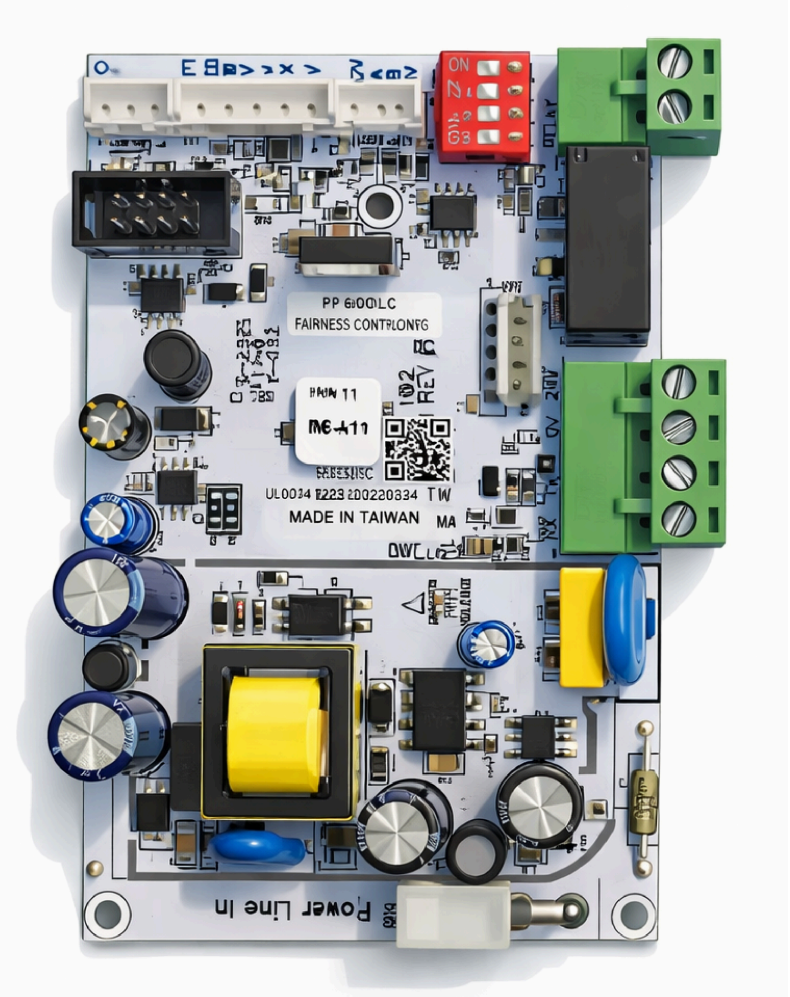
AIO® GWN Gateway for AIO® Heat Pumps

Installation Guide



innova

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DISCLAIMER

IMPORTANT - TRAINING IS REQUIRED PRIOR TO PERFORMING ANY INSTALLATION.

While this guide outlines the general installation requirements for the unit, it does not replace required installer training. Before commencing installation, the project manager must contact the INNOVA VIP Department at (212) 204-2700 to coordinate training for the installer.

Failure to ensure that installation is performed by INNOVA-trained personnel may result in improper operation or equipment damage, and may void the warranty.

Training may be conducted in person or remotely (online).

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1. ABOUT THIS GUIDE

This guide outlines the required procedures for safely installing the GWN gateway in an AIO® heat pump unit. Following these instructions reduces the risk of equipment damage, improper installation, and potential safety hazards.

Important: Read the entire installation guide before beginning any installation tasks. Pay close attention to all safety warnings and notices.

Note: This guide is shipped with the gateway and is the property of the customer. Make sure this guide is left in the customer's possession.

1.1 Specific language

Some language and symbols in this guide have specific meanings.

Reference to the product

- Any reference to "the unit" or "the AIO® unit" is meant to refer to the specific AIO® heat pump unit described in that section of the document.
- All references to the AIO® Wall Mounted unit refer to both the Wall Mounted Standard and the Wall Mounted Pro units.

Unit orientation

All directions in this guide (left, right, top, and bottom) are given from the perspective of facing the unit.

Role definitions

This guide is primarily intended for installers. The roles of end users and service technicians are also defined here for reference.

- **User:** A nonexpert who can safely operate the unit and perform basic diagnostics and maintenance.
- **Installer:** An INNOVA-trained and certified HVAC installation technician responsible for the correct installation of the unit as indicated in the installation guide and in accordance with all local and national codes.
- **Service technician:** A trained and qualified HVAC professional who performs service or maintenance in compliance with OSHA safety requirements, recognized industry best practices, and all applicable federal, state, and local codes and standards.
- **Trained HVAC technicians:** A group term for both installation and service technicians.

1.2 Safety notices, icons, and symbols

Warnings, Cautions, and Annotations are included throughout this guide. Read each carefully and follow the stated instructions.

Safety notices

Each safety notice represents the level and immediacy of risk. Each warning panel displays a background color and a signal word. They may include an icon to specify the topic.

DANGER

A red notice with the **DANGER** title indicates an imminently hazardous situation that could result in death or serious injury if not avoided.

WARNING

The orange notice with the **WARNING** title indicates a potential hazard that, if not avoided, could result in death or serious injury.

CAUTION

The yellow notice with the **CAUTION** title indicates a hazardous situation that, if not avoided, could result in minor to moderate injury or property damage.

Warning icons

The warning icons represent the type of risk and are used in conjunction with any of the safety notice panels.

	The flame icon indicates information related to a hot surface or explosion hazard.
	The lightning-bolt icon indicates a warning related to electrical hazards.
	The hand icon indicates information related to a moving parts and sharp surfaces hazard.
	The exclamation-mark icon indicates general hazards (environmental hazards, lifting hazards, and other categories).

Annotation icons

Annotations are provided throughout this guide. It is important to read each carefully and follow the instructions stated.



Indicates instructions or information that is important to note to ensure optimal installation or operation of the unit.

Indicates supplemental information, tips, or useful background information.

2. QUICK GUIDE - INSTALLING THE GWN GATEWAY IN AIO® UNITS

Before beginning any installation, read the Safety Guidelines in Section 4.

This Quick Guide provides links to the sections in this document that describe how to install a GWN gateway control board in each type of AIO® heat pump unit.

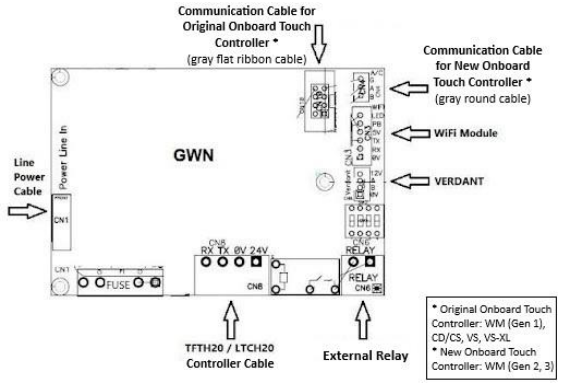
To install in an AIO® Wall Mounted (Standard/Pro) unit (Gen 1)
To install in an AIO® Wall Mounted (Standard/Pro) unit (Gen 2)
To install in an AIO® Wall Mounted (Standard/Pro) unit (Gen 3)
To install in an AIO® Ceiling Ducted unit (with or without ERV)
To install in an AIO® Ceiling Suspended unit (with ERV option)
To install in an AIO® Ceiling Suspended unit (without ERV option)
To install in an AIO® Vertical Stack unit
To install in an AIO® Vertical Stack XL unit

3. GWN GATEWAY OVERVIEW

The GWN gateway provides an interface between AIO® units and wall thermostats, including INNOVA controllers and the Verdant thermostat.

Figure 1 shows the GWN gateway board layout.

Figure 1. GWN gateway board layout



The GWN gateway can interface with:

- **Thermostats/Controllers**: Including the INNOVA AIO® Basic Touch Controller (LTCH20), the INNOVA Advanced Touch Controller (TFTH20), and the Verdant thermostat. See Section 6.2.
- **Wi-Fi module**: Enables control of the unit using a mobile device, via a dedicated Wi-Fi application. See Section 6.3.
- **External fresh air (via relay):** Enables connecting the unit to an external fresh air (ERV) system, via a relay contact. See Section 6.4.
- **Dual power sources (via relay):** Enables switching between one power source for heating and a second power source for cooling, such as when the building provides heat, but the tenant is responsible for cooling. See Section 6.5.

3.1 AIO® unit compatibility

The GWN gateway can be used with the following AIO® units:

- AIO® Wall Mounted Standard / Pro

- AIO® Ceiling Ducted (with and without ERV)
- AIO® Ceiling Suspended (with and without ERV option)
- AIO® Vertical Stack (Gen 3 or later only)
- AIO® Vertical Stack XL

- All references to the AIO® Wall Mounted unit refer to both the Wall Mounted Standard and the Wall Mounted Pro units.
- The GWN gateway cannot be used with Gen 1 or 2 of the Vertical Stack unit. See Section 12.

3.2 GWN gateway specifications

The following are the specifications of the GWN gateway:

- DIP switches for identifying the type of AIO® unit and controller.
- Relay Rating: Dry Contact - 24 VAC, 1 amp.
- LTCH20 and TFTH20 thermostat inputs via four-screw terminals.
- Verdant thermostat inputs via a dedicated 4-pin connector.
- Operating temperature: 40°F (4.4°C) - 158°F (70°C).
- Storage temperature: 0°F (-17.8°C) - 158°F (70°C), 90% relative humidity, non-condensing.
- Power supply: Universal input (115V, 230V, and 277V nominal), 50/60 Hz; automatic voltage detection.
- Power consumption: 3.2 watts.
- Fuse: 2 amps.
- Dimensions: 4" x 2.75" x 1" (101.6 mm x 70 mm x 25.4 mm)

The GWN gateway is an optional component for the AIO® unit. It must only be used for this purpose.

4. SAFETY GUIDELINES - READ BEFORE INSTALLING

This guide details the steps required for the safe installation of a GWN gateway in an AIO® unit. By following these instructions, the risk of damage to the equipment can be significantly reduced.

Read the entire installation guide before installing the gateway. Pay careful attention to all safety notices and warnings.

Failure to apply the indicated rules may cause malfunctions in the appliances and relieve the manufacturer of any warranty and of any liability for damage to persons, animals, or property.

All safety regulations in force at the installation site, as well as common-sense precautions, must be followed.

The precautions listed in this installation guide are intended to supplement accepted safe practices. In case of a direct conflict between accepted safety practices and this guide, the more stringent precaution takes precedence.

Failure to follow the instructions in this guide can result in property damage, serious injury, or death.

4.1 Fire/explosion hazards

⚠ WARNING

- In the event of abnormal conditions (such as a strange or burning smell, noise, or smoke), turn off the unit and disconnect it from its power source immediately. Report the issue immediately to your INNOVA representative or distributor.
- Servicing shall be performed only as recommended by the manufacturer.

4.2 Electrical hazards

⚠ DANGER

- Only trained HVAC technicians may install this gateway. Improper modifications by an unqualified person can result in serious injury or death.
- When working on the equipment, observe all precautions in the guide and on labels attached to the equipment.
- Before installation, maintenance, or servicing, disconnect power to the entire system. Verify that power to the entire system is down, including any remote disconnects, peripherals, third-party devices, and devices operating on the unit's network.
- Follow all OSHA-compliant Lockout/Tagout (LOTO) procedures.

⚠ WARNING

- All electrical connections, wiring, and grounding must be done by a qualified electrician and must comply with the National Electrical Code (NEC/NFPA-70) as well as all local codes that hold jurisdiction. Improper wiring or loose connections may cause overheating, fire, or electric shock.
- Use only the supplied installation-specific components. Using different components could lead to water leakage, electric shock, or fire.
- Do not open access panels to the interior of the unit without first disconnecting the power and/or turning off the breaker.

⚠ WARNING

- The unit contains capacitors that may retain an electrical charge after the power is disconnected. To avoid electrical shock or serious injury, before beginning any installation or servicing, be sure to:
  - Discharge all motor start-run capacitors.
  - Verify (using a voltmeter) that no power is running into the unit.
  - Wait at least five minutes for the AIO® unit to cool down and for the capacitors inside the unit to discharge.

⚠ CAUTION

In the event of a blackout or thunderstorm, turn the unit off and disconnect it from the power source immediately.

4.3 Moving parts hazards

⚠ DANGER

- Do not operate the equipment with panels, guards, or covers removed, except when specifically instructed by the procedures below to test the installation.
- Ensure power is disconnected and components have come to a complete stop before accessing the interior. Internal fans, motors, and other moving components may start automatically when power is supplied.

⚠ WARNING

- Keep hands, hair, tools, and loose clothing away from fans and moving components. Contact with moving parts can cause serious injury.
- Do not remove, bypass, or disable protective covers, guards, or safety interlocks.

4.4 General safety guidelines

⚠ WARNING

- Do not modify or tamper with the gateway. Unauthorized alterations may compromise safety, create hazardous conditions, and void the warranty.
- Wear appropriate personal protective equipment (PPE) such as gloves and safety glasses during the installation process.
- Only a qualified HVAC professional may install this unit. The installer must be licensed, insured, or bonded, as required by local regulations.

Installation by anyone other than an INNOVA-trained and qualified HVAC professional voids the warranty on the unit.

4.5 Installer responsibilities

- Install the unit safely and in accordance with all applicable local and national codes and regulations.
- Ensure that you fully understand the product and the installation procedures before beginning installation. Installation activities involve greater risk than normal system operation.
- Provide the customer with the information necessary to operate the system safely after installation.

The safety precautions in this guide are intended to supplement recognized best practices. In the event of a conflict, the more stringent safety measure always takes precedence.

5. PREPARING FOR INSTALLATION

Before beginning the installation procedure, verify that all required components have been received and that all required materials and accessories are present.

5.1 Shipping configuration

The GWN gateway is shipped in a single package containing the following:

- GWN gateway board
- Two double-sided adhesive foam strips
- Three white plastic spacer (stand-up) clips
- Alcohol pads

The GWN gateway may be ordered with or without cables. If the configuration with cables was ordered, the package should also contain:

- Flat ribbon (gray) communication cable (for use with Wall Mounted Gen 1 units and all Vertical Stack and Ceiling Ducted/Suspended units)
- Round (gray) communication cable (for use with Wall Mounted Gen 2 and Gen 3 units)
- Black power cable (for use with all units)

Some of the AIO units may come with power and/or communication cables pre-installed. In this case, those cables should be used and the respective gateway cables would not be needed.

5.2 Inspecting the package

When the shipment is received, inspect it thoroughly before proceeding to installation:

1. Ensure that the contents match the order and shipping documents.
2. Inspect the entire gateway board and any accessories for any damage that may have occurred during shipping.
3. If the package or contents appear damaged:
   a. Photograph all damage and all sides of the component to support a damage claim.
   b. Clearly document the damage on the freight bill.
   c. Notify your INNOVA representative or distributor.

Report all damage within two weeks of delivery to be eligible for a claim.

5.3 Required tools and supplies

- #2 Phillips-head screwdriver
- Mini (⅛" [3.2 mm]) flathead screwdriver
- Basic electrical tools

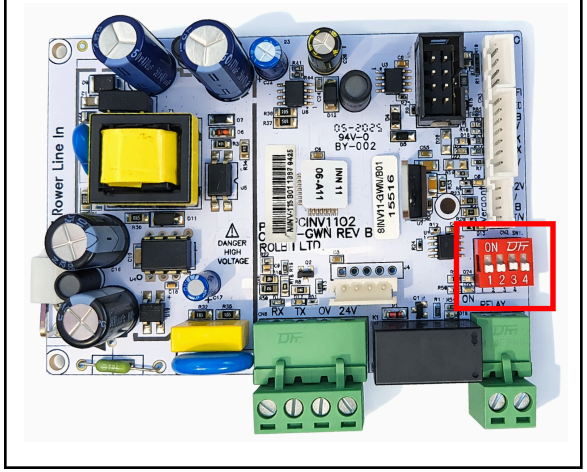
6. GWN GATEWAY CONNECTION OPTIONS

6.1 DIP switch configuration

The GWN gateway has four DIP switches to configure the type of unit and controller to which the gateway will be connected.

Before operating the AIO unit, the DIP switches on the GWN gateway must be configured. We recommend configuring the DIP switches before installing the gateway in the unit, but it can also be done after installation if needed.

Figure 2. GWN DIP switches



1. **DIP Switch #1: HVAC Type**
   DIP switch #1 indicates the HVAC type in which the GWN gateway is being installed.
   - **ON** = Old HVAC type, i.e., an AIO® unit with the original onboard touch controller. Includes Wall Mounted (Gen 1), Vertical Stack, Vertical Stack XL, and Ceiling Ducted/ Suspended.
   - **OFF** = New HVAC type, i.e., an AIO® unit with the new onboard touch controller. Includes

Wall Mounted (Gen 2 and Gen 3).

2. **DIP Switch #2: Verdant Controller**
   DIP switch #2 indicates the type of controller to which the GWN gateway will be connected.
   - **ON** = Verdant controller/thermostat.
   - **OFF** = INNOVA controller/thermostat (TFTH20 or LTCH20), or no wall controller.
3. **DIP Switch #3: Verdant controller series**
   DIP switch #3 indicates the specific series of Verdant controller used, when DIP switch #2 is ON.
   - **ON** = Verdant EPH series.
   - **OFF** = Verdant VX series.

If DIP switch #2 is OFF, DIP switch #3 must also be OFF.

4. **DIP Switch #4: Dual Power Sources**
   DIP switch #4 indicates whether the relay contact on the GWN will be used to switch between dual power sources (see Section 6.5).
   - **ON** = Dual power sources connected.
   - **OFF** = Single power source only.

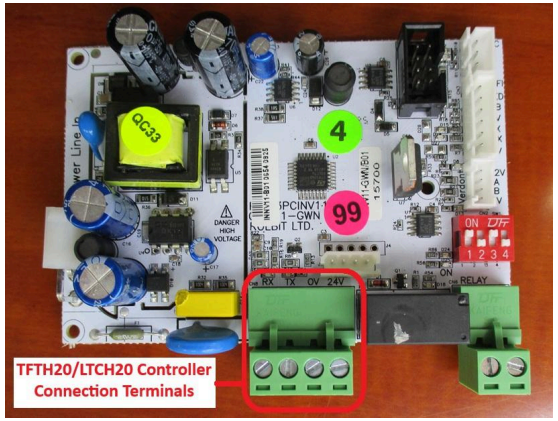
6.2 Connecting the GWN gateway to a wall controller

The GWN gateway can be connected to an INNOVA controller/thermostat or to a Verdant controller/thermostat.

- To use the GWN gateway together with the LTCH20 Basic Touch Controller, refer to the AIO Basic Touch Controller (LTCH20) Installation Guide.
- To use the GWN gateway together with the TFTH20 Advanced Touch Controller, refer to the AIO Advanced Touch Controller (TFTH20) Installation Guide.

The GWN gateway is connected to an LTCH20 or TFTH20 controller via the dedicated terminal block (CN8), as shown.

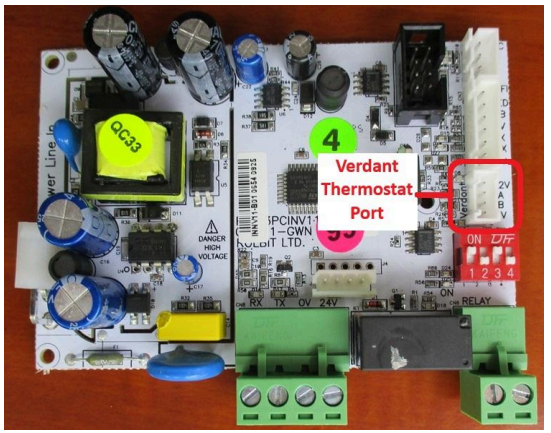
Figure 3. GWN to LTCH20/TFTH20 controller terminals



- The GWN enables connecting INNOVA heat pumps with the Verdant Building Automation System (BAS) for seamless integration and control. For details on integrating a GWN gateway with a Verdant thermostat, refer to the GWN Gateway to Verdant Integration and Installation Guide.

  The GWN gateway is connected to a Verdant thermostat via the dedicated Verdant port (CN2), as shown.

Figure 4. GWN to Verdant port



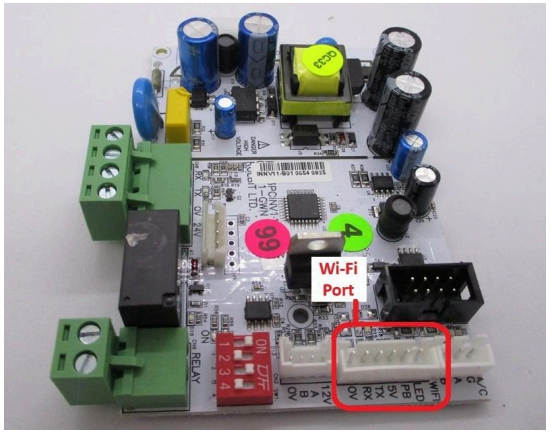
6.3 Connecting the GWN gateway to Wi-Fi

The GWN gateway enables controlling the AIO unit via Wi-Fi, using a mobile device, by providing an interface for the AIO GW1-WIFI Wi-Fi module.

For information on installing and using the Wi-Fi module, refer to the AIO® Wi-Fi Module GW1-WIFI and Smart Life App Installation and User Guide.

The GWN gateway is connected to the Wi-Fi module via the Wi-Fi port (CN3), as shown.

Figure 5. GWN Wi-Fi port

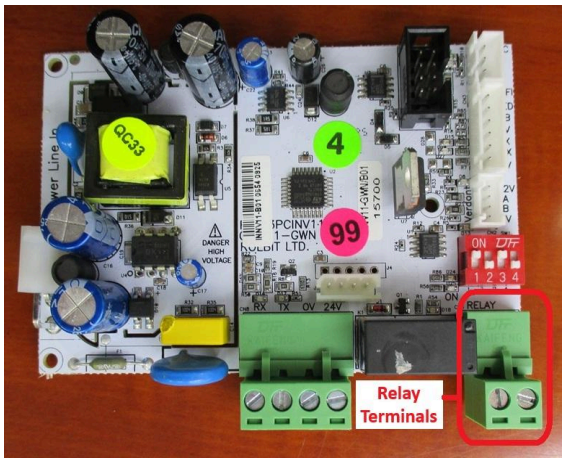


6.4 Connecting the GWN gateway to an external fresh air system

The GWN gateway enables connecting the AIO unit to an external fresh air (ERV) system, using the relay contact (CN6) on the gateway board.

The relay terminals on the GWN gateway are shown below.

Figure 6. GWN relay terminals



When the relay is used for an external fresh air device, it cannot be used for dual power sources (see Section 6.5).

⚠CAUTION

The relay on the GWX is a dry-contact relay (pilot-duty) that is rated at only 24 VAC and 1 amp. When connecting an external device, do not exceed this capacity.

6.5 Connecting the GWN gateway to dual power sources

In some installations, it may be necessary to draw the power for the heating and cooling functions from two separate power sources (for example, if the building provides heat, but the tenant is responsible for paying for cooling).

When a GWN gateway is installed in an AIO heat pump unit, it enables the unit to connect to dual power sources and to switch back and forth between them depending on the operating mode. This is accomplished via the relay contact (CN6) on the GWN gateway board. When the contact is closed, power is drawn from one source, and when it is open, the first power source is disabled, and power is drawn from the second source.

The relay contact on the GWN gateway has the following logic:

- The relay opens when the unit is in cooling mode.
- The relay closes when the unit is in heating mode.

When the relay is used for dual power sources, it cannot be used to control an external fresh air system (see Section 6.4).

⚠CAUTION

The relay on the GWN is a dry-contact relay (pilot-duty) that is rated at only 24 VAC and 1 amp. When connecting an external device, do not exceed this capacity.

The relay terminals on the GWX gateway are shown above in Figure 6 in Section 6.4.

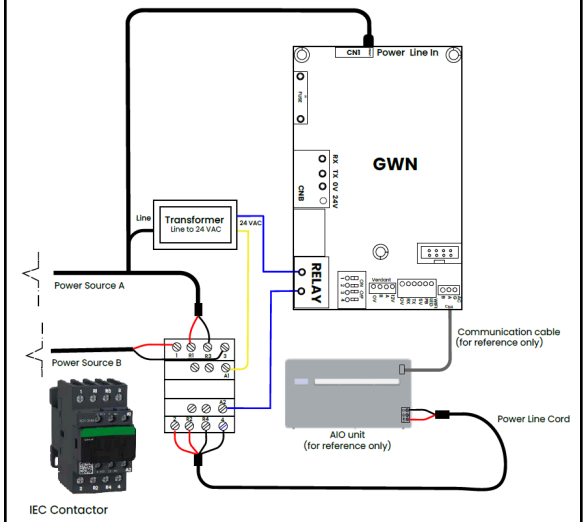
To implement dual power sources, DIP switch #4 on the GWN gateway board must be set to ON. See Section 6.1.

Figure 7 provides a sample scheme for wiring the GWN gateway to dual power sources using an IEC contactor. Other wiring schemes are also possible, as long as the wiring aligns with the relay logic described above.

In the diagram, the dual power sources are labeled as follows:

- **Power source 'A'** is the power source that is used when the relay is closed, meaning the unit is in heating mode.
- **Power source 'B'** is the power source that is used when the relay is open, meaning the unit is in cooling mode.

Figure 7. GWN wiring diagram for dual power sources



To view this wiring diagram as a PDF file, click the following link:

AIO GWN Dual Power Sources Wiring Diagram.pdf

7. INSTALLING THE GWN GATEWAY IN THE AIO® WALL MOUNTED (GEN 1) UNIT

To install the GWN gateway in an AIO® Wall Mounted (Gen 1) unit:

1. Open the AIO® unit.
2. Attach the gateway to the unit.
3. Connect the power and communication cables between the gateway and the unit.
4. Close the AIO® unit.

7.1 Opening the unit

To open the AIO® Wall Mounted (Gen 1) unit:

1. **Disconnect the power supply.**
   Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **Remove the return air filter and grille.**
   Lift off the top grille from the unit. Then gently pull up on the plastic around the return air filter, and carefully lift the filter out.

Figure 8. Lift off the top grille

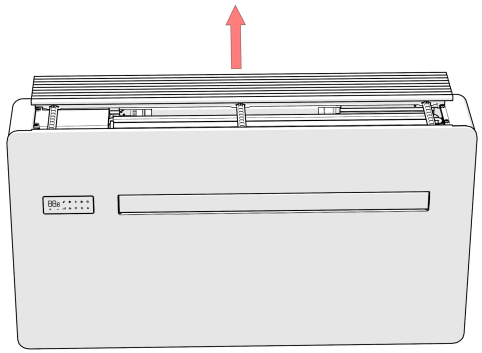
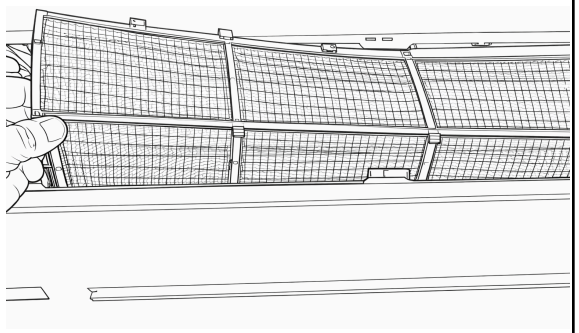


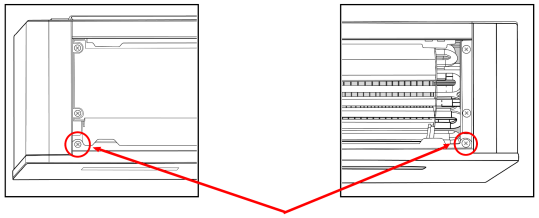
Figure 9. Remove the filter



3. **Remove the front panel.**
   Remove the two front screws on the top of the unit, and gently lift and pull the front panel forward to remove it.

Keep the screws that are removed in each step separate.

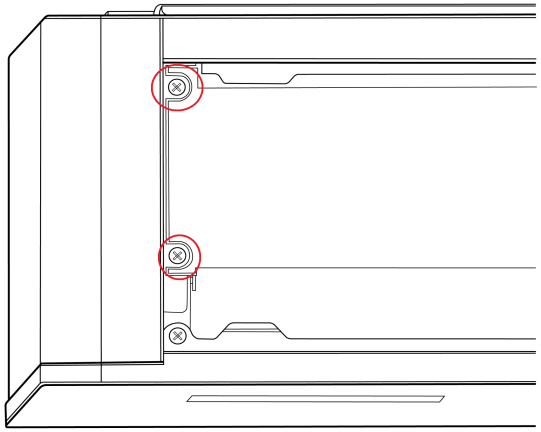
Figure 10. Remove the front top screws



4. Remove the electrical protective cover.

a. Remove the two screws on the top left that hold the black plastic electrical protective cover in place on the frame.

Figure 11. Remove the left screws from the electrical cover



b. Remove the two lower screws that secure the black plastic electrical protective cover to the onboard touch controller cover and to the unit, and remove the protective cover.

Figure 12. Remove the electrical protective cover

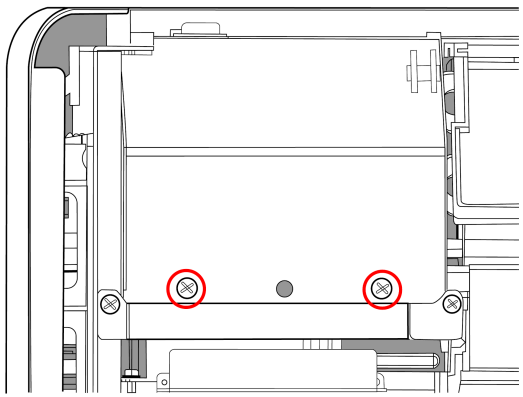


Figure 13. Inside of the electrical protective cover



7.2 Attaching the GWN gateway to the unit

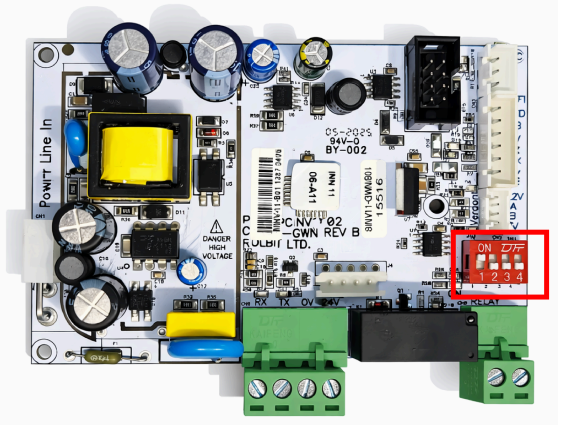
⚠CAUTION

Handle the control board and all electronic components with care to avoid damage.

To attach the GWN gateway to the AIO® Wall Mounted (Gen 1) unit:

1. **Set the DIP switches on the gateway.**
   a. For a Wall Mounted (Gen 1) unit, set DIP switch #1 on the GWN gateway board #1 to ON.
   b. Set DIP switches #2, #3, and #4 on the GWN gateway board as required for the specific installation configuration, as described in Section 6.1.

Figure 14. GWN DIP switches



2. **Mount the gateway board to the unit.**
   a. Clean the mounting location on the underside of the black plastic electrical protective cover with an alcohol pad to ensure proper adhesion. The mounting location is shown below.
   b. Remove the backing from one side of the two double-sided adhesive foam strips and attach the strips to the back of the gateway board.

The foam in the adhesive strips provides insulation to prevent short circuits.

   c. Remove the backing from the other side of the adhesive strips. Mount the gateway board to the underside of the electrical protective cover, placing it one inch (25.4 mm) from the right side, as shown. Press firmly to ensure the gateway is securely attached.

⚠CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 15. Mount the gateway board

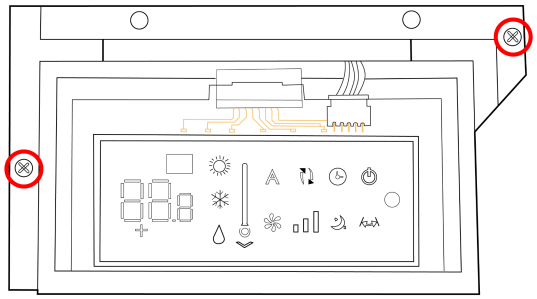


7.3 Connecting the gateway cables

To connect the power and communication cables between the GWN gateway and the AIO® Wall Mounted (Gen 1) unit:

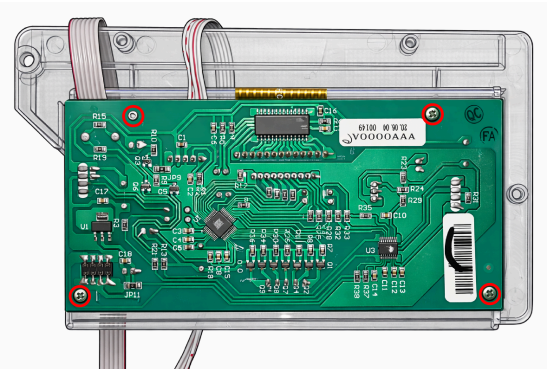
1. **Access the onboard touch controller.**
   a. Remove the two screws from the plastic cover of the onboard touch controller on the unit.

Figure 16. Remove the cover of the controller



b. Remove the four screws that secure the controller circuit board to its clear plastic housing.

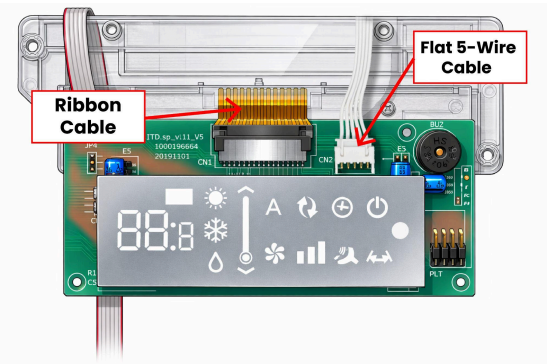
Figure 17. Remove the screws from the controller housing



c. Carefully open the controller housing and remove the controller circuit board from the housing.

d. Gently remove the white, flat, 5-wire cable connector from the controller circuit board.

Figure 18. Remove the controller from its housing



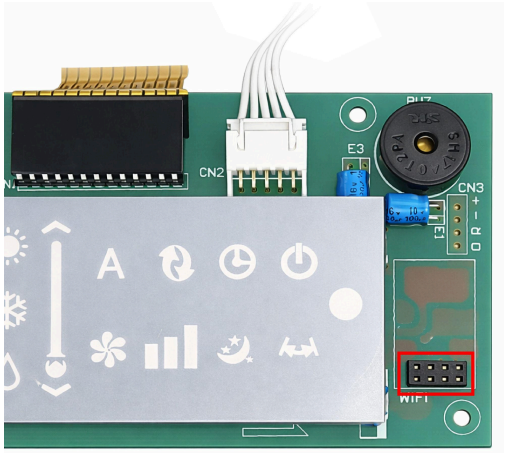
⚠CAUTION

The ribbon cable connecting the touchscreen controller to the housing is fragile and must be handled with extreme care to avoid damage.

2. Connect the communication cable to the unit.

a. Locate the black, eight-hole Wi-Fi socket on the right side of the onboard touch controller circuit board.

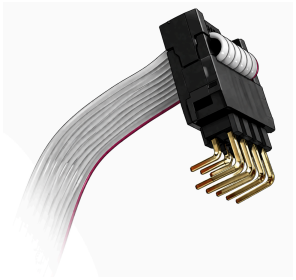
Figure 19. Wi-Fi socket on the controller board



If there is a Wi-Fi chip in the Wi-Fi socket, remove this chip to enable installing the communication cable. This Wi-Fi chip is not used with the GWN gateway. To enable Wi-Fi communication, refer to the AIO® Wi-Fi Module GW1-WIFI and Smart Life App Installation and User Guide.

b. On the gray flat ribbon communication cable, find the end with an eight-pin right-angle pin header in the black connector.

Figure 20. Communication cable connector with right-angle pin header

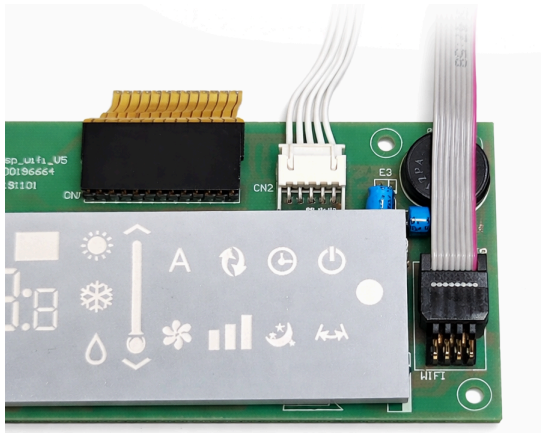


c. Connect the cable to the Wi-Fi socket as follows:

Ensure that the communication cable is inserted with the red stripe on the cable facing away from the display.

- If the Wi-Fi socket is empty: Insert the eight pins on the cable connector securely into the Wi-Fi socket as shown.

Figure 21. Connect the communication cable to the unit



- If there is already a right-angle pin header in the Wi-Fi socket: Remove the right-angle pin header from the cable connector, and push the cable connector securely onto the pins in the Wi-Fi socket.

Figure 22. Remove the pin header from the connector

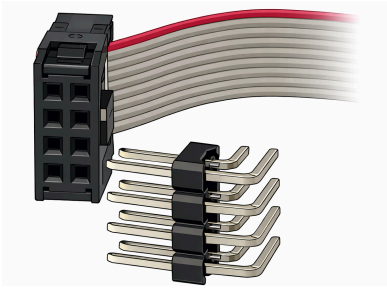
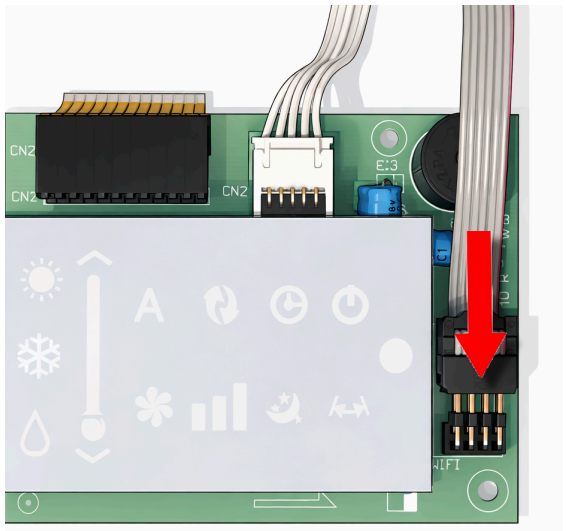


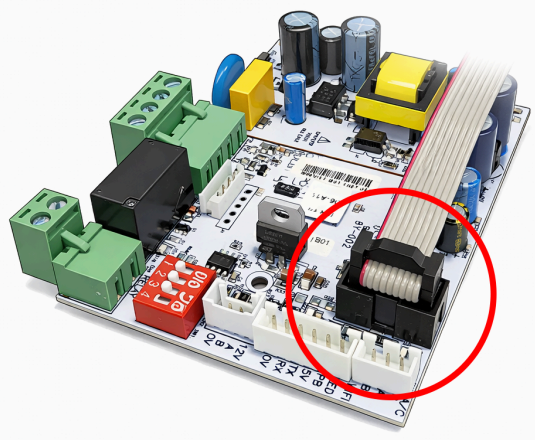
Figure 23. Connect the cable to the pin header in the Wi-Fi socket



3. **Reattach the onboard touch controller.**
   a. Gently reconnect the flat, white 5-wire cable connector to the controller circuit board (see step 1d above).
   b. Carefully replace the touch controller into the clear plastic controller housing and close the housing (see step 1c above).
   c. Reattach the controller circuit board to its housing using the four screws removed in step 1b above.
   d. Reattach the plastic cover of the controller to the unit using the two screws removed in step 1a above.

4. **Connect the communication cable to the gateway.**
   Connect the end of the gray flat ribbon communication cable (with the 8-hole connector) to the black 8-pin socket (CN10) on the gateway.

Figure 24. Connect the communication cable to the gateway

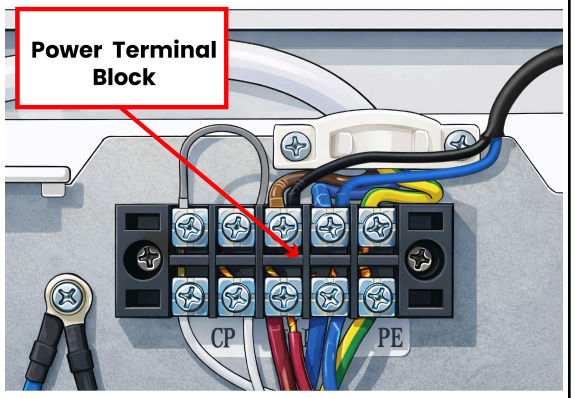


5. **Connect the power cable to the unit.**

The GWN gateway uses a "Universal Input" power supply that works with any line voltage.

Strip the three-pronged connector from the end of the black power cable, and hardwire the power cable to the power supply terminal block (CONN1) that is located on the back left side of the electrical compartment of the unit.

Figure 25. Hardwire the power cable to the unit



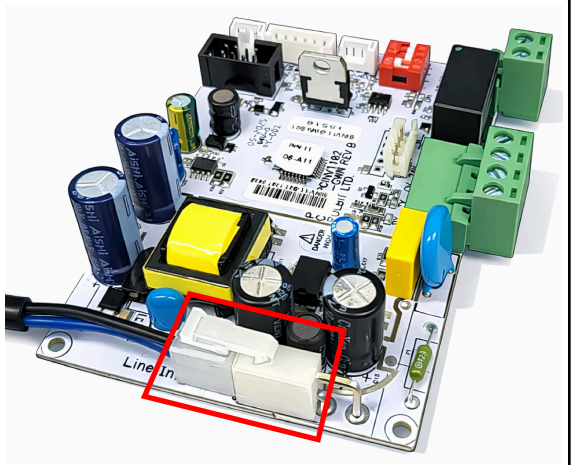
The wiring has the following configuration:

- Black is Live
- Blue is Neutral.

Make sure that the wires are connected as specified — black (live on gateway) to brown (live on unit) and blue to blue — and that they are securely fastened.

6. **Connect the power cable to the gateway.**
   Insert the two-pronged connector on the other end of the black power cable into the "Power Line In" port (CN1) on the gateway board.

Figure 26. Connect the power cable to the gateway



⚠CAUTION

Ensure that all wire insulation on the cables is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

7.4 Closing the unit

To close the AIO® Wall Mounted (Gen 1) unit:

1. **Position the electrical cover in place.**
   Put the black electrical protective cover in place to cover the electrical connections while the unit is being tested.

Do not secure the cover with screws until after the unit has been tested.

2. **Test the onboard touch controller.**
   a. Reconnect the power supply to the unit and power it on.
   b. Test the onboard touch controller to verify that it changes the temperature setting and operating modes as selected. Refer to the AIO® Wall Mounted (Gen 1) User Guide for more information.
      - If the touch controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
      - If the test fails, repeat the applicable steps in Sections 7.1 through 7.3 to open the unit and check if all connections are secure. Then repeat the test. If the test still fails, contact an INNOVA-trained service technician.
3. **Close the unit.**
   a. Secure the black electrical protective cover to the plastic cover of the controller and to the unit using the two screws removed in Section 7.1, Step 4b.
   b. Replace the left side panel and secure it to the frame of the unit using the two screws removed in Section 7.1, Step 4a.
   c. Replace the front panel and secure it to the unit using the two screws removed in Section 7.1, Step 3.
   d. Reinstall the return air filter and the grille into the unit (see Section 7.1, Step 2).
4. **Reconnect the power supply to the unit.**

8. INSTALLING THE GWN GATEWAY IN THE AIO® WALL MOUNTED (GEN 2) UNIT

To install the GWN gateway in an AIO® Wall Mounted (Gen 2) unit:

1. Open the AIO® unit.
2. Attach the gateway to the unit.
3. Connect the power and communication cables between the gateway and the unit.
4. Close the AIO® unit.

8.1 Opening the unit

To open the AIO® Wall Mounted (Gen 2) unit:

1. **Disconnect the power supply.**
   Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **Remove the return air filter and grille.**
   Lift off the top grille from the unit. Then gently pull up on the plastic around the return air filter and carefully lift the filter out.

Figure 27. Lift off the top grille

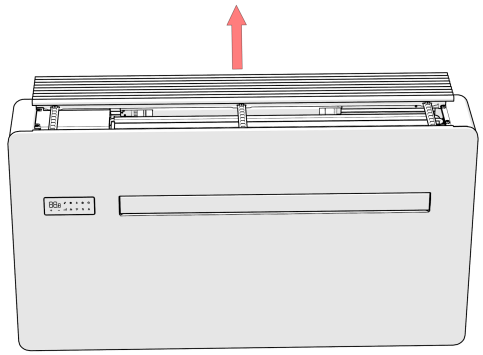
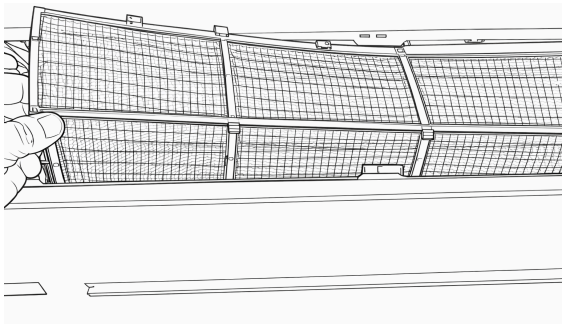


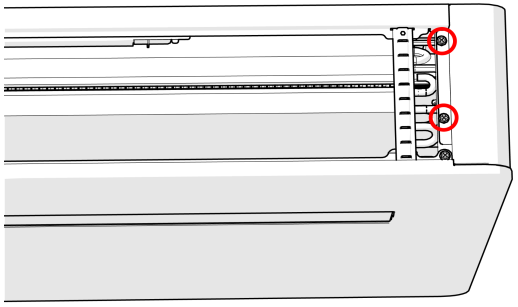
Figure 28. Remove the filter



3. **Remove the right side panel.**
   Remove the two screws from the right side decorative panel of the unit. Then lift and remove the right side panel.

Keep the screws that are removed in each step separate.

Figure 29. Remove the right side panel



8.2 Attaching the GWN gateway to the unit

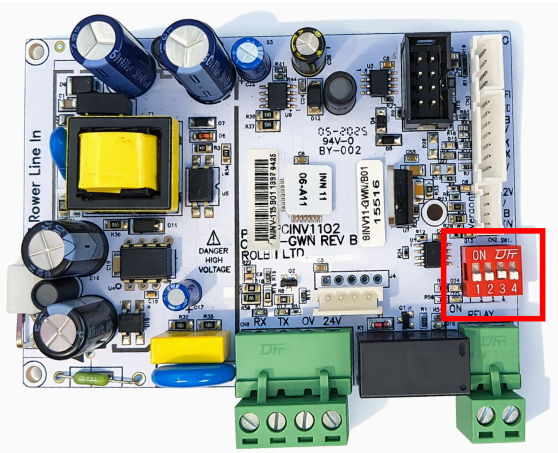
⚠CAUTION

Handle the control board and all electronic components with care to avoid damage.

To attach the GWN gateway to the AIO® Wall Mounted (Gen 2) unit:

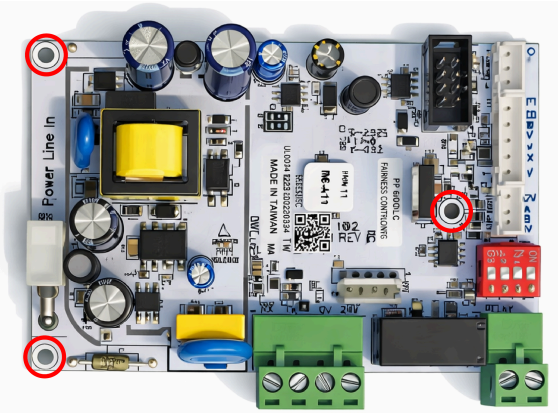
1. **Set the DIP switches on the gateway.**
   a. For a Wall Mounted (Gen 2) unit, set DIP switch #1 on the GWN gateway board #1 to OFF.
   b. Set DIP switches #2, #3, and #4 on the GWN gateway board as required for the specific installation configuration, as described in Section 6.1.

Figure 30. GWN DIP switches



2. **Mount the gateway board to the unit.**
   - If there are mounting holes on the inner metal panel:
     a. Insert the three plastic spacer (stand-up) clips (provided with the gateway) into the two top holes and the middle hole on the panel.
     b. Mount the gateway board on top of the clips, using the holes in the gateway.

Figure 31. Holes for spacer clips



It is recommended to use spacer clips if there are holes, since the spacers raise the gateway board ¼" (6.4 mm) above the metal chassis, preventing contact and ensuring safe clearance.

   - If there are no mounting holes on the panel:
     a. Clean the mounting location on the inside of the right side metal panel with an alcohol pad to ensure proper adhesion. The mounting location is shown below.
     b. Remove the backing from one side of the two double-sided adhesive foam strips and attach the strips to the back of the gateway board.

The foam in the adhesive strips provides insulation to prevent short circuits.

c. Remove the backing from the other side of the adhesive strips and mount the gateway board on the inside of the metal panel. Press firmly to ensure the gateway is securely attached.

⚠CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 32. Mount the gateway board

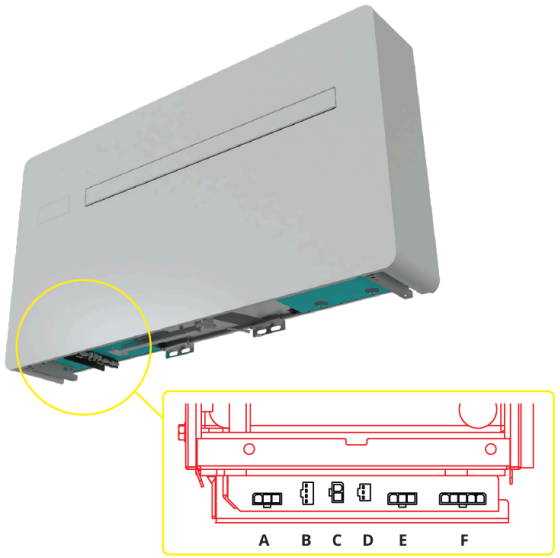


8.3 Connecting the gateway cables

To connect the power and communication cables between the GWN gateway and the AIO® Wall Mounted (Gen 2) unit:

1. **Open the Accessory Connection Block on the unit.**
   The accessory connection block is located on the bottom left of the unit, as shown. Remove the screw from the accessory connection block cover and slide the cover to the right to remove it.

Figure 33. Wall Mounted Gen 2 accessory connection block



A	Power Supply for gateway	**D**	Communication port for ERV
B	Communication port for gateway	**E**	Power for ERV
C	Power for the heat trace wire on the condensate line	**F**	Not Used

2. **Connect the communication cable to the unit.**
   Connect the end of the gray communication cable (with the black connector) to the dedicated gateway communication port on the accessory connection block (labeled B in Figure 33). Ensure the connector is inserted completely and securely.

3. **Connect the power cable to the unit.**
   Connect the three-pronged end of the black power cable to the dedicated gateway power supply port on the accessory connection block (labeled A in Figure 33). Ensure the connector is inserted completely and securely.

Figure 34. Power and communication cable connections

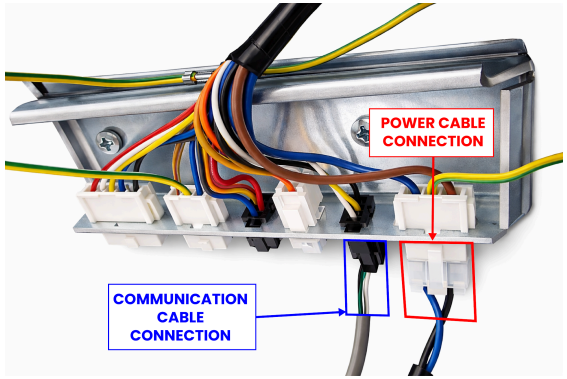
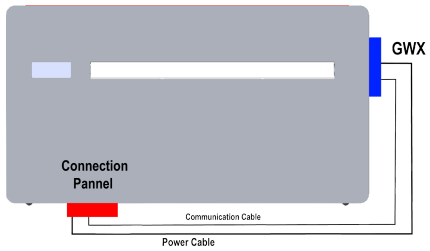


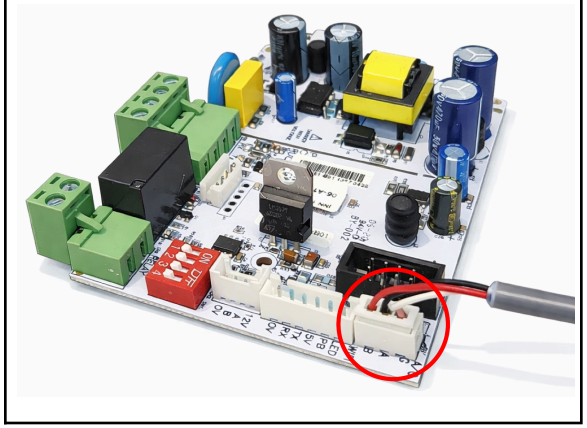
Figure 35. Connected cables from the gateway to the unit



The GWN gateway uses a "Universal Input" power supply that works with any line voltage.

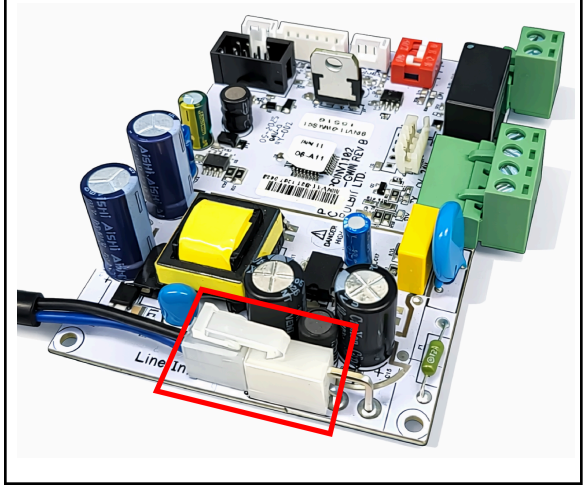
4. **Connect the communication cable to the gateway.**
   Insert the white connector on the round gray communication cable into the "A/C" port (CN4) on the gateway.

Figure 36. Connect the communication cable



5. **Connect the power cable to the gateway.**
   Insert the free, two-pronged end of the black power cable into the "Power Line In" port (CN1) on the gateway board.

Figure 37. Connect the power cable



⚠CAUTION

Ensure that all wire insulation on the cables is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

8.4 Closing the unit

To close the AIO® Wall Mounted (Gen 2) unit:

1. **Test the onboard touch controller.**
   a. Reconnect the power supply to the unit and power it on.
   b. Test the onboard touch controller to verify that it changes the temperature setting and operating modes as selected. Refer to the AIO® Wall Mounted (Gen 2/3) User Guide for more information.
      - If the touch controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
      - If the test fails, repeat the applicable steps in Sections 8.1 through 8.3 to check if all connections are secure. Then repeat the test. If the test still fails, contact an INNOVA-trained service technician.
2. **Close the accessory connection block cover and side panel.**
   a. Replace the accessory connection block cover and slide it to the left, ensuring the tab on the left side of the cover slides into the slot on the unit, and secure it with the screw removed in Section 8.3, Step 1.
   b. Replace the right side panel and secure it to the frame of the unit using the two screws removed in Section 8.1, Step 3.
   c. Reinstall the return air filter and the grille into the unit (see Section 8.1, Step 2).
3. **Reconnect the power supply to the unit.**

9. INSTALLING THE GWN GATEWAY IN THE AIO® WALL MOUNTED (GEN 3) UNIT

To install the GWN gateway in an AIO® Wall Mounted (Gen 3) unit:

1. Open the AIO® unit.
2. Attach the gateway to the unit.
3. Connect the power and communication cables between the gateway and the unit.
4. Close the AIO® unit.

9.1 Opening the unit

To open the AIO® Wall Mounted (Gen 3) unit:

1. **Disconnect the power supply.**
   Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **Remove the return air filter and grille.**
   Lift off the top grille from the unit. Then gently pull up on the plastic around the return air filter and carefully lift the filter out.

Figure 38. Lift off the top grille

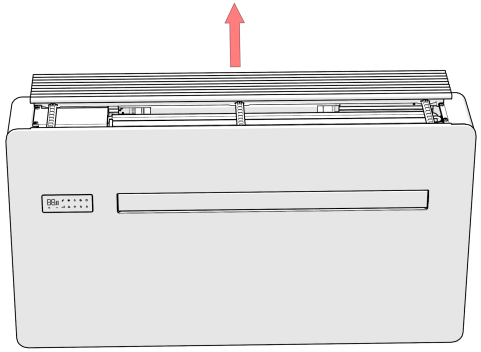
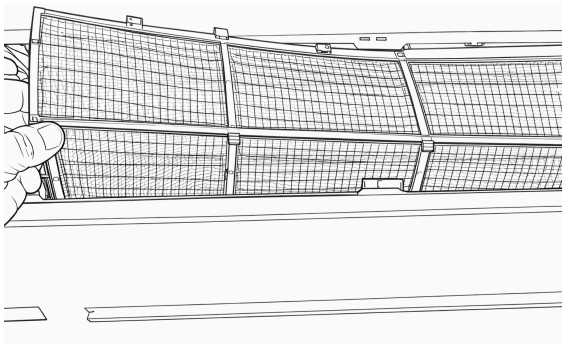


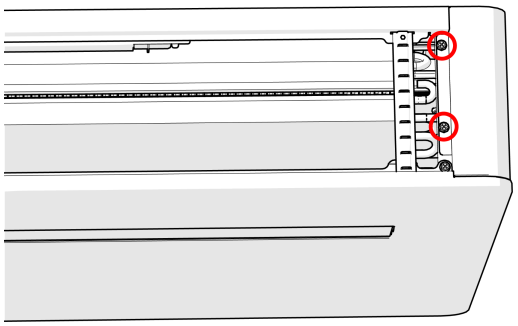
Figure 39. Remove the filter



3. **Remove the right side panel.**
   Remove the two screws that secure the right side decorative panel to the unit. Then lift and remove the right side panel.

Keep the screws that are removed in each step separate.

Figure 40. Remove the right side panel



9.2 Attaching the GWN gateway to the unit

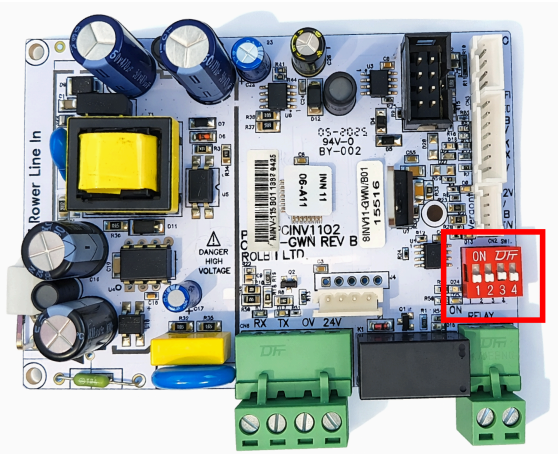
⚠CAUTION

Handle the control board and all electronic components with care to avoid damage.

To attach the GWN gateway to the AIO® Wall Mounted (Gen 3) unit:

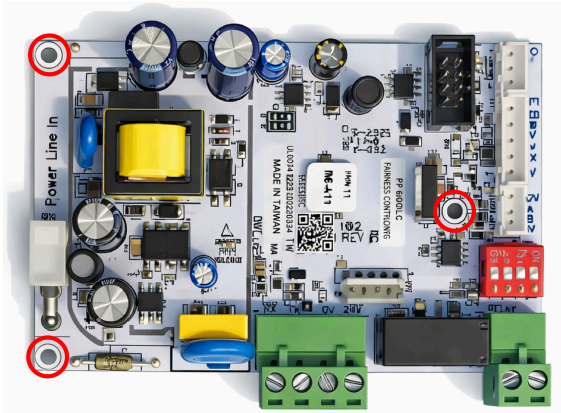
1. **Set the DIP switches on the gateway.**
   a. For a Wall Mounted (Gen 3) unit, set DIP switch #1 on the GWN gateway board #1 to OFF.
   b. Set DIP switches #2, #3, and #4 on the GWN gateway board as required for the specific installation configuration, as described in Section 6.1.

Figure 41. GWN DIP switches



2. **Mount the gateway board to the unit.**
   - If there are mounting holes on the inner metal panel:
     a. Insert the three plastic spacer (stand-up) clips (provided with the gateway) into the two top holes and the middle hole on the panel.
     b. Mount the gateway board on top of the clips, using the holes in the gateway.

Figure 42. Holes for spacer clips



It is recommended to use spacer clips if there are holes, since the spacers raise the gateway board ¼" (6.4 mm) above the metal chassis, preventing contact and ensuring safe clearance.

   - If there are no mounting holes on the panel:
     a. Clean the mounting location on the inside of the right side metal panel with an alcohol pad to ensure proper adhesion. The mounting location is shown below.
     b. Remove the backing from one side of the two double-sided adhesive foam strips and attach the strips to the back of the gateway board.

The foam in the adhesive strips provides insulation to prevent short circuits.

c. Remove the backing from the other side of the adhesive strips and mount the gateway board on the inside of the metal panel. Press firmly to ensure the gateway is securely attached.

⚠CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 43. Mount the gateway board



9.3 Connecting the gateway cables

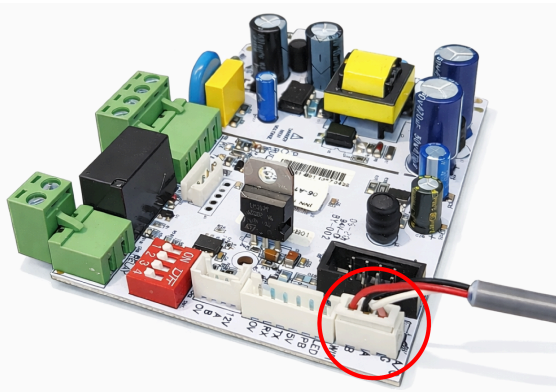
To connect the power and communication cables between the GWN gateway and the AIO® Wall Mounted (Gen 3) unit:

1. **Connect the communication cable to the gateway.**

The black power cable and round gray communication cable are pre-attached to the Gen 3 Wall-Mounted unit and hang down under the right side decorative panel, and only need to be connected to the gateway.

Insert the white connector on the round gray communication cable into the "A/C" port (CN4) on the gateway.

Figure 44. Connect the communication cable

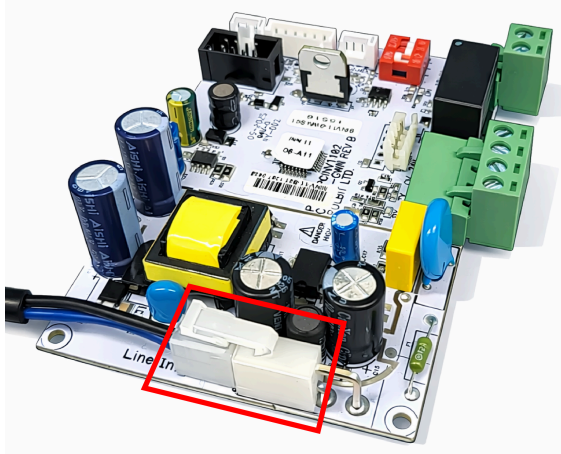


2. **Connect the power cable to the gateway.**

The GWN gateway uses a "Universal Input" power supply that works with any line voltage.

Insert the free, two-pronged end of the black power cable into the "Power Line In" port (CN1) on the gateway board.

Figure 45. Connect the power cable



⚠CAUTION

Ensure that all wire insulation on the cables is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

9.4 Closing the unit

To close the AIO® Wall Mounted (Gen 3) unit:

1. **Test the onboard touch controller.**
   a. Reconnect the power supply to the unit and power it on.
   b. Test the onboard touch controller to verify that it changes the temperature setting and operating modes as selected. Refer to the AIO® Wall Mounted (Gen 2/3) User Guide for more information.
      - If the touch controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
      - If the test fails, repeat the applicable steps in Sections 9.1 through 9.3 to check if all connections are secure. Then repeat the test. If the test still fails, contact an INNOVA-trained service technician.
2. **Close the side panel.**
   a. Replace the right side panel and secure it to the frame of the unit using the two screws removed in Section 9.1, Step 3.
   b. Reinstall the return air filter and the grille into the unit (see Section 9.1, Step 2).
3. **Reconnect the power supply to the unit.**

10. INSTALLING THE GWN GATEWAY IN THE AIO® CEILING DUCTED / CEILING SUSPENDED (WITH ERV OPTION) UNIT

To install the GWN gateway in an AIO® Ceiling Ducted / Ceiling Suspended (with ERV option) unit:

1. Open the AIO® unit.
2. Attach the gateway to the unit.
3. Connect the power and communication cables between the gateway and the unit.
4. Close the AIO® unit.

- The instructions in this section describe Gen 3 of the AIO® Ceiling Ducted (with and without ERV) and the Ceiling Suspended (with ERV option), but the procedure is similar for Gen 1 and Gen 2 of both unit types.
- The illustrations in this section show the AIO® Ceiling Suspended (with ERV option) unit, but the installation is very similar for the Ceiling Ducted units.

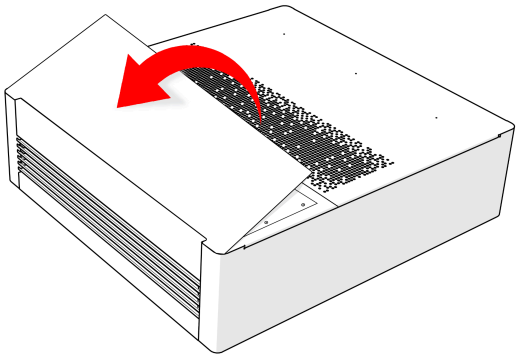
10.1 Opening the unit

To open the AIO® Ceiling Ducted / Ceiling Suspended (with ERV option) unit:

1. **Disconnect the power supply.**
   Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **For Ceiling Suspended units only:** Open the decorative bottom panel.

The Ceiling Suspended units have a decorative bottom panel. Pull this panel open as shown to expose the metal panel that covers the electrical panel.

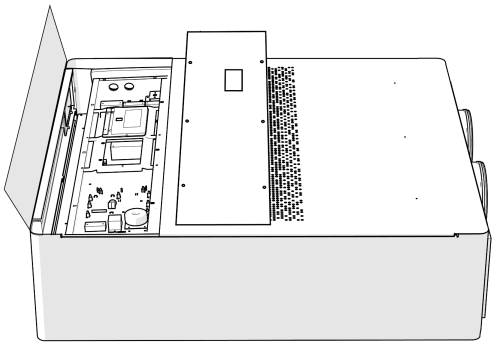
Figure 46. Open the decorative bottom panel



3. **Open the electrical panel.**
   Remove all the screws that hold the metal panel in place, and remove the metal panel to access the electrical panel.

Keep the screws that are removed in each step separate.

Figure 47. Access the electrical panel



10.2 Attaching the GWN gateway to the unit

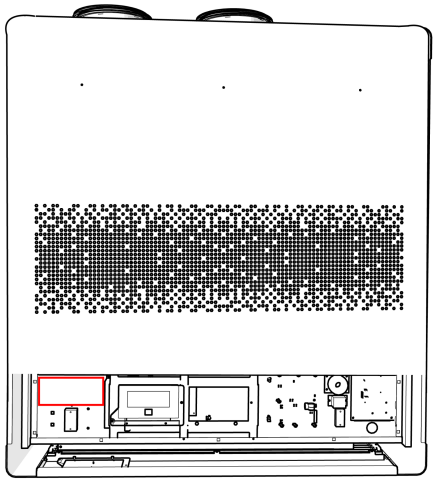
⚠CAUTION

Handle the control board and all electronic components with care to avoid damage.

To attach the GWN gateway to the AIO® Ceiling Ducted / Ceiling Suspended (with ERV option) unit:

1. **Set the DIP switches on the gateway.**
   a. For a Ceiling Ducted or Ceiling Suspended (with ERV option) unit, set DIP switch #1 on the GWN gateway board #1 to ON.
   b. Set DIP switches #2, #3, and #4 on the GWN gateway board as required for the specific installation configuration, as described in Section 6.1.
2. **Mount the gateway board to the unit.**
   The electrical panel has a space near the terminal block for mounting the gateway.

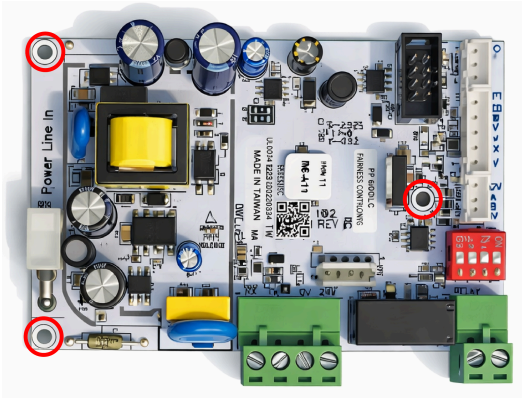
Figure 48. Mounting location for gateway on the electrical panel



Mount the gateway board as follows:

- If there are mounting holes on the electrical panel:
  a. Insert the three plastic spacer (stand-up) clips (provided with the gateway) into the two top holes and the middle hole on the panel.
  b. Mount the gateway board onto the clips, using the holes in the gateway.

Figure 49. Holes for spacer clips



It is recommended to use spacer clips if there are holes, since the spacers raise the gateway board ¼" (6.4 mm) above the metal chassis, preventing contact and ensuring safe clearance.

- If there are no mounting holes on the panel:
  a. Clean the mounting location on the electrical panel with an alcohol pad to ensure proper adhesion. The mounting location is shown below.
  b. Remove the backing from one side of the two double-sided adhesive foam strips and attach the strips to the back of the gateway board.

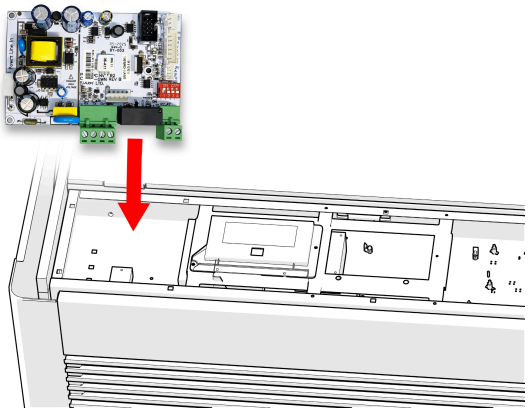
The foam in the adhesive strips provides insulation to prevent short circuits.

  c. Remove the backing from the other side of the adhesive strips and mount the gateway board in the indicated location on the electrical panel. Press firmly to ensure the gateway is securely attached.

⚠CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 50. Mount the gateway board

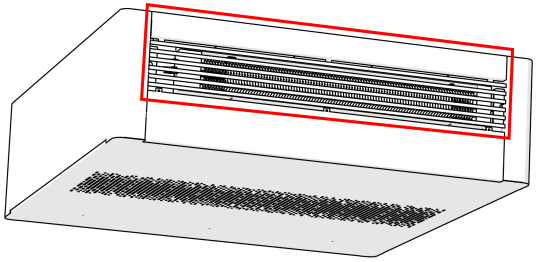


10.3 Connecting the gateway cables

To connect the power and communication cables between the GWN gateway and the AIO® Ceiling Ducted / Ceiling Suspended (with ERV option) unit:

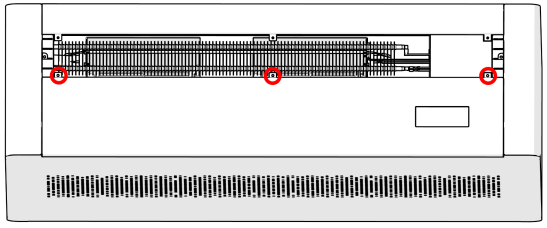
1. **Access the onboard touch controller.**
   a. Remove the supply grille on the front panel.

Figure 51. Grille on front panel



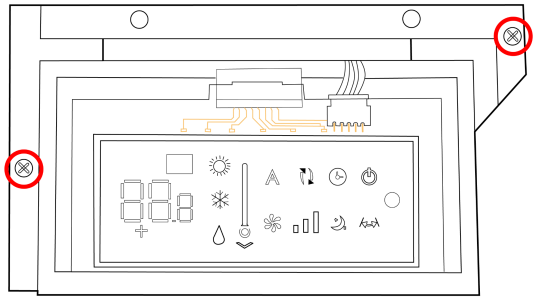
   b. **For Ceiling Suspended units only:** Remove the three screws from the decorative front panel to access the onboard touch controller.

Figure 52. Remove the front panel



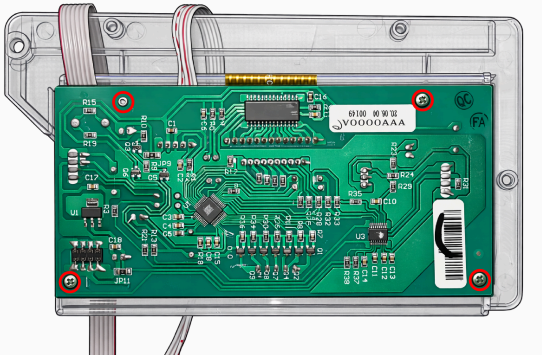
   c. Remove the two screws to detach the onboard touch controller housing from the unit.

Figure 53. Detach the controller housing



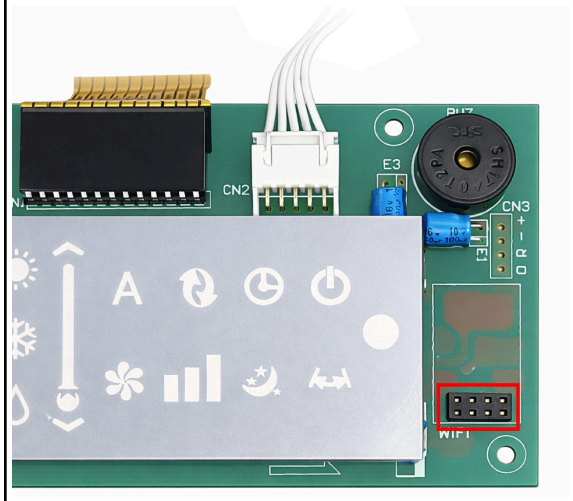
   d. Remove the four screws to remove the controller from the housing.

Figure 54. Open the controller housing



2. **Connect the communication cable to the unit.**
   a. Locate the black, eight-hole Wi-Fi socket on the right side of the onboard touch controller circuit board.

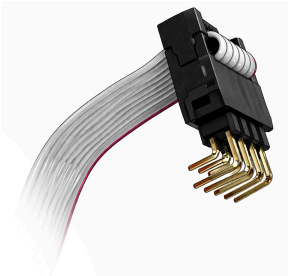
Figure 55. Wi-Fi socket on the controller board



If there is a Wi-Fi chip in the Wi-Fi socket, remove this chip to enable installing the communication cable. This Wi-Fi chip is not used with the GWN gateway. To enable Wi-Fi communication, refer to the AIO® Wi-Fi Module GW1-WIFI and Smart Life App Installation and User Guide.

b. On the gray flat ribbon communication cable, find the end with an eight-pin right-angle pin header in the black connector.

Figure 56. Communication cable connector with right-angle pin header

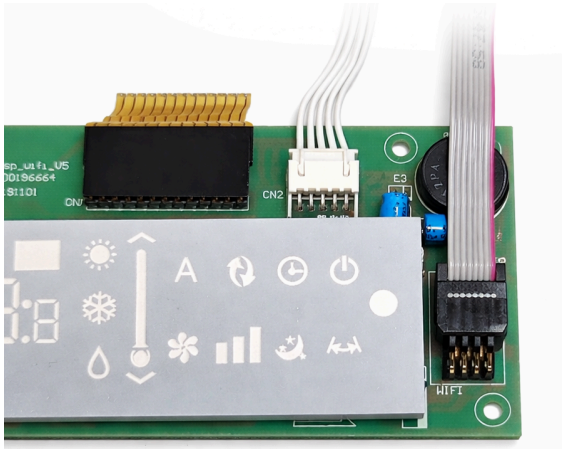


c. Connect the cable to the Wi-Fi socket as follows:

Ensure that the communication cable is inserted with the red stripe on the cable facing away from the display.

- If the Wi-Fi socket is empty: Insert the eight pins on the cable connector securely into the Wi-Fi socket as shown.

Figure 57. Connect the communication cable to the unit



- If there is already a right-angle pin header in the Wi-Fi socket: Remove the right-angle pin header from the cable connector, and push the cable connector securely onto the pins in the Wi-Fi socket.

Figure 58. Remove the pin header from the connector

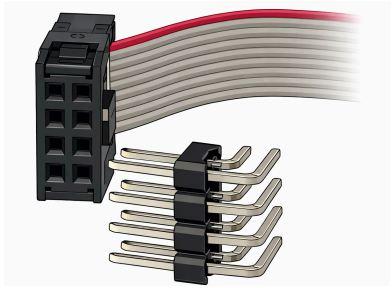
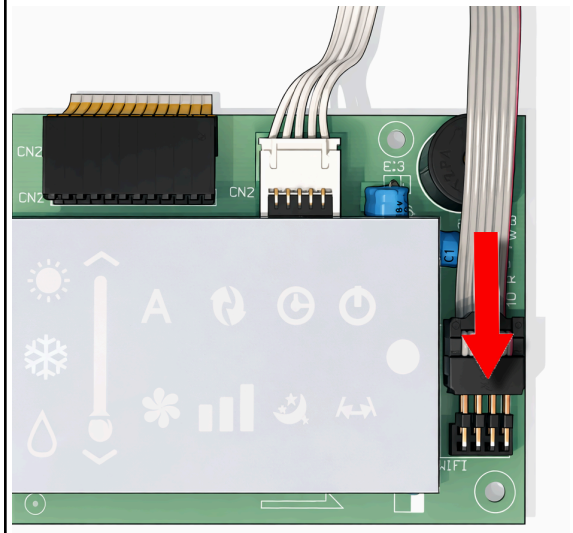


Figure 59. Connect the cable to the pin header in the Wi-Fi socket



3. Reattach the onboard touch controller.

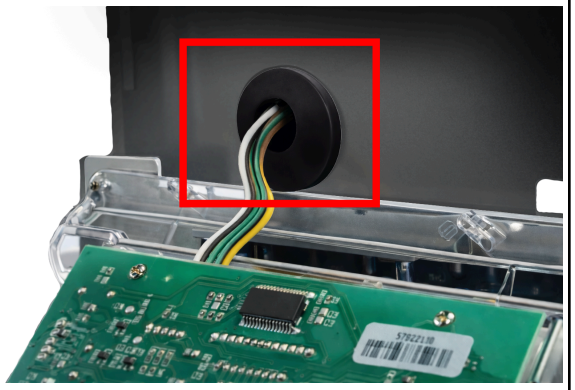
a. Replace the controller in its housing and secure it using the four screws removed in Step 1d above.

b. Route the free end of the communication cable through the rubber cable grommet behind the controller housing.

⚠CAUTION

Be careful not to damage the colored wires (seen below) that are already routed through the grommet.

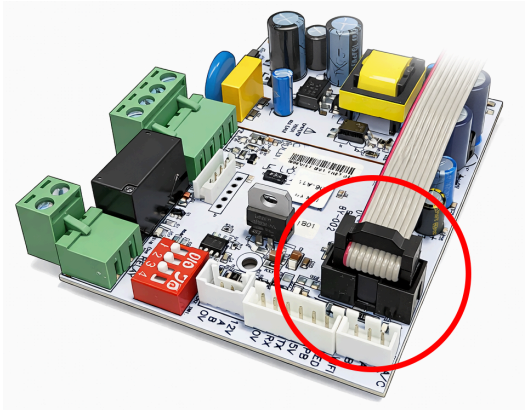
Figure 60. Rubber grommet in the controller housing



c. Reattach the controller housing to the unit using the two screws removed in Step 1c above.

4. **Connect the communication cable to the gateway.**
   Connect the end of the gray flat ribbon communication cable (with the 8-hole connector) to the black 8-pin socket (CN10) on the gateway.

Figure 61. Connect the communication cable to the gateway



5. **Connect the power cable to the unit (if needed).**

The GWN gateway uses a "Universal Input" power supply that works with any line voltage.

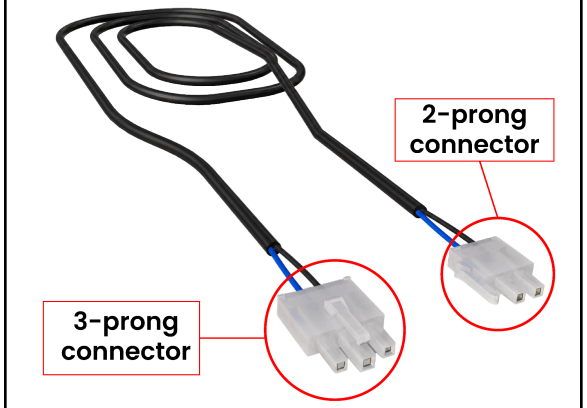
The black power cable may come pre-installed in the Ceiling Ducted/Suspended unit. In this case, the cable only needs to be connected to the gateway, as described in Step 6.

If the power cable is not pre-connected to the unit, the power cable that comes with the gateway must be hard-wired to the screw terminal block on the unit.

The gateway power cable contains two wires, one black and one blue.

At one end of the cable, the wires terminate in a three-prong connector, and at the other end, they terminate in a two-prong connector, as shown.

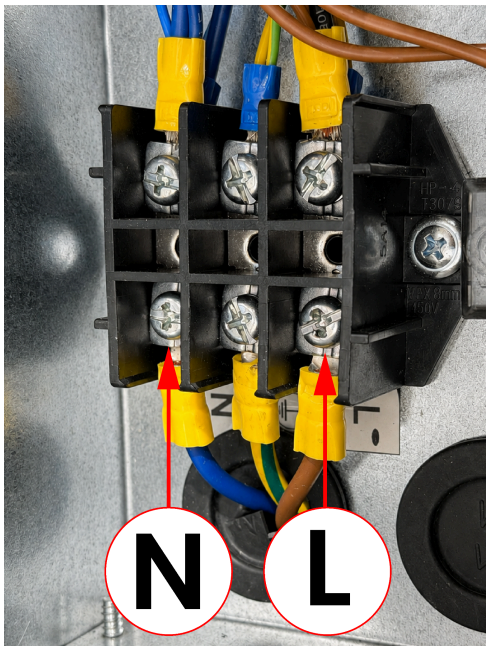
Figure 62. Gateway power cable



To hard-wire the power cable to the unit's screw terminal block:

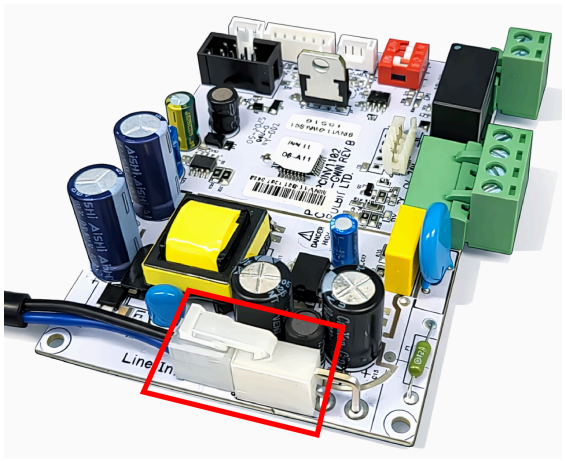
a. Cut off the **three-pronged** connector from the cable.
b. Strip enough insulation from the black and blue wires to enable connecting them to the terminals on the unit.
c. The black wire in this cable is Live (Hot). Connect this wire to the L or L1 terminal on the unit.
d. The blue wire in this cable is Neutral. Connect this wire to the N terminal on the unit.

Figure 63. L and N terminals on screw terminal block



6. **Connect the power cable to the gateway.**
   Insert the two-pronged end of the black power cable into the "Power Line In" port (CN1) on the gateway board.

Figure 64. Connect the power cable to the gateway



⚠CAUTION

Ensure that all wire insulation is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

10.4 Closing the unit

To close the AIO® Ceiling Ducted / Ceiling Suspended (with ERV option) unit:

1. **Test the onboard touch controller.**
   a. Reconnect the power supply to the unit and power it on.
   b. Test the onboard touch controller to verify that it changes the temperature setting and operating modes as selected. Refer to the AIO® Ceiling Ducted User Guide for more information (since the Ceiling Suspended units use the same controller).
      - If the controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
      - If the test fails, repeat the applicable steps in Sections 10.1 through 10.3 to check if all connections are secure. Then repeat the test. If the test still fails, contact an INNOVA-trained service technician.
2. **Close the unit.**
   a. **For Ceiling Suspended units only:** Reinstall the front panel using the three screws removed in Section 10.3, Step 1b.
   b. Replace the supply grille (see Section 10.3, Step 1a).
   c. Replace the metal panel that covers the electrical panel, and secure it using all of the screws removed in Section 10.1, Step 3.
   d. **For Ceiling Suspended units only:** Close the decorative bottom panel (see Section 10.1, Step 2).
3. **Reconnect the power supply to the unit.**

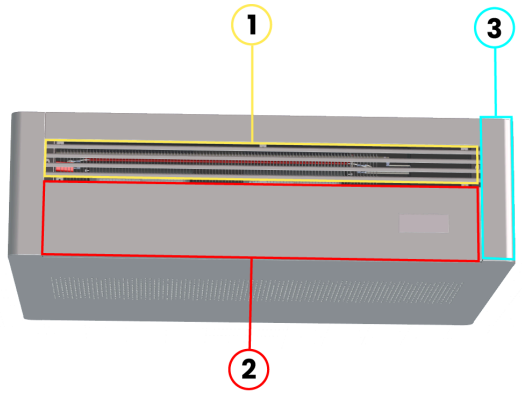
11. INSTALLING THE GWN GATEWAY IN THE AIO® CEILING SUSPENDED (WITHOUT ERV OPTION) UNIT

To install the GWN gateway in an AIO® Ceiling Suspended (without ERV option) unit:

1. Open the AIO® unit.
2. Attach the gateway to the unit.
3. Connect the power and communication cables between the gateway and the unit.
4. Close the AIO® unit.

11.1 Opening the unit

Figure 65. Open the Ceiling Suspended (without ERV) unit

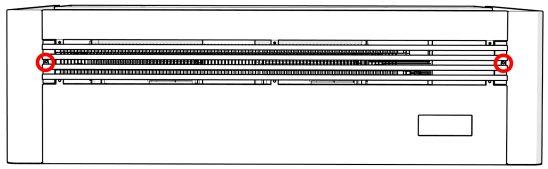


1	Supply grille	3	Right panel
2	Front panel		

To open the AIO® Ceiling Suspended (without ERV option) unit:

1. **Disconnect the power supply.**
   Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **Remove the supply grille, front panel, and right panel.**
   a. Remove the two screws from the supply grille, and remove the supply grille.

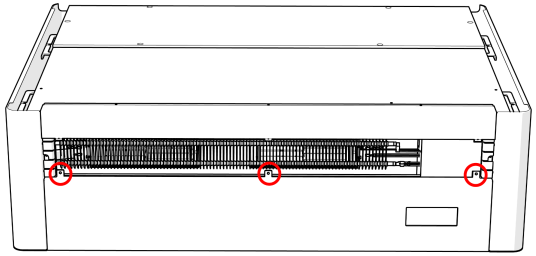
Figure 66. Remove the supply grille



Keep the screws that are removed in each step separate.

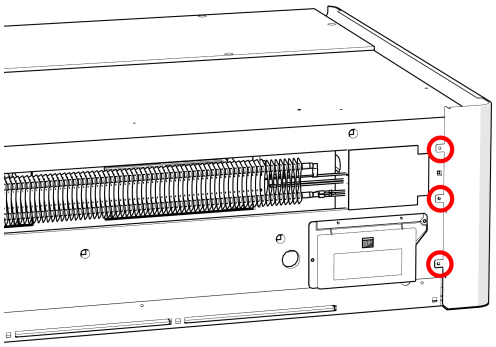
b. Remove the three screws from the front panel, and remove the front panel.

Figure 67. Remove the front panel



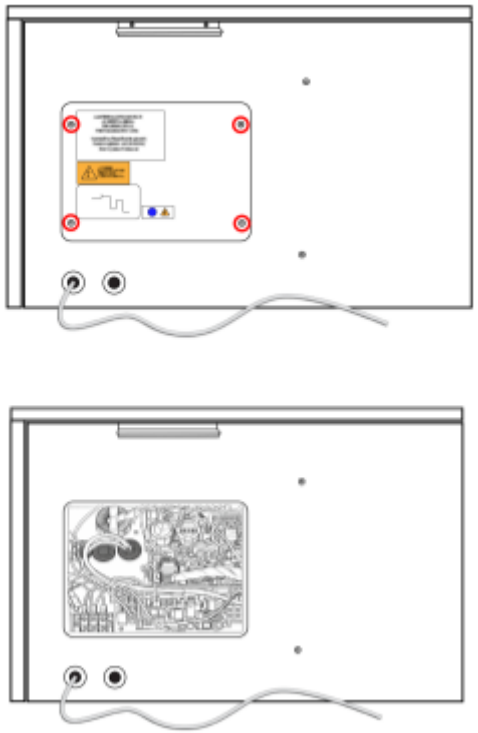
c. Remove the three screws from the right side panel, and remove the right side panel (the side next to the display).

Figure 68. Remove the right side panel



3. **Open the electrical panel.**
   On the side of the unit next to the display, remove the four screws from the electrical panel cover, and remove the cover to expose the electrical panel.

Figure 69. Open the electrical panel



11.2 Attaching the GWN gateway to the unit

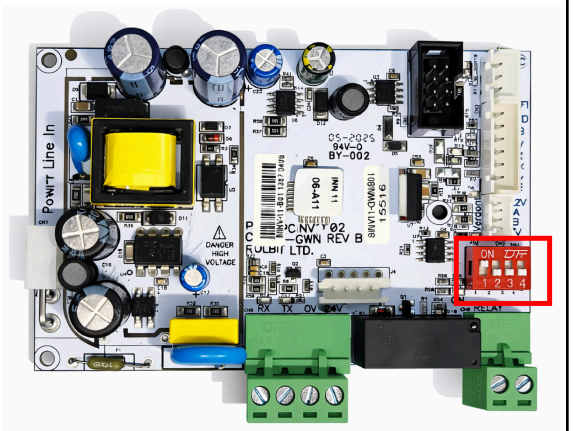
⚠CAUTION

Handle the control board and all electronic components with care to avoid damage.

To attach the GWN gateway to the AIO® Ceiling Suspended (without ERV option) unit:

1. **Set the DIP switches on the gateway.**
   a. For a Ceiling Suspended (without ERV option) unit, set DIP switch #1 on the GWN gateway board #1 to ON.
   b. Set DIP switches #2, #3, and #4 on the GWN gateway board as required for the specific installation configuration, as described in Section 6.1.

Figure 70. GWN DIP switches



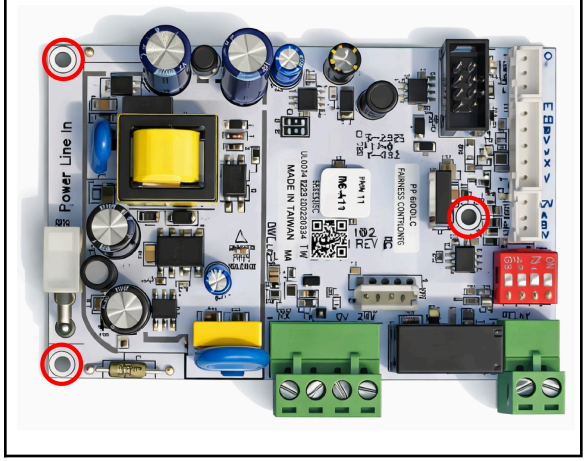
2. **Mount the gateway board to the unit.**
   The electrical panel has a space on the side wall for mounting the gateway, as shown in Figure 71 below.
   Mount the gateway board as follows:
   - If there are mounting holes on the electrical

panel:

a. Insert the three plastic spacer (stand-up) clips (provided with the gateway) into the two top holes and the middle hole on the panel.

b. Mount the gateway board onto the clips, using the holes in the gateway.

Figure 71. Holes for spacer clips



It is recommended to use spacer clips if there are holes, since the spacers raise the gateway board ¼" (6.4 mm) above the metal chassis, preventing contact and ensuring safe clearance.

- If there are no mounting holes on the panel:

  a. Clean the mounting location on the electrical panel with an alcohol pad to ensure proper adhesion. The mounting location is shown below.

  b. Remove the backing from one side of the two double-sided adhesive foam strips and attach the strips to the back of the gateway board.

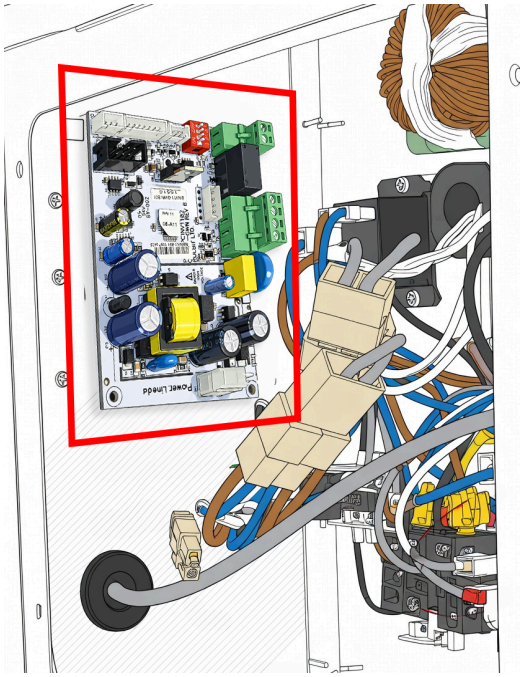
The foam in the adhesive strips provides insulation to prevent short circuits.

c. Remove the backing from the other side of the adhesive strips and mount the gateway board in the indicated location on the electrical panel. Press firmly to ensure the gateway is securely attached.

⚠CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 72. Mount the gateway board



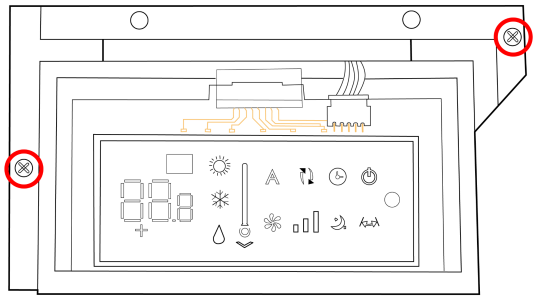
11.3 Connecting the gateway cables

To connect the power and communication cables between the GWN gateway and the AIO® Ceiling Suspended (without ERV option) unit:

1. **Access the onboard touch controller.**

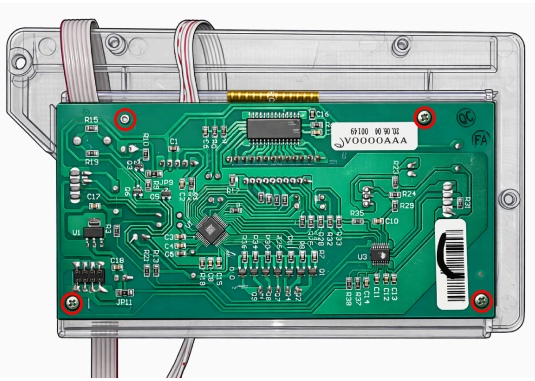
   a. Remove the two screws to detach the onboard touch controller housing from the unit.

Figure 73. Detach the controller housing



b. Remove the four screws to remove the controller from the housing.

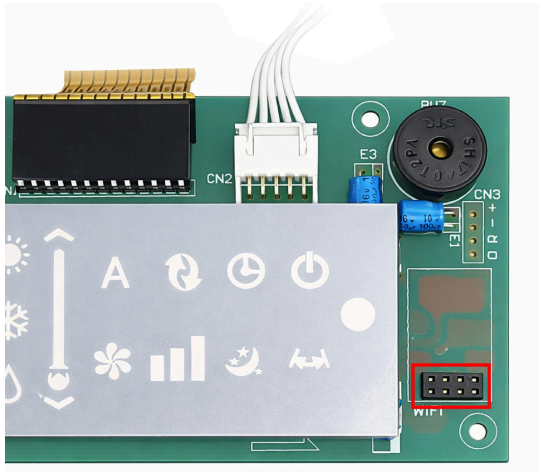
Figure 74. Open the controller housing



2. Connect the communication cable to the unit.

a. Locate the black, eight-hole Wi-Fi socket on the right side of the onboard touch controller circuit board.

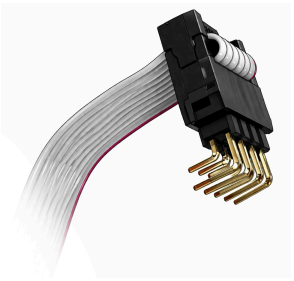
Figure 75. Wi-Fi socket on the controller board



If there is a Wi-Fi chip in the Wi-Fi socket, remove this chip to enable installing the communication cable. This Wi-Fi chip is not used with the GWN gateway. To enable Wi-Fi communication, refer to the AIO® Wi-Fi Module GW1-WIFI and Smart Life App Installation and User Guide.

b. On the gray flat ribbon communication cable, find the end with an eight-pin right-angle pin header in the black connector.

Figure 76. Communication cable connector with right-angle pin header

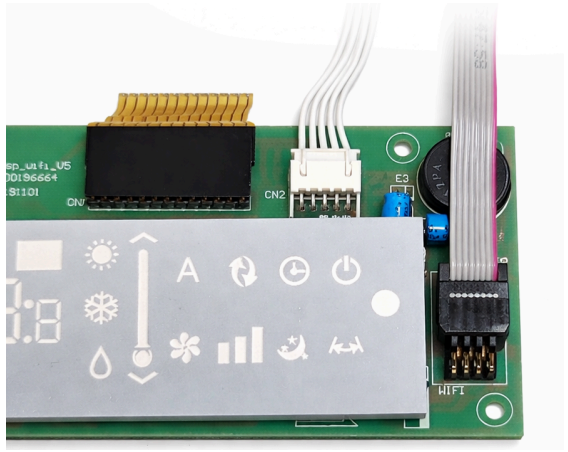


c. Connect the cable to the Wi-Fi socket as follows:

Ensure that the communication cable is inserted with the red stripe on the cable facing away from the display.

- If the Wi-Fi socket is empty: Insert the eight pins on the cable connector securely into the Wi-Fi socket as shown.

Figure 77. Connect the communication cable to the unit



- If there is already a right-angle pin header in the Wi-Fi socket: Remove the right-angle pin header from the cable connector, and push the cable connector securely onto the pins in the Wi-Fi socket.

Figure 78. Remove the pin header from the connector

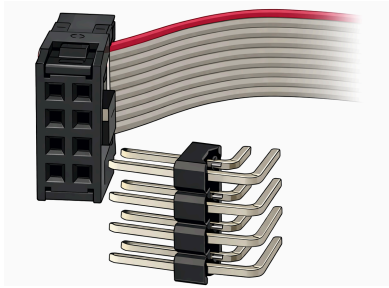
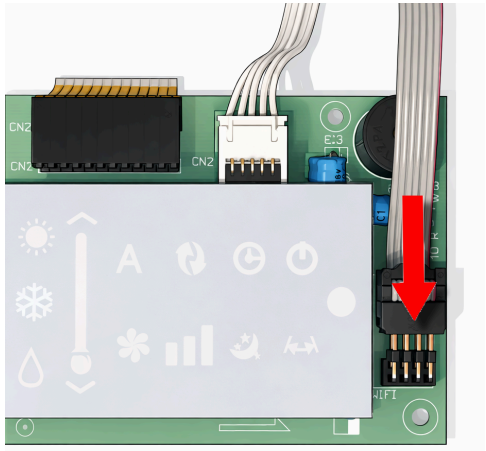


Figure 79. Connect the cable to the pin header in the Wi-Fi socket

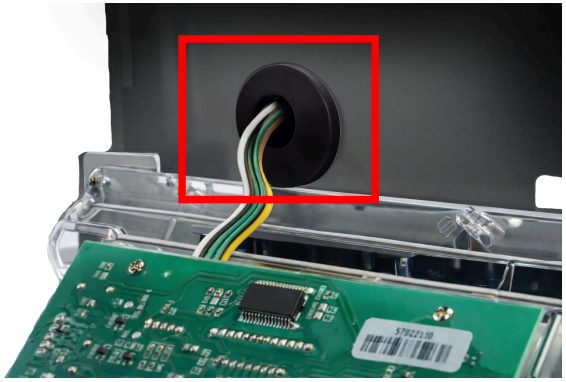


3. **Reattach the onboard touch controller.**
   a. Replace the controller in its housing and secure it using the four screws removed in Step 1b above.
   b. Route the free end of the communication cable through the rubber cable grommet behind the controller housing.

⚠CAUTION

Be careful not to damage the colored wires (seen below) that are already routed through the grommet.

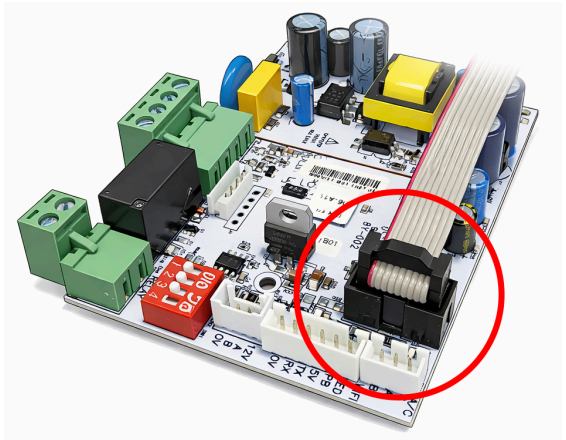
Figure 80. Rubber grommet in the controller housing



   c. Reattach the controller housing to the unit using the two screws removed in Step 1a above.

4. **Connect the communication cable to the gateway.**
   Connect the end of the gray flat ribbon communication cable (with the 8-hole connector) to the black 8-pin socket (CN10) on the gateway.

Figure 81. Connect the communication cable to the gateway



5. **Connect the power cable to the unit (if needed).**

The GWN gateway uses a "Universal Input" power supply that works with any line voltage.

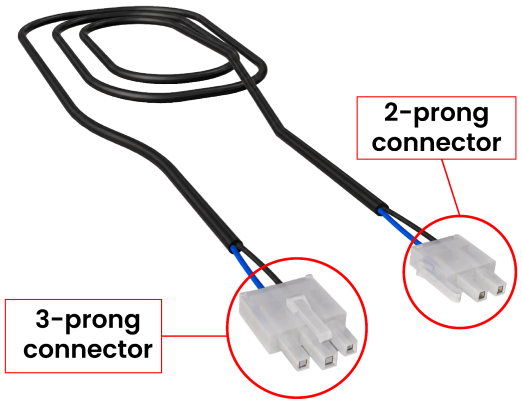
The black power cable may come pre-installed in the Ceiling Suspended (without ERV option) unit. In this case, the cable only needs to be connected to the gateway, as described in Step 6.

If the power cable is not pre-connected to the unit, the power cable that comes with the gateway must be hard-wired to the screw terminal block on the unit.

The gateway power cable contains two wires, one black and one blue.

At one end of the cable, the wires terminate in a three-prong connector, and at the other end, they terminate in a two-prong connector, as shown.

Figure 82. Gateway power cable



To hard-wire the power cable to the unit's screw terminal block:

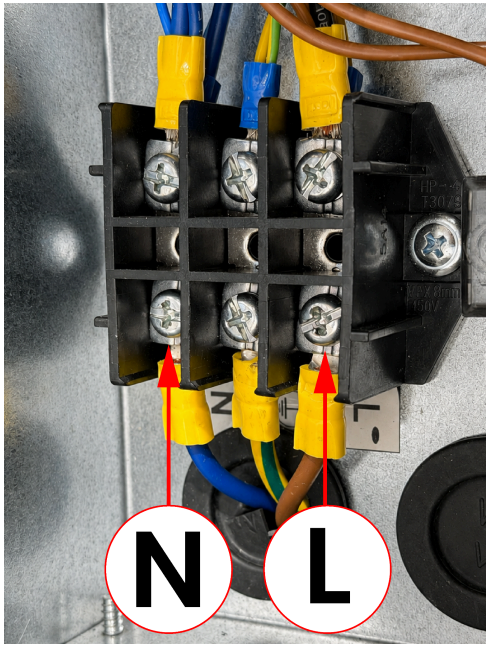
a. Cut off the **three-pronged** connector from the cable.

b. Strip enough insulation from the black and blue wires to enable connecting them to the terminals on the unit.

c. The black wire in this cable is Live (Hot). Connect this wire to the L or L1 terminal on the unit.

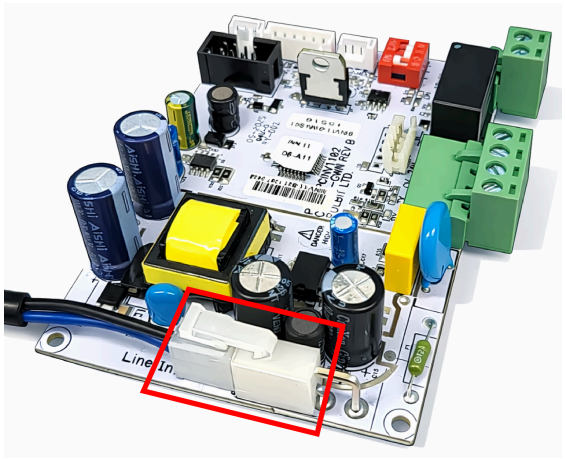
d. The blue wire in this cable is Neutral. Connect this wire to the N terminal on the unit.

Figure 83. L and N terminals on screw terminal block



6. **Connect the power cable to the gateway.**
Insert the two-pronged end of the black power cable into the "Power Line In" port (CN1) on the gateway board.

Figure 84. Connect the power cable to the gateway



⚠CAUTION

Ensure that all wire insulation on the cables is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

11.4 Closing the unit

To close the AIO® Ceiling Suspended (without ERV option) unit:

1. **Test the onboard touch controller.**
   a. Reconnect the power supply to the unit and power it on.
   b. Test the onboard touch controller to verify that it changes the temperature setting and operating modes as selected. Refer to the AIO® Ceiling Ducted User Guide for more information (since the Ceiling Suspended units use the same controller).
      - If the controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
      - If the test fails, repeat the applicable steps in Sections 11.1 through 11.3 to check if all connections are secure. Then repeat the test. If the test still fails, contact an INNOVA-trained service technician.
2. **Close the unit.**
   a. Replace the electrical panel cover using the four screws removed in Section 11.1, Step 3.
   b. Replace the right side panel using the three screws removed in Section 11.1, Step 2c.
   c. Replace the front panel using the three screws removed in Section 11.1, Step 2b.
   d. Replace the supply grille using the two screws removed in Section 11.1, Step 2a.
3. **Reconnect the power supply to the unit.**

12. INSTALLING THE GWN GATEWAY IN THE AIO® VERTICAL STACK UNIT

The GWN gateway can only be installed in a Vertical Stack unit if it is Gen 3 or later, since in Gen 1 and 2, the display is located near the top of the Vertical Stack unit and cannot be connected to a gateway.

To install the GWN gateway in an AIO® Vertical Stack (Gen 3) unit:

1. Open the AIO® unit.
2. Attach the gateway to the unit.
3. Connect the power and communication cables between the gateway and the unit.
4. Close the AIO® unit.

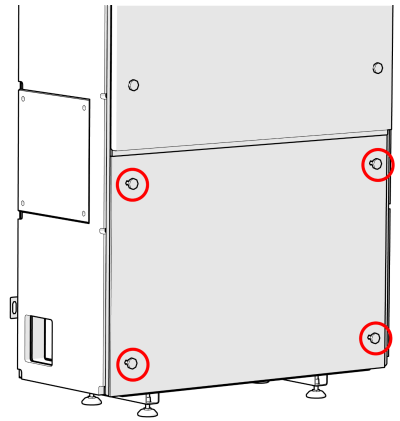
12.1 Opening the unit

To open the AIO® Vertical Stack unit:

1. **Disconnect the power supply.**
   Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **Open the electrical panel.**
   Open the electrical panel by removing the four knobs.

Keep any screws or knobs that are removed in each step separate.

Figure 85. Remove the knobs to open the electrical panel



12.2 Attaching the GWN gateway to the unit

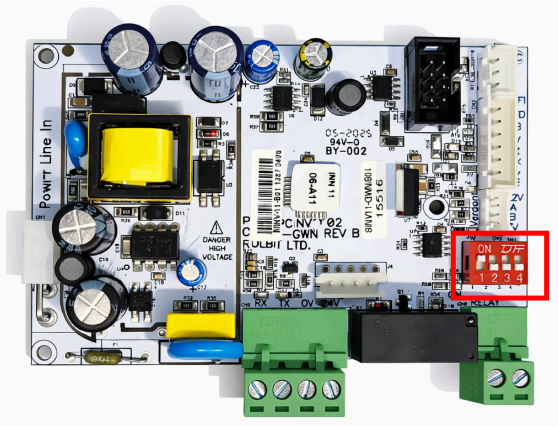
⚠CAUTION

Handle the control board and all electronic components with care to avoid damage.

To attach the GWN gateway to the AIO® Vertical Stack unit:

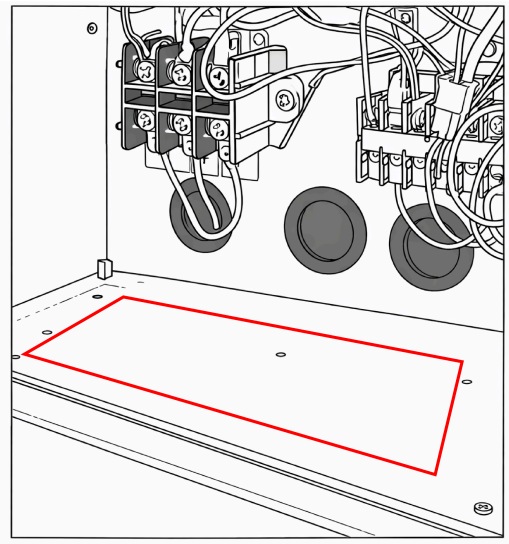
1. **Set the DIP switches on the gateway.**
   a. For a Vertical Stack unit, set DIP switch #1 on the GWN gateway board #1 to ON.
   b. Set DIP switches #2, #3, and #4 on the GWN gateway board as required for the specific installation configuration, as described in Section 6.1.

Figure 86. GWN DIP switches



2. **Mount the gateway board to the unit.**
   The electrical panel has a space at the bottom, near the terminal block, for mounting the gateway.

Figure 87. Gateway board mounting location



Mount the gateway board as follows:

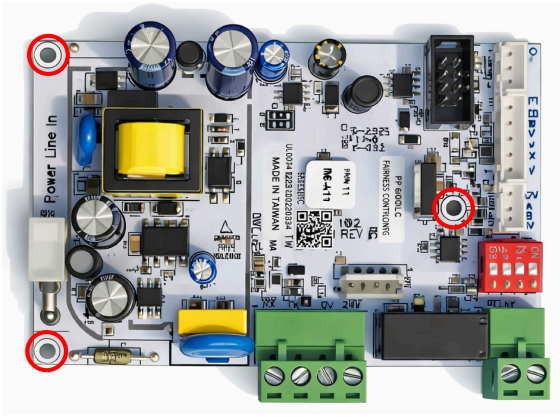
- If there are mounting holes on the electrical

panel:

a. Insert the three plastic spacer (stand-up) clips (provided with the gateway) into the two top holes and the middle hole on the panel.

b. Mount the gateway board onto the clips, using the holes in the gateway.

Figure 88. Holes for spacer clips



It is recommended to use spacer clips if there are holes, since the spacers raise the gateway board ¼" (6.4 mm) above the metal chassis, preventing contact and ensuring safe clearance.

- If there are no mounting holes on the panel:

  a. Clean the mounting location on the electrical panel with an alcohol pad to ensure proper adhesion. The mounting location is shown below.

  b. Remove the backing from one side of the two double-sided adhesive foam strips and attach the strips to the back of the gateway board.

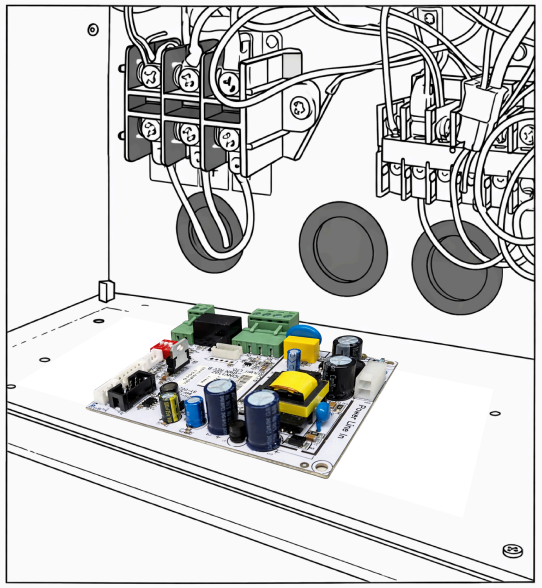
The foam in the adhesive strips provides insulation to prevent short circuits.

c. Remove the backing from the other side of the adhesive strips and mount the gateway board in the indicated location on the electrical panel. Press firmly to ensure the gateway is securely attached.

⚠CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 89. Mount the gateway board



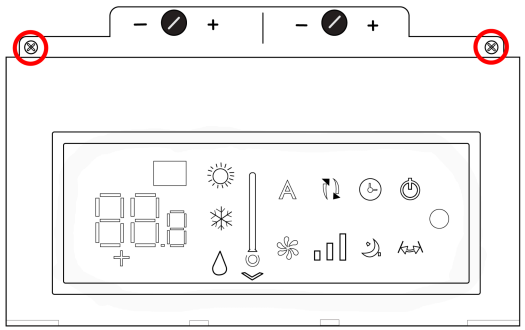
12.3 Connecting the gateway cables

To connect the power and communication cables between the GWN gateway and the AIO® Vertical Stack unit:

1. **Access the onboard touch controller.**

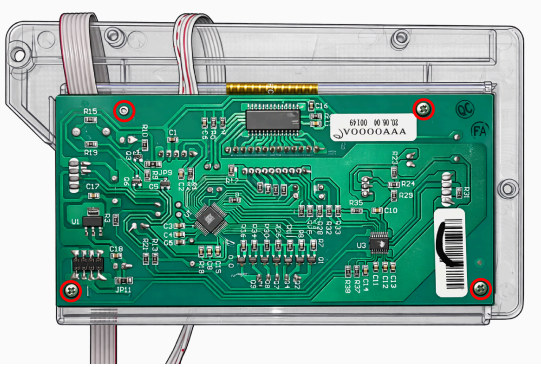
   a. Remove the two screws to detach the onboard touch controller housing from the unit.

Figure 90. Access the onboard touch controller



b. Remove the four screws to remove the controller from the housing.

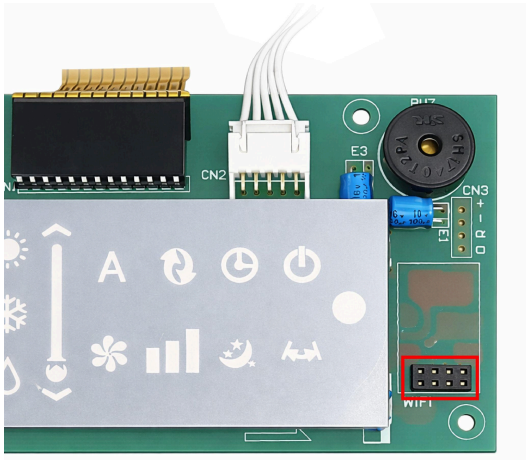
Figure 91. Open the controller housing



2. Connect the communication cable to the unit.

a. Locate the black, eight-hole Wi-Fi socket on the right side of the onboard touch controller circuit board.

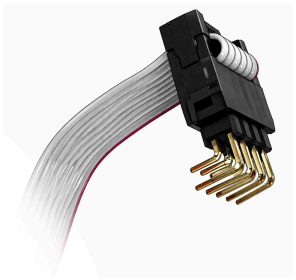
Figure 92. Wi-Fi socket on the controller board



If there is a Wi-Fi chip in the Wi-Fi socket, remove this chip to enable installing the communication cable. This Wi-Fi chip is not used with the GWN gateway. To enable Wi-Fi communication, refer to the AIO® Wi-Fi Module GW1-WIFI and Smart Life App Installation and User Guide.

b. On the gray flat ribbon communication cable, find the end with an eight-pin right-angle pin header in the black connector.

Figure 93. Communication cable connector with right-angle pin header

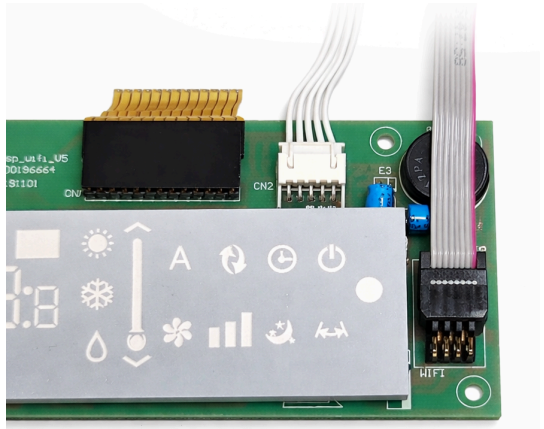


c. Connect the cable to the Wi-Fi socket as follows:

Ensure that the communication cable is inserted with the red stripe on the cable facing away from the display.

- If the Wi-Fi socket is empty: Insert the eight pins on the cable connector securely into the Wi-Fi socket as shown.

Figure 94. Connect the communication cable to the unit



- If there is already a right-angle pin header in the Wi-Fi socket: Remove the right-angle pin header from the cable connector, and push the cable connector securely onto the pins in the Wi-Fi socket.

Figure 95. Remove the pin header from the connector

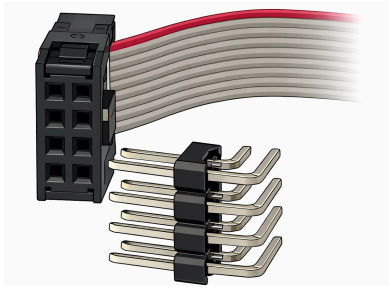
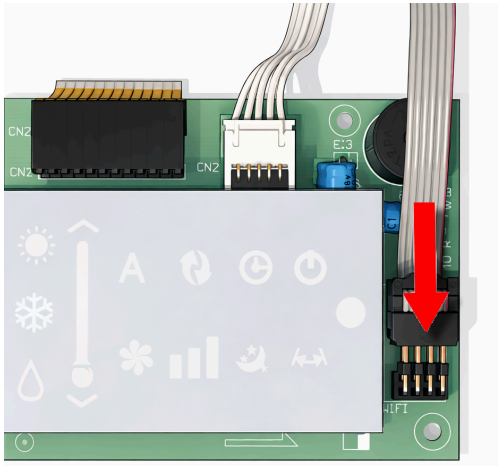
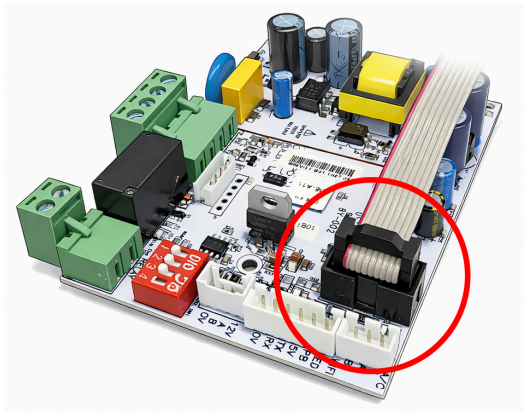


Figure 96. Connect the cable to the pin header in the Wi-Fi socket



3. **Reattach the onboard touch controller.**
    a. Replace the controller in its housing and secure it using the four screws removed in Step 1b above.
    b. Reattach the controller housing to the unit using the two screws removed in Step 1a above.
4. **Connect the communication cable to the gateway.**
   Connect the end of the gray flat ribbon communication cable (with the 8-hole connector) to the black 8-pin socket (CN10) on the gateway.

Figure 97. Connect the communication cable to the gateway



5. **Connect the power cable to the unit (if needed).**

The GWN gateway uses a "Universal Input" power supply that works with any line voltage.

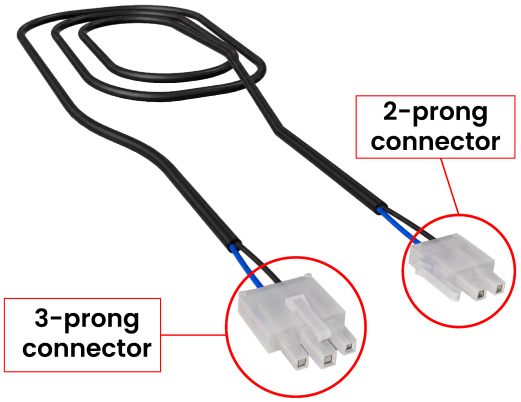
The black power cable may come pre-installed in the Vertical Stack unit. In this case, the cable only needs to be connected to the gateway, as described in Step 6.

If the power cable is not pre-connected to the unit, the power cable that comes with the gateway must be hard-wired to the screw terminal block on the unit.

The gateway power cable contains two wires, one black and one blue.

At one end of the cable, the wires terminate in a three-prong connector, and at the other end, they terminate in a two-prong connector, as shown.

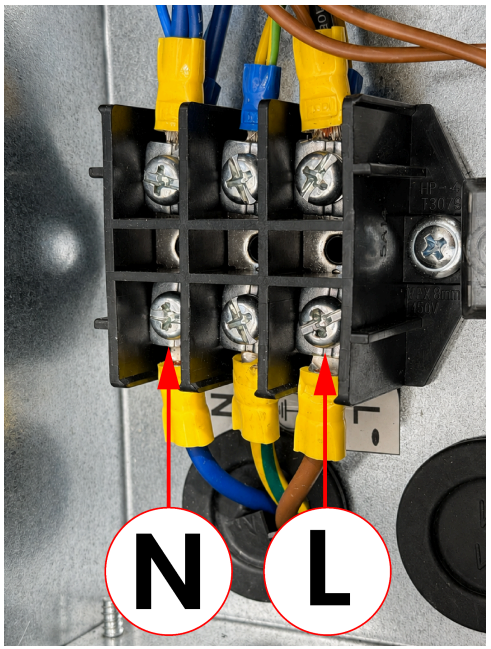
Figure 98. Gateway power cable



To hard-wire the power cable to the unit's screw terminal block:

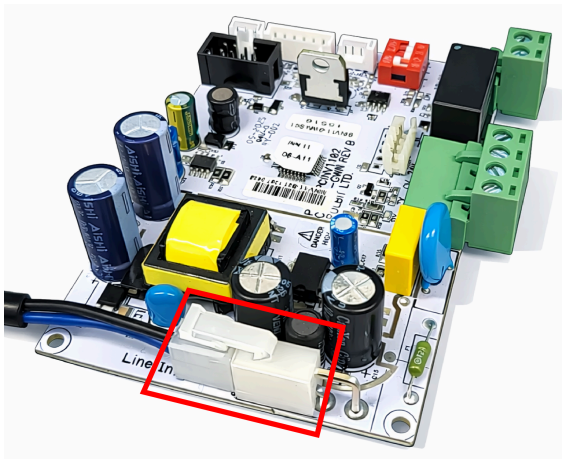
a. Cut off the **three-pronged** connector from the cable.
b. Strip enough insulation from the black and blue wires to enable connecting them to the terminals on the unit.
c. The black wire in this cable is Live (Hot). Connect this wire to the L or L1 terminal on the unit.
d. The blue wire in this cable is Neutral. Connect this wire to the N terminal on the unit.

Figure 99. L and N terminals on screw terminal block



6. **Connect the power cable to the gateway.**
   Insert the two-pronged end of the black power cable into the "Power Line In" port (CN1) on the gateway board.

Figure 100. Connect the power cable to the gateway



> **⚠CAUTION**
>
> Ensure that all wire insulation on the cables is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

12.4 Closing the unit

To close the AIO® Vertical Stack unit:

1. **Test the onboard touch controller.**
   a. Reconnect the power supply to the unit and power it on.
   b. Test the onboard touch controller to verify that it changes the temperature setting and operating modes as selected. Refer to the AIO® Vertical Stack User Guide for more information.
      - If the controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
      - If the test fails, repeat the applicable steps in Sections 12.1 through 12.3 to check if all connections are secure. Then repeat the test. If the test still fails, contact an INNOVA-trained service technician.
2. **Close the unit.**
   Close the electrical panel by replacing and tightening the four knobs removed in Section 12.1, Step 2.
3. **Reconnect the power supply to the unit.**

13. INSTALLING THE GWN GATEWAY IN THE AIO® VERTICAL STACK XL UNIT

To install the gateway in an AIO® Vertical Stack XL unit:

1. Open the AIO® unit.
2. Attach the gateway to the unit.
3. Connect the power and communication cables between the gateway and the unit.
4. Close the AIO® unit.

13.1 Opening the unit

To open the AIO® Vertical Stack XL unit:

1. **Disconnect the power supply.**
   Disconnect the unit from the power supply and wait at least five minutes after it was last operated.
2. **Remove the decorative panel.**
   Remove the eight knobs from the decorative panel. Then remove the decorative panel.

> Keep the screws or knobs that are removed in each step separate.

Figure 101. Remove the knobs from the decorative panel

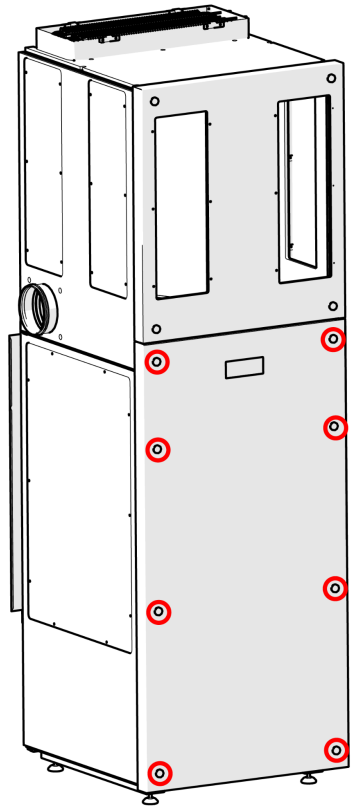
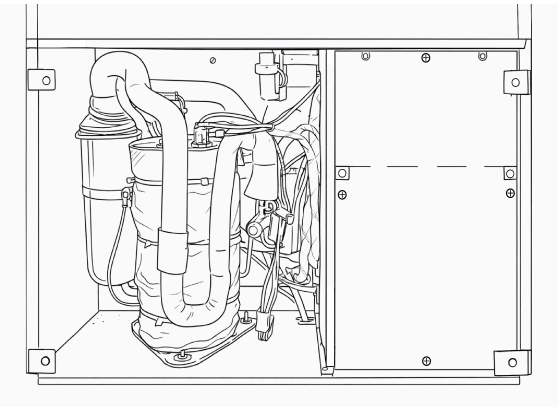


Figure 102. Remove the decorative panel



3. **Open the electrical panel.**
   Remove the four screws and the two metal panels to access the electrical panel.

Figure 103. Remove the metal panels

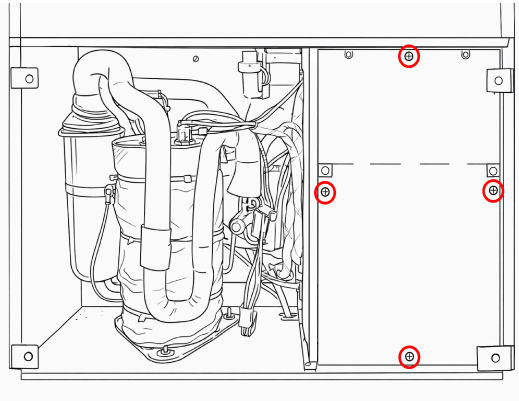
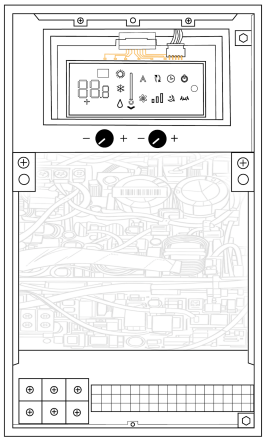


Figure 104. Open the electrical panel



13.2 Attaching the GWN gateway to the unit

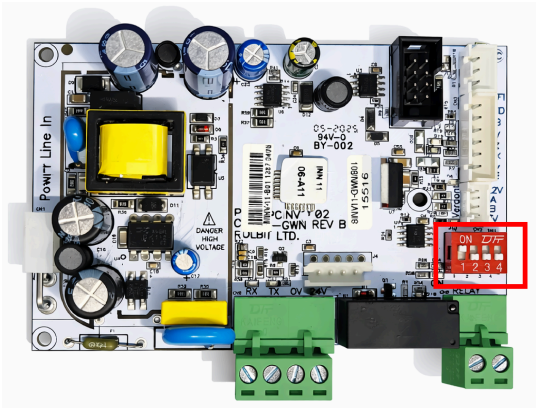
⚠CAUTION

Handle the control board and all electronic components with care to avoid damage.

To attach the GWN gateway to the AIO® Vertical Stack XL unit:

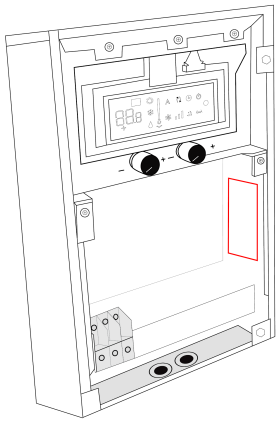
1. **Set the DIP switches on the gateway.**
   a. For a Vertical Stack unit, set DIP switch #1 on the GWN gateway board #1 to ON.
   b. Set DIP switches #2, #3, and #4 on the GWN gateway board as required for the specific installation configuration, as described in Section 6.1.

Figure 105. GWN DIP switches



2. **Mount the gateway board to the unit.**
   The electrical panel has a space on the side wall for mounting the gateway.

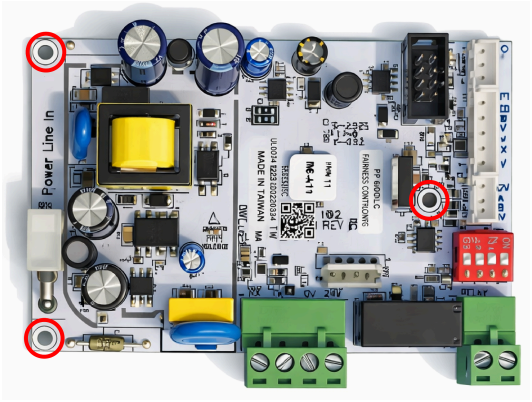
Figure 106. Gateway board mounting location



Mount the gateway board as follows:

- If there are mounting holes on the electrical panel:
  a. Insert the three plastic spacer (stand-up) clips (provided with the gateway) into the two top holes and the middle hole on the panel.
  b. Mount the gateway board onto the clips, using the holes in the gateway.

Figure 107. Holes for spacer clips



It is recommended to use spacer clips if there are holes, since the spacers raise the gateway board ¼" (6.4 mm) above the metal chassis, preventing contact and ensuring safe clearance.

- If there are no mounting holes on the panel:
  a. Clean the mounting location on the electrical panel with an alcohol pad to ensure proper adhesion. The mounting location is shown below.
  b. Remove the backing from one side of the two double-sided adhesive foam strips and attach the strips to the back of the gateway board.

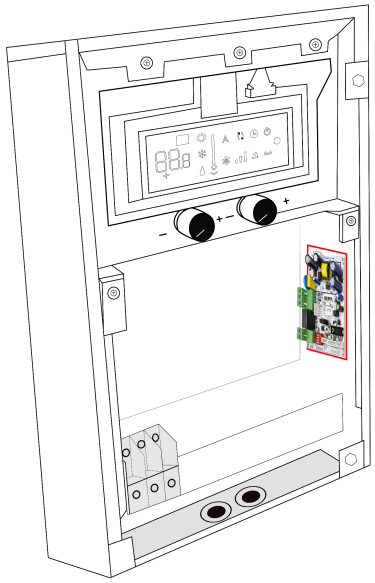
The foam in the adhesive strips provides insulation to prevent short circuits.

  c. Remove the backing from the other side of the adhesive strips and mount the gateway board in the indicated location on the electrical panel. Press firmly to ensure the gateway is securely attached.

⚠CAUTION

Make sure there is no direct contact between the gateway board and the metal panel.

Figure 108. Mount the gateway board

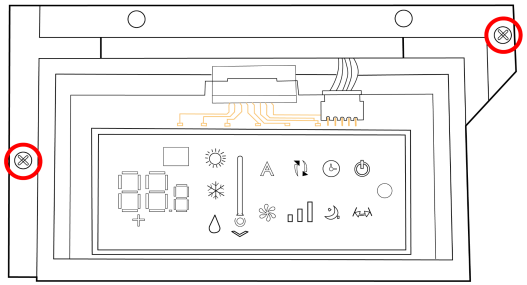


13.3 Connecting the gateway cables

To connect the power and communication cables between the GWN gateway and the AIO® Vertical Stack XL unit:

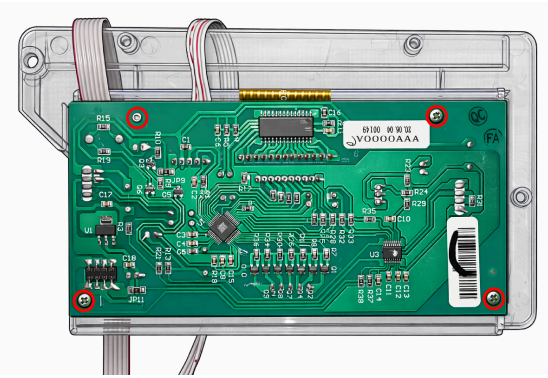
1. **Access the onboard touch controller.**
   a. Remove the two screws to detach the onboard touch controller housing from the unit.

Figure 109. Access the onboard touch controller



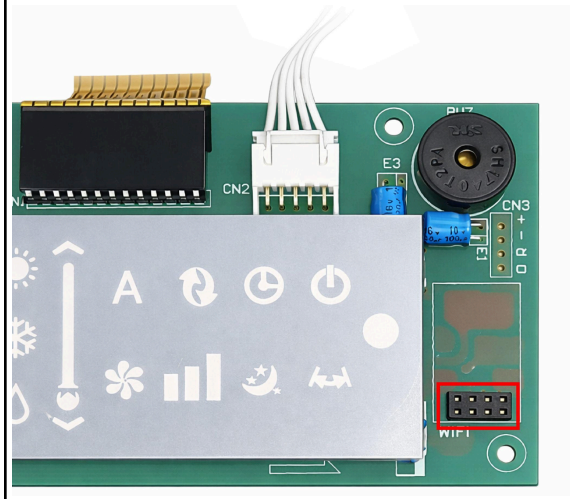
b. Remove the four screws to remove the controller from the housing.

Figure 110. Open the controller housing



2. **Connect the communication cable to the unit.**
   a. Locate the black, eight-hole Wi-Fi socket on the right side of the onboard touch controller circuit board.

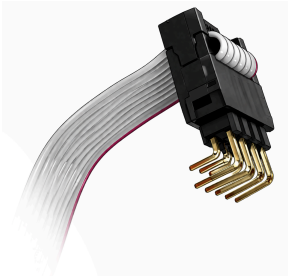
Figure 111. Wi-Fi socket on the controller board



If there is a Wi-Fi chip in the Wi-Fi socket, remove this chip to enable installing the communication cable. This Wi-Fi chip is not used with the GWN gateway. To enable Wi-Fi communication, refer to the AIO® Wi-Fi Module GW1-WIFI and Smart Life App Installation and User Guide.

b. On the gray flat ribbon communication cable, find the end with an eight-pin right-angle pin header in the black connector.

Figure 112. Communication cable connector with right-angle pin header

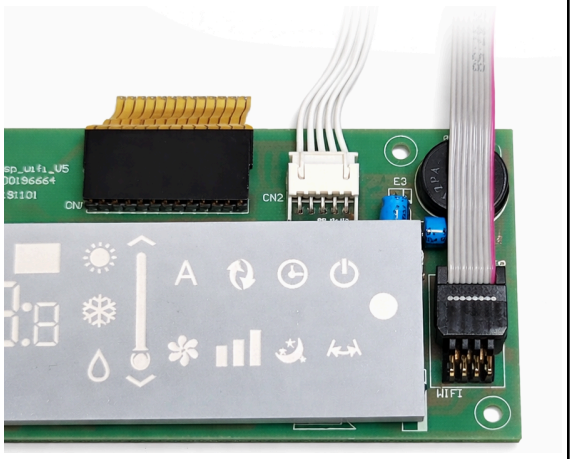


c. Connect the cable to the Wi-Fi socket as follows:

Ensure that the communication cable is inserted with the red stripe on the cable facing away from the display.

- If the Wi-Fi socket is empty: Insert the eight pins on the cable connector securely into the Wi-Fi socket as shown.

Figure 113. Connect the communication cable to the unit



- If there is already a right-angle pin header in the Wi-Fi socket: Remove the right-angle pin header from the cable connector, and push the cable connector securely onto the pins in the Wi-Fi socket.

Figure 114. Remove the pin header from the connector

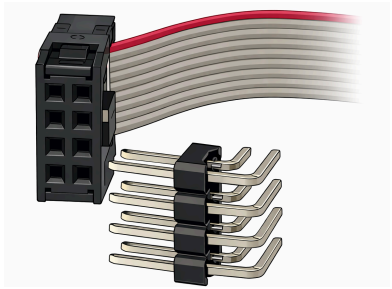
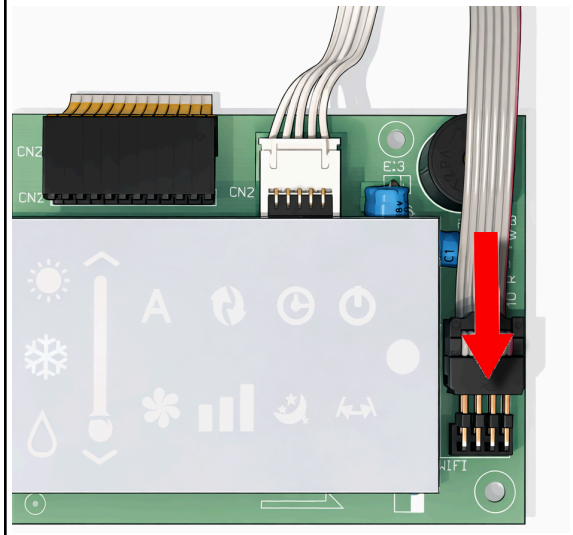
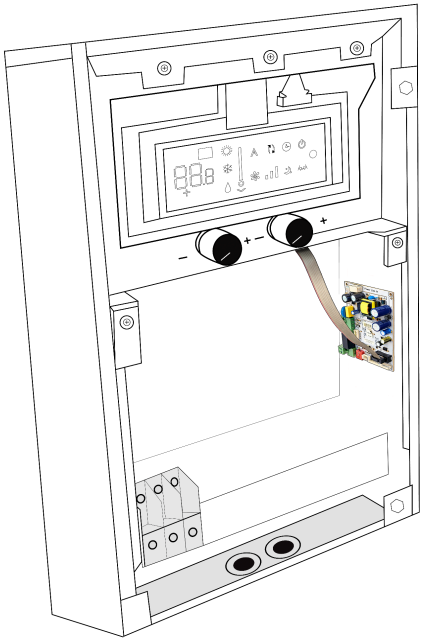


Figure 115. Connect the cable to the pin header in the Wi-Fi socket



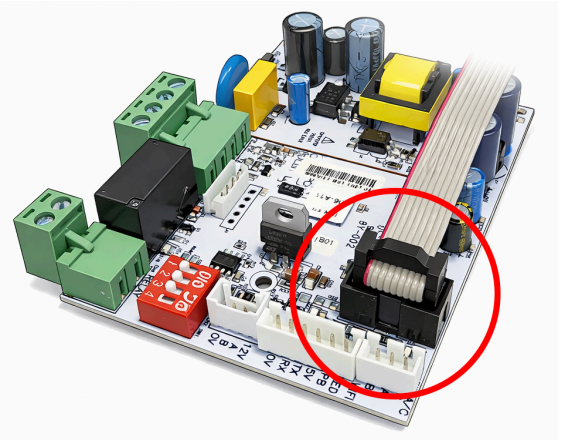
3. **Reattach the onboard touch controller.**
   a. Replace the controller in its housing and secure it using the four screws removed in Step 1b above.
   b. Reattach the controller housing to the unit using the two screws removed in Step 1a above.
4. **Connect the communication cable to the gateway.**
   a. Route the free end (with the 8-hole connector) of the gray flat ribbon communication cable from behind the controller to enable connecting it to the gateway.

Figure 116. Route the communication cable from the controller



   b. Connect the end of the gray flat ribbon communication cable (with the 8-hole connector) to the black 8-pin socket (CN10) on the gateway.

Figure 117. Connect the communication cable to the gateway



5. Connect the power cable to the unit (if needed).

The GWN gateway uses a "Universal Input" power supply that works with any line voltage.

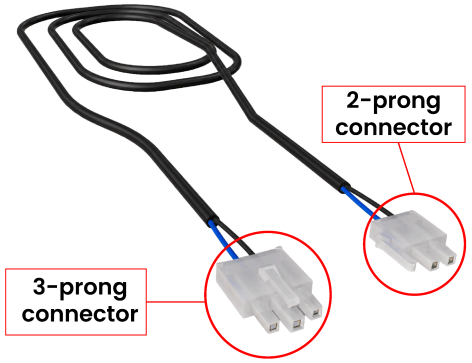
The black power cable may come pre-installed in the Vertical Stack XL unit. In this case, the cable only needs to be connected to the gateway, as described in Step 6.

If the power cable is not pre-connected to the unit, the power cable that comes with the gateway must be hard-wired to the screw terminal block on the unit.

The gateway power cable contains two wires, one black and one blue.

At one end of the cable, the wires terminate in a three-prong connector, and at the other end, they terminate in a two-prong connector, as shown.

Figure 118. Gateway power cable



To hard-wire the power cable to the unit's screw terminal block:

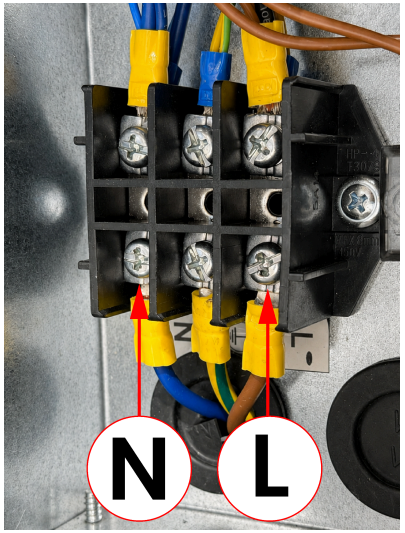
a. Cut off the **three-pronged** connector from the cable.

b. Strip enough insulation from the black and blue wires to enable connecting them to the terminals on the unit.

c. The black wire in this cable is Live (Hot). Connect this wire to the L or L1 terminal on the unit.

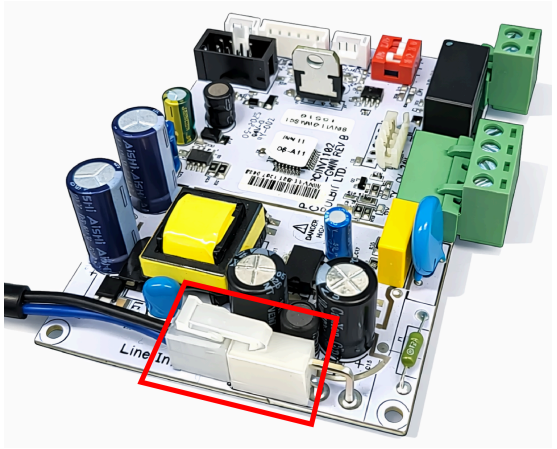
d. The blue wire in this cable is Neutral. Connect this wire to the N terminal on the unit.

Figure 119. L and N terminals on screw terminal block



6. Connect the power cable to the gateway.
Insert the two-pronged end of the black power cable into the "Power Line In" port (CN1) on the gateway board.

Figure 120. Connect the power cable to the gateway



⚠CAUTION

Ensure that all wire insulation is intact and that there are no exposed conductive parts that could cause short circuits or other electrical issues.

13.4 Closing the unit

To close the AIO® Ceiling Vertical Stack XL unit:

1. **Test the onboard touch controller.**
    a. Reconnect the power supply to the unit and power it on.
    b. Test the onboard touch controller to verify that it changes the temperature setting and operating modes as selected. Refer to the AIO® Vertical Stack User Guide for more information (since the Vertical Stack XL units use the same controller).
        - If the controller works as expected, power off the unit and wait at least five minutes for the capacitors inside the unit to discharge.
        - If the test fails, repeat the applicable steps in Sections 13.1 through 13.3 to check if all connections are secure. Then repeat the test. If the test still fails, contact an INNOVA-trained service technician.
2. **Close the unit.**
    a. Replace the two metal panels and secure them with the four screws removed in Section 13.1, Step 3.
    b. Replace the decorative panel and secure it by replacing and tightening the eight knobs removed in Section 13.1, Step 2.
3. **Reconnect the power supply to the unit.**

14. WARRANTY TERMS AND CONDITIONS

Controllers and gateways carry a two-year warranty.

14.1 Exclusions and limitations

The above-noted warranty shall not cover:

- Any damage resulting from improper voltage supplied to the AIO® unit.
- Damage to a controller or gateway where there is a corrosive atmosphere containing any damaging chemical, such as chlorine or fluorine.
- Failure of the controller or gateway due to acts of God, natural disasters, power failures, interruptions, brownouts or power spikes, or due to incorrect, inadequate electrical service, or failure of internet services or home networks.
- Damages or personal injury caused directly or indirectly by failure or malfunction of the controller or gateway as a result of any cause, including natural disasters, accidents, misuse, improper wiring, or installation.

For additional information and any product inquiries, contact:

innova.co | **USA:** 216-710-1000 **Canada:** 416-739-1000

APPENDIX A: REVISION HISTORY

Rev	Date	Revised By	Changes
A	2026-03-22	Leah Kuber	Create a single document for all AIO® units.
B	2026-03-30	Leah Kuber	Clarify instructions for non-Wall Mounted units.
C	2026-08-03	Leah Kuber	Minor technical corrections
D	2026-09-03	Leah Kuber	Clarify hardwiring procedure for all units.
E	2026-09-23	Leah Kuber	Add information about wiring for dual power sources in section 3 and section 6, including updating the beginning of section 3 and adding new sections 6.2, 6.3, and 6.4.
F	2026-10-25	Leah Kuber	Corrections and clarifications throughout document following external review of GWX guide; add use of relay to connect external fresh air (including new section 6.4 so former 6.4 is now 6.5); add info about DIP switches 3 & 4 in all relevant places (including dual power sources).

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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MADE IN ITALY

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AIO® GWN Gateway for AIO® Heat Pumps
Installation Guide