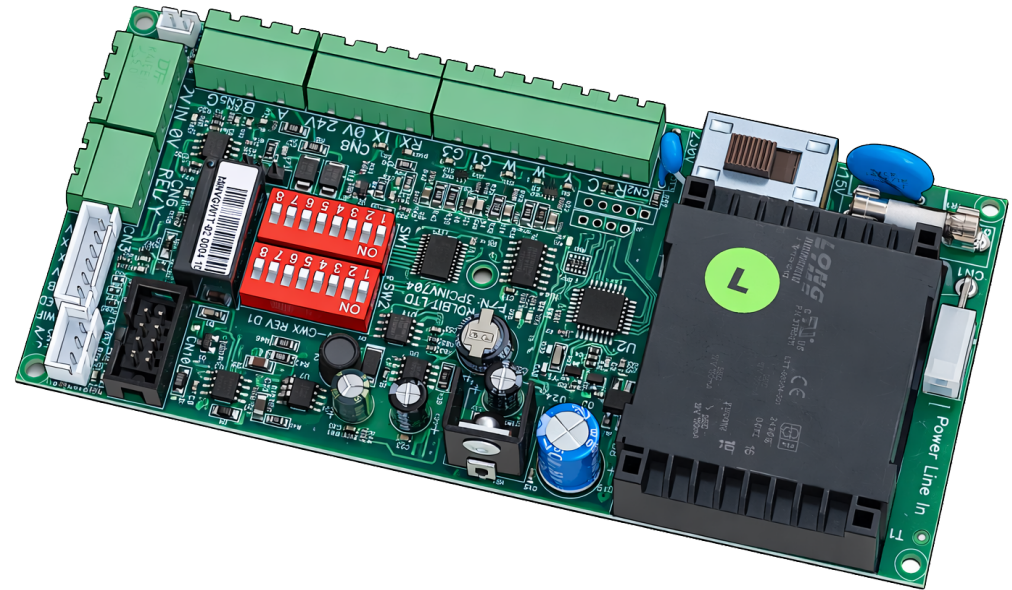


# AIO™ GWX Gateway Control Board

## Product Data Sheet



## CONTACT INFO

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## WARNING

Only qualified professionals should install and service this equipment. Improper installation or modifications by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the installation guide and on the labels attached to the equipment.

## REVISION HISTORY

| Rev | Date       | Revised By | Changes                               |
|-----|------------|------------|---------------------------------------|
| A   | 2026-03-26 | Leah Kuber | New document                          |
| B   | 2026-05-26 | Leah Kuber | Add section 5 with Heating mode logic |

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## 1. AIO™ GWX GATEWAY CONTROL BOARD

The GWX Gateway Control Board integrates and manages operations for AIO™ Heat Pumps, supporting Wall Mounted (Gen 2+) and other models. This gateway facilitates seamless communication with building management systems, thermostats, and additional accessories, ensuring optimal system control and energy efficiency.

**Note:** This gateway board must be field-installed and connected inside the AIO™ unit by an electrician or technician. Installation takes approximately 15 minutes.

### 1.1 AIO™ GWX Submittal

|                |               |
|----------------|---------------|
| Job            | Reference     |
| Construction   | Location      |
| Approval       | Quote Number  |
| Engineer       | Date          |
| Drawing Number | P.O. Number:  |
| Submitted To   | Submitted By: |

## 2. SUPPORTED ELEMENTS AND ACCESSORIES

- **Thermostats:** Supports third-party thermostats and INNOVA LTCH20 and TFTH20 models.  
**Note:** When the GWX gateway is connected to a third-party controller, the display on the AIO™ unit will show "61F" ("16C") for cooling mode and "88F" ("31C") for heating mode, regardless of the actual set point. These numbers only indicate that the unit is active. The actual temperature set point is displayed on the thermostat.
- **Building Management System (BMS):** Enables remote communication via MODBUS and BACnet protocols.
- **Wi-Fi connectivity:** Enables control via an additional module (not included) that is connected to a dedicated app for smartphones, tablets, and computers.
- **Auxiliary heater control:** Enables control and integration of auxiliary heating systems, including electric, hydronic, and baseboard heaters.



The relay on the GWX is a Pilot-Duty relay and is rated at only 24 VAC and 1 amp. When connecting an external device, do not exceed this capacity.

- **Fresh air unit:** Integrates control for fresh air intake systems.
- **External temperature sensor:** Operates the electric heater based on external temperature conditions.
- **Motion detector:** Activates energy-saving modes based on room occupancy.

## 3. SPECIFICATIONS

- **Power supply:** Operates on either 115V or 230V AC, 50/60 Hz, selected via a switch.
- **Power consumption:** 2.4 watts.
- **Operating environment:** Functional between 40°F (4.4°C) and 158°F (70°C).
- **Storage environment:** Stable between 0°F (-17.8°C) and 158°F (70°C) at 90% relative humidity (non-condensing).
- **Relay rating:** Dry-contact relay rated at 1 amp.
- **Communication Protocols:** MODBUS and BACnet over RS-485 for BMS integration.
- **Thermostat connections:**
  - **INNOVA LTCH20/TFTH20 thermostats:** Connected via four screw terminals.
  - **Third-Party thermostats:** Connected via seven screw terminals (R, C, Y, W, H, M, L, where H = High Fan, M = Medium Fan, L = Low Fan).
- **Control settings:** DIP switches configure the mode of operation and bus address. For more information, refer to the [AIO™ GWX Gateway Installation Guide](#).
- **Supported temperature set points:** 61°F – 88°F (16.1°C – 31.1°C).
- **Fuse protection:** 0.3 amp ceramic fuse.
- **Dimensions:** 6" x 2.7" x 1" (152 mm x 68 mm x 25 mm).
- **Warranty:** 2-year limited warranty.

## 4. WIRING AND INSTALLATION

The GWX control board includes three cables:

- **Communication Cable (round gray):** For connecting the GWX board to the air conditioning control system in AIO™ Wall Mounted Gen 2+ units.
- **Communication Cable (flat ribbon gray):** For connecting the GWX board to the air conditioning control system in other AIO™ units.
- **Power Cable (black):** For supplying power from the unit.

### 4.1 AIO™ unit compatibility

The GWX gateway can be installed in the following AIO™ units:

- AIO™ Wall Mounted Standard/Pro (Gen 2+)
- AIO™ Ceiling Ducted (with and without ERV)
- AIO™ Ceiling Suspended (with and without ERV option)
- AIO™ Vertical Stack
- AIO™ Vertical Stack XL

The GWX is not compatible with the AIO™ Wall Mounted (Gen 1) unit.

### 4.2 Installation instructions:

- In some models, installers must connect the communication cable from the GWX board to the A/C unit's controller panel, and the power cable must be hard-wired to the electrical panel (if it is not pre-installed).
- In some models, installers must connect the communication and power cables from the GWX board to terminals at the bottom of the A/C unit.
- In newer models, the communication and power cables are pre-installed within the A/C unit and only need to be connected to the gateway.

For complete installation instructions for each unit type, refer to the [AIO™ GWX Gateway Installation Guide](#).

## 5. HEATING MODE LOGIC

The GWX gateway includes an external heating function that enables the use of an external sensor (NTC thermistor) to automatically activate heating from an external or baseboard heater at specific temperatures. The heating modes are configured using the GWX SW2 DIP switches #4 and #5, with the following logic:

Table 1: SW2 Heating mode controls

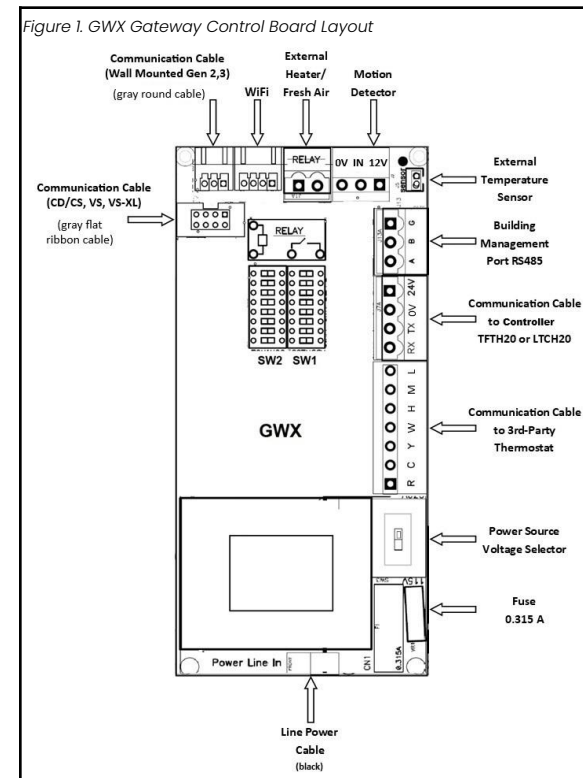
| DIP #4 | DIP #5 | Heating mode                  | External heater used when: |
|--------|--------|-------------------------------|----------------------------|
| OFF    | OFF    | Internal Heat                 | Never                      |
| ON     | OFF    | Low-Temperature External Heat | Outside temp < -5°C (23°F) |
| OFF    | ON     | Basic External Heat           | Outside temp < 5°C (41°F)  |
| ON     | ON     | Invalid - no action           | N/A                        |

- **Internal Heat mode:** Heating is always controlled by the AIO™ unit.
- **Both External Heat modes:** Heat is controlled by a baseboard heater or other external heater when the outside temperature is below the listed threshold. When the outside temperature is above this threshold, heating is controlled by the AIO™ unit.
- **Both External Heat modes assume an external NTC sensor is connected.** If no sensor is connected, the system will revert to Internal mode.
- **Cooling mode is controlled by the AIO™ unit regardless of the heating mode selected.**
- **The external heater can be operated using the LTCH20 or TFTH20 controllers.**

## 6. LAYOUT

To view the Layout of the Gateway as a high-resolution PDF, click the link below:

[PDF GWX Gateway Control Board Layout.pdf](#)





With over 20 years of experience in the climate comfort sector, we have a clear goal: growth through innovation. Our team is laser-focused on the conception, development, and production of innovative heating, ventilation, and air conditioning solutions. This mission has developed through bringing together technical skills, creativity, technology, design, Italian passion, and a global vision to achieve the best energy efficiency and performance.

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