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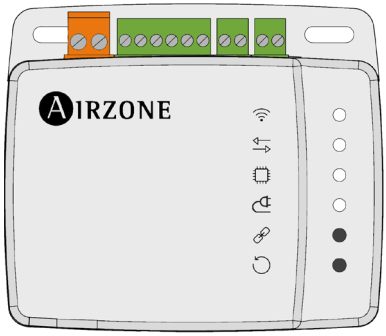
Integration manual

Aidoo Pro EEBUS Aquarea

Panasonic

For PAW-AZAW-EEBUS-1

[For AZAI6WSPEEBPN]



EEBUS

AIRZONE

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Precautions and environmental policy

PRECAUTIONS

- For your security, and to protect the devices, follow these instructions:
- Do not manipulate the system with wet or damp hands.
- Disconnect the power supply before making any connections.
- Take care not to cause a short circuit in any of the system connections.

ENVIRONMENTAL POLICY

Do not dispose of this equipment in the household waste. Electrical and electronic equipment contain substances that may damage the environment if they are not handled appropriately. The symbol of a crossed-out waste bin indicates that electrical equipment should be collected separately from other urban waste. For correct environmental management, it must be taken to the collection centers provided for this purpose, at the end of its useful life.

The equipment components may be recycled. Act in accordance with current regulations on environmental protection.
If you replace it with other equipment, you must return it to the distributor or take it to a specialized collection center.

Those breaking the law or by-laws will be subject to such fines and measures as are laid down in environmental protection legislation.

Aidoo Pro EEBUS Aquarea

Device to manage and integrate Panasonic Aquarea Heat Pumps Series H, J, K, L or M, into EMS (Energy Management Systems) via the standard EEBUS communication protocol. Configuration through the "Airzone Cloud" app (available for iOS and Android). Wireless network connection via Wi-Fi. Self-powered by external power supply provided. Features:

- EEBUS service enabled by default on a permanent basis
- Integration of the MPC profile (Monitoring Power Consumption)
- Integration of the LPC profile (Limitation Power Consumption)

MONITORING OF POWER CONSUMPTION

The target of this implementation is to provide monitoring of *Total Active Power*.

The unit provides three separeted values corresponding to the different operating modes of the heat pump system:

- **DHW Power**
- **Heating Power**
- **Cooling Power**

In order to comply with the EEBUS requirement for a single *Total Active Power* value, it is necessary to combine these three data points into one unique data output:

Total Active Power for EEBUS = DHW Power + Heating Power + Cooling Power

Optionally, it is also possible to provide the *Total Energy* for EEBUS by summing up the respective energy resgisters:

Total Energy (EEBUS) = DHW Energy + Heating Energy + Cooling Energy

LIMITATION OF POWER CONSUMPTION

The target of this implementation is to provide limitation of the unit's *Power Consumption*. The Aquarea system operates under two possible conditions:

If *Power Consumption Limit* = Not Active
The Aquarea unit operates normally without applying any limitation.

If *Power Consumption Limit* = Active
The Aidoo Pro EEBUS device performs a verification loop every 10 seconds to compare the received limit value with the current power consumption.

***Note**: A safety threshold is internally defined in the gateway and configurable in the Airzone Cloud app to prevent undesired limitations caused by calculation tolerances (range: 0 to 2000 W, adjustable in 100 W steps).*

When *Power Consumption* control is enabled, the device selects either the Standard Mode or the Power Limit M Mode, depending on the compatibility and configuration of the connected Aquarea unit.

If the *Power Consumption Limit* signal or heatbeat message is not received within the defined interval, the Aquarea unit switches to a **failsafe mode**, following the conditions below:

Heartbeat Status	Active Power Consumption Limit	Control System behavior
Received in time	Desactivated	Power not limited
Received in time	Activated (duration expired / undefined)	Limited by Active Power Consumption Limit
Not received in time	–	Failsafe duration minimum not expired: limited by failsafe consumption Active Power Limit Failsafe duration minimum expired: power not limited

Standard Mode

The Aidoo Pro EEBUS device switches off or switches on the Aquarea depending on the power limitation:

Limit ON

The device switches off the Aquarea Unit to prevent exceeding the power limit. Every 30 seconds, it checks the unit status:

a. If the unit remains off, no action is taken.
b. If the unit has been manually switched on while the limit is still active, the device will turn it off again to maintain the limitation.

Limit OFF

The *Power Consumption Limit* is disabled. *Action after Limit* is executed:

a. (Default) Return to the previous operation value that was active before the limit was applied.
b. Keep the unit switched off.

Note: *These options can be configured via the App Airzone Cloud.*

Power Limit M Mode

The Aidoo Pro EEBUS device controls the *Power Cosumption* of the unit, adjusting its operation according to the defined power limit. This mode will only be activated if the unit meets the following requirements:

- **Unit series.** Aquarea M Series or newer.
- **Optional PCB installed.** *CZ-NS6P* (For Allin One and Bi-bloc) or *CZ-NS7P* (For Control Module).
- **SG signal connector bridge.** A bridge must be present between VCC and BIT 1 on connector CN206.

Note: *For M generation units manufactured prior to Q2 2026, please contact your local Panasonic Sales Office, as a firmware upgrade may be required.*

Limit ON

The Aidoo Pro EEBUS device applies a dynamic power limitation to the connected Aquarea unit. The system continuously adjusts operation to stay within the maximum allowed power consumption. This value is calculated as follows:

Maximum allowed power consumption = Value received from EEBUS - configured Safety threshold

If the received limit from EEBUS is very low (around 500 W or less), the device switches the unit off to prevent unstable operation. Furthermore, if the limit is below the minimum power required for the unit's compressor operation, the compressor will not turn on.

Note: *The minimum power required by the compressor may be diferent depending on the Outdoor Temperature and Water Set Points.*

The Maximum Consumption value received from EEBUS is directly sent by the EEBUS Gateway to the Aquarea unit HPU (Heat Pump Unit) Stop Consumption parameter, to define the maximum allowed power consumption. If the unit's actual consumption exceeds this HPU Stop Consumption value, the system will force the unit to stop. When this condition occurs:

- If ***HPU Stop Consumption*** **is higher than 3 kW**, the system may activate the backup electric heater for Heating or DHW, with a maximum output of 3 kW, even if a 6 or 9 kW heater is installed.
- If ***HPU Stop Consumption*** **is below 3 kW**, the unit will switch off when this limit is reached, without activating any backup heater.

Note: *During the Defrost mode and other security or specials operations, the unit may temporarily exceed the maximum allowed power consumption, as long as it does not surpass the HPU Stop Consumption value.*

Limit OFF

The *Power Consumption Limit* is disabled. *Action after Limit* is executed:

a. (Default) Return to the previous operation value that was active before the limit was applied.
b. Keep the unit switched OFF.

Note: *These options can be configured via the App Airzone Cloud.*

Gateway Setup for Panasonic

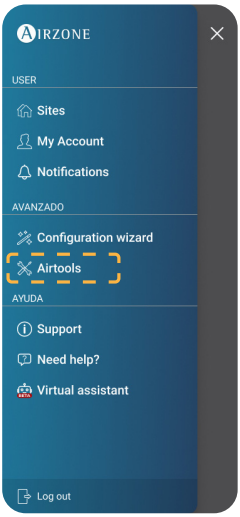
NETWORK CONFIGURATION

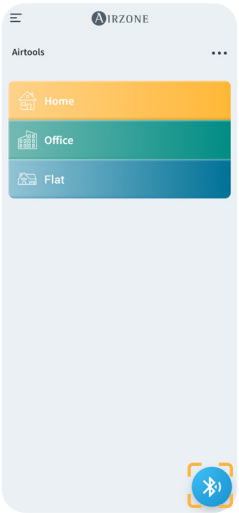
Download de Airzone Cloud app for gateway setup.

App Airzone Cloud

If you click the *Airtools* button on the sidebar menu of the “Airzone Cloud” app, you can access advanced settings. Then click the *Bluetooth* item to begin to search for nearby devices.

Select your “Aidoo Pro EEBUS Panasonic Aquarea” to continue.



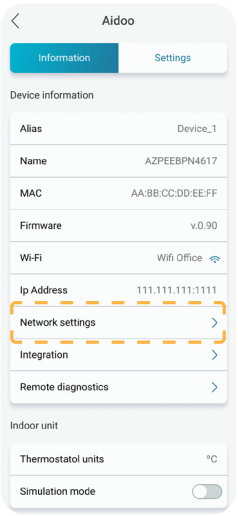


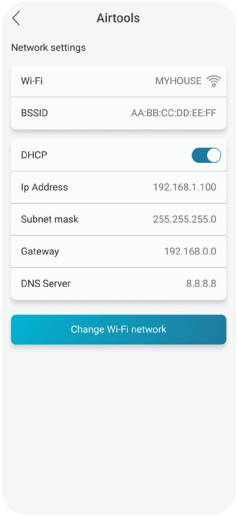
Once the device has been selected, the information menu will be displayed.

- **Name.** Device name.
- **MAC.** Device's MAC address.
- **Firmware.** It indicates the device version.
- **Wi-Fi.** Network linked to the device.
- **IP Address.** It displays the device's IP address.
- **Network settings.** It is used to configure the device.

Press the *Factory reset* button to restore the initial values.

By entering the *Network settings* submenu you can change the Wi-Fi network if necessary.



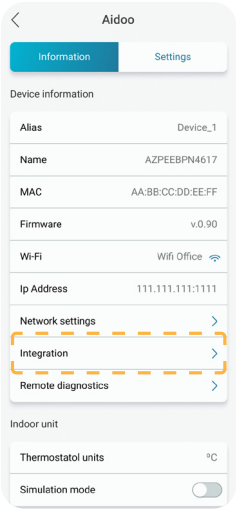


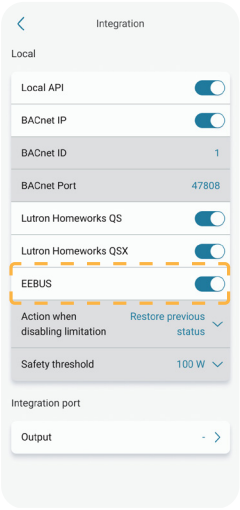
CONFIGURATION OF EEBUS PARAMETERS

To configure the EEBUS parameters, select the ***Integration*** option in the device information menu.

Once the EEBUS parameter is enabled, you can define how the unit will behave when the power consumption limitation is disabled:

a. Restore previous status.
b. Remain off.





Panasonic

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