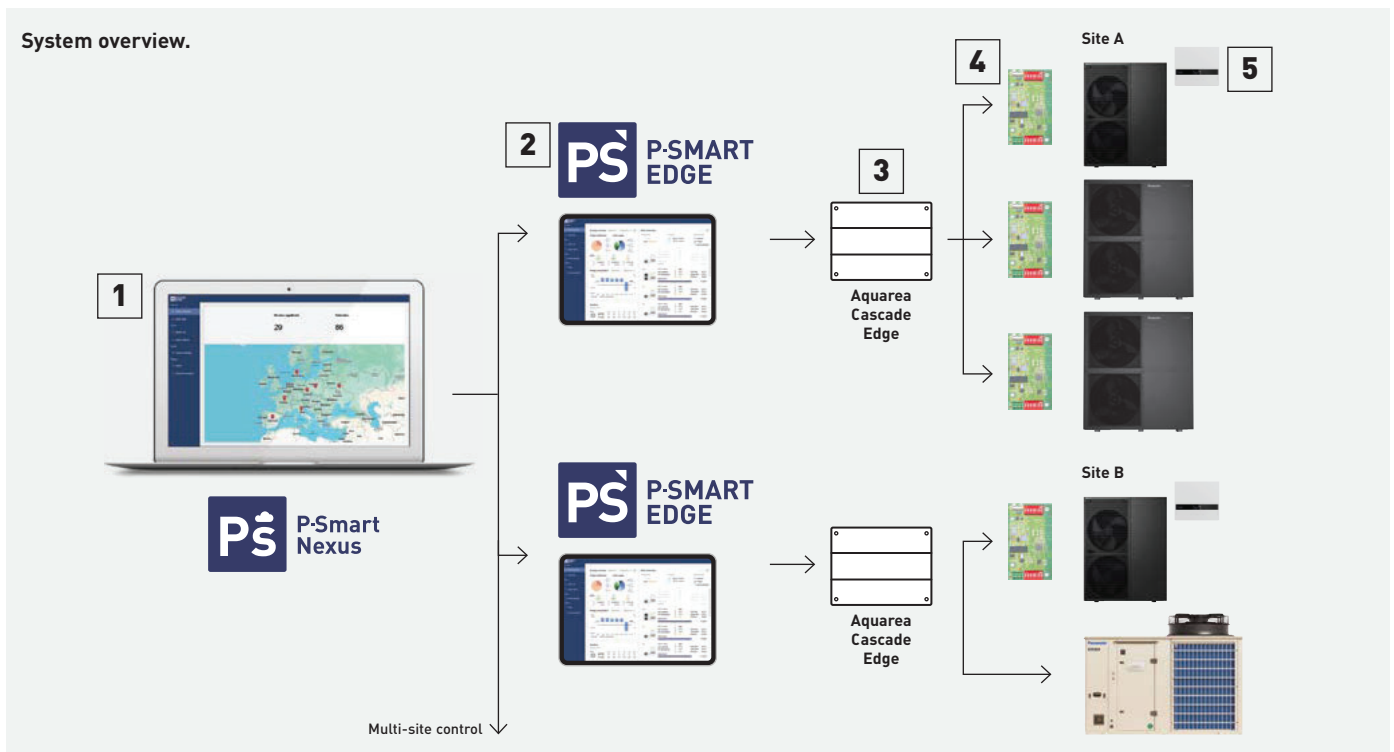· Configuration wizard with default values

Compatible with Aquarea Heat Pumps from H Series onwards [2].

1) Maximum capacity combining 1 Aquarea (master) + 9 ECOi-W AQUA-G BLUE 80 kW (slave). 2) Requires 1 CZ-NSMB or 1 PAW-AZAW-MBS-M per each Aquarea Heat Pump.

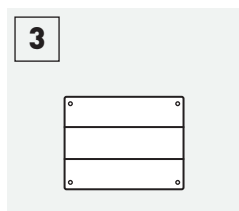|	PAW-A2W-CMH-3	PAW-A2W-CME4	PAW-A2W-CME10
Cascade up to number of heat pumps	Up to 10	Up to 4	Up to 10
Management of heat demand, balancing working hours	✔	✔	✔
Integration of photovoltaics (PV optimised algorithm)	✔	—	—
Connectable buffer tank	2 tanks	1 tank	1 tank
Heating/cooling 0-10 V demand signal	✔	—	—
BMS integration	Modbus TCP	BACnet IP	BACnet IP
Built-in touch screen display	✔	—	—
Management via smartphone, tablet or PC	—	✔	✔
Remote monitoring via P-Smart Edge	—	✔	✔
Multi-site control via P-Smart Nexus	—	✔	✔
Data statistics visualization	—	✔	✔

P-Smart Edge.
Control and monitoring solution for Aquarea cascade systems wherever you are. In a simple click, configure and receive status updates of all your units.

System overview.

Site A

Aquarea Cascade Edge

Site B

Aquarea Cascade Edge

Multi-site control

1

P-Smart Nexus.
Smart multi-site control which allows a remote global supervision of all your sites. Control your different installations wherever you are, with easy on-site network setup.

2

P-Smart Edge.
Control and monitoring solution for Aquarea cascade systems, even outside your installation site.

3

Aquarea Cascade Edge.
PAW-A2W-CME4 and PAW-A2W-CME10.

4

Modbus interface.
Requires 1 CZ-NSMB or 1 PAW-AZAW-MBS-M per each Aquarea heat pump.

5

Aquarea cascade system.
Master unit: control module or Bi-bloc mandatory + optional PCB.
Slave units: remote controller needed. Possibility of combination with other Panasonic commercial products (ECOi-W AQUA chillers and heat pumps).

Advantages

Powerful remote management with user-friendly interface.
· Simple and intuitive home screen with: Plant overview, energy overview, DHW status and buffer and zone list
· Alarm status and history
· 3 different user profiles: facility manager, installer and maintenance
· Online visualization, no installation of any specific software is required

Remote configuration of the technical parameters.
Possible configuration of:
· Installation settings
· Sterilization configuration (schedule)
· Outdoor units silence mode (schedule)
· Bivalent
· SG Ready
· COP ranking

Historical system data.
· Graphs and data showing the energy overview related to periods of 7 days or 8 hours
· Data stored for up to 2 years

P-Smart Nexus: smart multi-site remote management.
· Remote global supervision of all your sites in one place
· 24/7 control of all the installations
· Easy connection to Aquarea Cascade Edge without special on-site network setup
· 3-year subscription from the start-up included
· Online visualization, no installation of any specific software is required

Note: User interface design may vary.