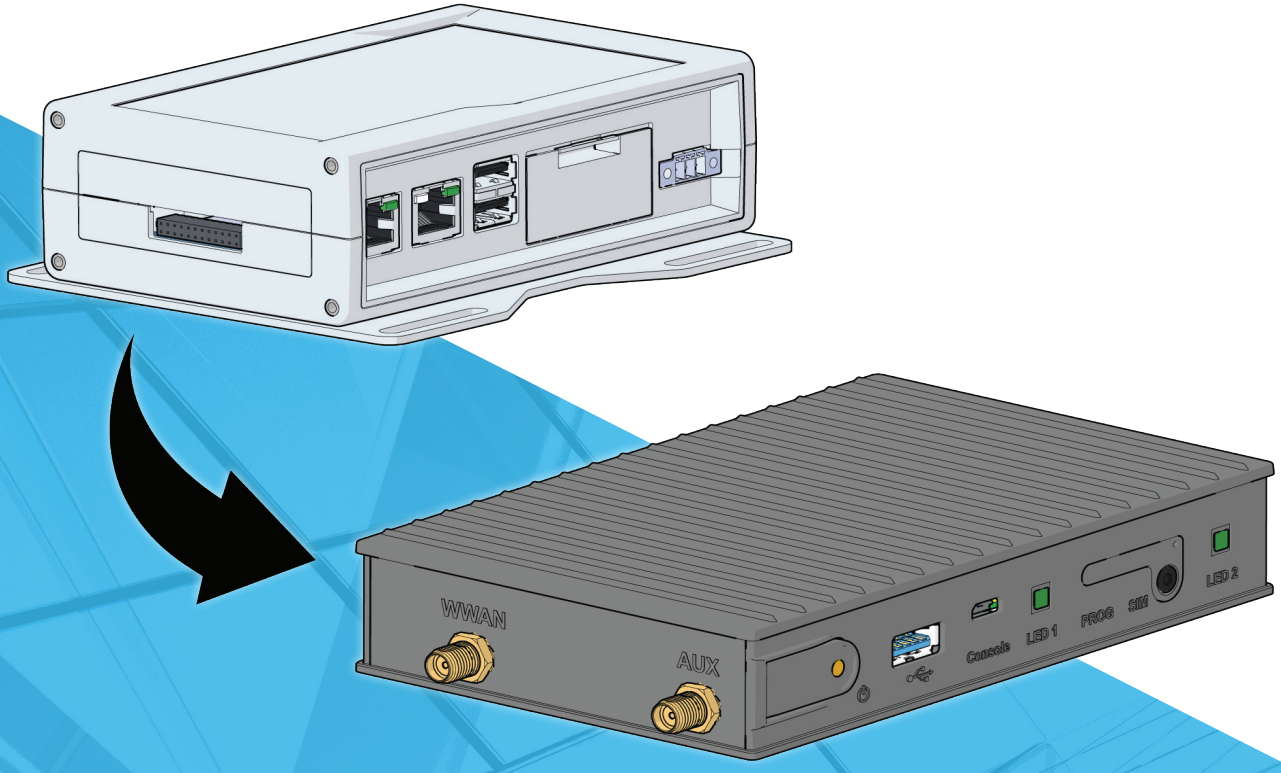
IM 1397
JUNE 2025

SITELINE® GATEWAY REPLACEMENT

GENERATION 2 GATEWAY TO SITELINE GATEWAY



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Safety Information

NOTICE

Installation and maintenance are to be performed only by licensed, if required by local codes and regulations, or qualified personnel who are familiar with local codes and regulations and are experienced with this type of equipment.

⚠ DANGER

LOCKOUT/TAGOUT all power sources prior to service, pressurizing, de-pressuring, or powering down the unit. Failure to follow this warning exactly can result in serious injury or death. Disconnect electrical power before servicing the equipment. More than one disconnect may be required to denergize the unit. Be sure to read and understand the installation, operation, and service instructions within this manual.

⚠ WARNING

Electric shock hazard. Improper handling of this equipment can cause personal injury or equipment damage. This equipment must be properly grounded. Connections to and service of the MicroTech control panel must be performed only by personnel that are knowledgeable in the operation of the equipment being controlled.

⚠ WARNING

Polyolester Oil, commonly known as POE oil is a synthetic oil used in many refrigeration systems, and may be present in this Daikin Applied product. POE oil, if ever in contact with PVC/CPVC, will coat the inside wall of PVC/CPVC pipe causing environmental stress fractures. Although there is no PVC/CPVC piping in this product, please keep this in mind when selecting piping materials for your application, as system failure and property damage could result. Refer to the pipe manufacturer's recommendations to determine suitable applications of the pipe.

⚠ CAUTION

Static sensitive components. A static discharge while handling electronic circuit boards can cause damage to the components. Discharge any static electrical charge by touching the bare metal inside the control panel before performing any service work. Never unplug any cables, circuit board terminal blocks, or power plugs while power is applied to the panel.

Hazard Identification

The following symbols and labels are used throughout this manual to indicate immediate or potential hazards. It is the owner and installer's responsibility to read and comply with all safety information and instructions accompanying these symbols. Failure to heed safety information increases the risk of property damage and/or product damage, serious personal injury or death. Improper installation, operation and maintenance can void the warranty.

⚠ DANGER

Danger indicates a hazardous situation, which will result in death or serious injury if not avoided.

⚠ WARNING

Warning indicates a potentially hazardous situations, which can result in property damage, personal injury, or death if not avoided.

⚠ CAUTION

Caution indicates a potentially hazardous situations, which can result in minor injury or equipment damage if not avoided.

NOTICE

Notice indicates practices not related to physical injury.

Introduction

This manual contains the information needed to replace a Generation 2 Gateway with a SiteLine Gateway. For installation Technical Support, please contact the Daikin Applied Controls Support Group at CTLTechSupport@daikinapplied.com or (800) 432-1342.

Revision History

Literature Number	Release Date	Action
IM 1397	April 2025	Initial Release

Limited Warranty

Consult your local Daikin Representative for warranty details. To find your local Daikin Representative, go to www.DaikinApplied.com.

SiteLine Gateway Replacement Component

The SiteLine Gateway is a factory tested device, which arrives ready to be installed on an existing mounting bracket or control panel backplane. The Gateway is provided with a DC Terminal Block Adapter shipped loose in the box. The existing Generation 2 Gateway will be removed and replaced by the SiteLine Gateway. The existing power supply, cellular antennas or Ethernet LAN cable, and gateway installation screws will be reused.

Replacement Procedure

⚠ DANGER

Electric shock hazard. Can cause personal injury or equipment damage.

Prior to installing SiteLine hardware, power must be removed from the unit. This means removing power at the breaker panel serving the unit, and following proper lockout/tagout procedures at said breaker panel for the duration of the install. Power should not be reapplied until all electrical interconnections have been made and verified.

This equipment must be properly grounded. Connections and service to all equipment and hardware must be performed only by personnel knowledgeable in the operation of the equipment being controlled.

⚠ CAUTION

Static sensitive components. Can cause equipment damage.

Discharge any static electrical charge by touching the bare metal inside the control panel before performing any service work. Never unplug cables, circuit board terminal blocks, or power plugs while power is applied to the panel.

⚠ WARNING

Sharp edges on sheet metal and fasteners can cause personal injury. This equipment must be installed, operated, and serviced only by an experienced installation company and fully trained personnel.

⚠ CAUTION

To avoid damaging wires or components, verify clearance in and around the point of penetration prior to any drilling

During any drilling, ensure that resultant metal shavings are not allowed to contact unit electronics.

Subsequent to any drilling, remove all resulting metal shavings from the control enclosure.

NOTICE

For Cellular and Wi-Fi installations, do not power the M2M Gateway until the antennas have been installed and connected.

Necessary Tools and Supplies

NOTICE

Not all tools and supplies required for every installation

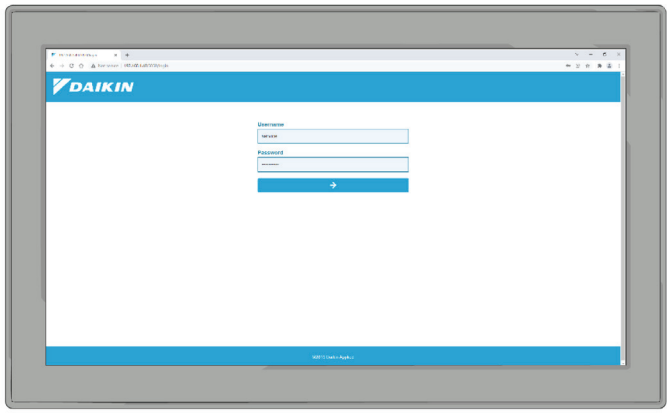
- Multimeter
- Cordless drill
- Drill Bit Set
- #2 Phillips Screwdriver
- #2 Slotted Screwdriver
- Precision Screwdriver Set (Slotted and Philips)
- Hex Key Set (SAE and Metric)
- Nut Driver Set
- Laptop Computer
- Ethernet patch cable

Special Instructions for Gateways Using LAN Connectivity

If the existing Generation 2 Gateway is connected to the cloud through the customer's corporate network using the local area network (LAN), the following instructions must be followed before removing the old Gateway.

1. Using a laptop computer and Ethernet patch cable, connect to the "ETH1" port of the Generation 2 Gateway.
2. Navigate to the laptop's Local Area Connection settings screen and change the IP subnet mask to 255.255.255.0 and set the IP address to be compatible with the default Generation 2 Gateway ETH1 IP address of 192.168.1.40 (example compatible address: 192.168.1.45). For more information on how to change the computer's IP settings, consult the Operating System's "Help" files.
3. Open a web browser page and type, 192.168.1.40:5050, then press enter.
4. From the Login screen (Figure 1), enter the Username: "service", then enter the unique password that was provided with the Generation 2 Gateway hardware and click the arrow to sign in. NOTE: If either the username or password is incorrect, a message displays to indicate the incorrect value.
5. From the Gateway Configuration User Interface Status screen, click the Configuration Settings link (Figure 2).
6. From the LAN tab of the Configuration screen, record all LAN settings (Figure 3), as these will be entered in the replacement SiteLine Gateway.
7. Once all settings are recorded, close the browser window, then disconnect the Ethernet patch cable between the laptop and Generation 2 Gateway.

Figure 1: Generation 2 Gateway Login



Removing the Existing Generation 2 Gateway

Prior to replacing the Generation 2 Gateway, power must be removed from the unit. Power must be removed at the breaker panel serving the unit, and proper lockout/tagout procedures should be followed for the duration of the install. After removing unit power at the breaker panel, the installer must verify the absence of power at the unit using a multimeter. Only if power has been verified absent, should the technician continue the replacement process.

Generation 2 Gateway Connection to MicroTech Controller or HMI

The Generation 1 Gateway is connected to the MicroTech III- or 4-unit controller or chiller HMI via an Ethernet patch cable. Disconnect the Ethernet patch cable from the gateway port marked, “ETH1” (Figure 4).

Figure 2: Configuration Settings Link

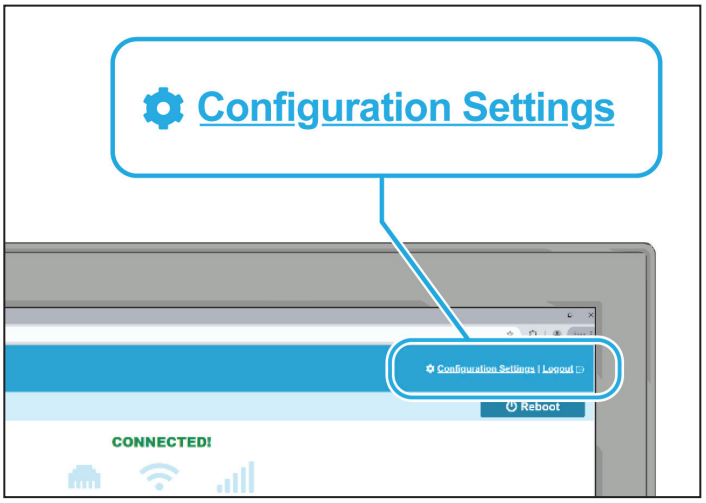


Figure 3: Generation 2 Gateway LAN Settings

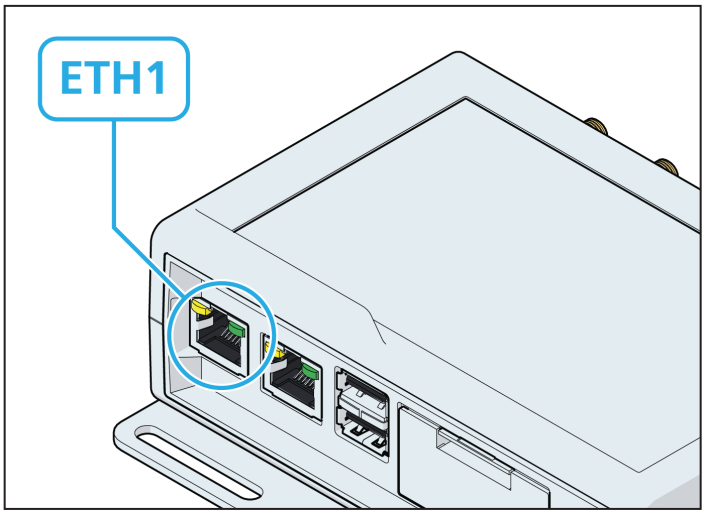
Removing the Existing Generation 2 Gateway

Prior to replacing the Generation 2 Gateway, power must be removed from the unit. Power must be removed at the breaker panel serving the unit, and proper lockout/tagout procedures should be followed for the duration of the install. After removing unit power at the breaker panel, the installer must verify the absence of power at the unit using a multimeter. Only if power has been verified absent, should the technician continue the replacement process.

Generation 2 Gateway Connection to MicroTech Controller or HMI

The Generation 1 Gateway is connected to the MicroTech III- or 4-unit controller or chiller HMI via an Ethernet patch cable. Disconnect the Ethernet patch cable from the gateway port marked, “ETH1” (Figure 4).

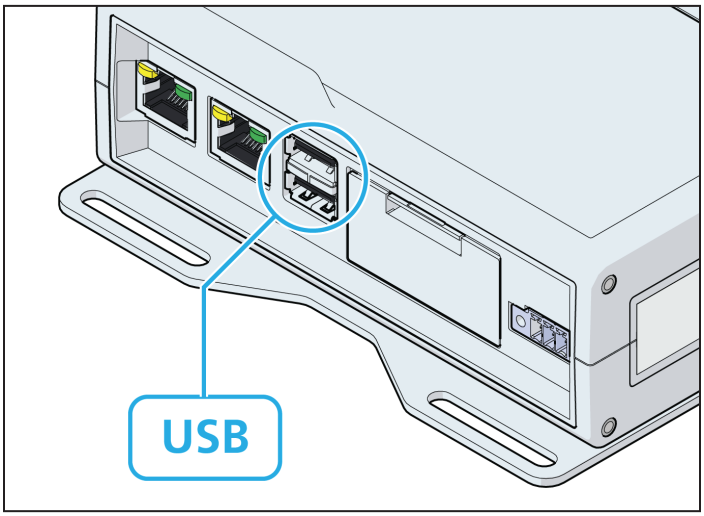
Figure 4: ETH1 Connection



Generation 2 Gateway Connection to EMM

If the Generation 2 Gateway has the Energy Management Module (EMM) option, the Gateway is connected to the EMM via USB. Remove the USB cable connection from the Generation 2 Gateway port marked, “USB 0” OR “USB1” (Figure 5). The EMM assembly will be removed in a later step, as it is no longer supported by the new Gateway.

Figure 5: USB Connection



Generation 2 Gateway Antenna or Ethernet Connections

Depending on the application, the Generation 2 Gateway could be connected to the cloud via cellular, Wi-Fi, or LAN. If the application is cellular, unscrew the SMA coaxial connector from the Gateway SMA coaxial connectors; “CELL MAIN” and “CELL DIV” for cellular or “WLAN” for Wi-Fi. (Figure 6). If the application is Wi-Fi, unscrew the SMA coaxial connector from the Gateway SMA coaxial connector; “CELL MAIN” and “CELL DIV” for cellular or “Wi-Fi/BT” for Wi-Fi. (Figure 7).

NOTICE

Wi-Fi is no longer used with the SiteLine Gateway.

If the application is LAN, unplug the Ethernet patch cable from the “Eth0” port of the Generation 2 Gateway (Figure 8).

Figure 6: Generation 2 Gateway Cellular Connections

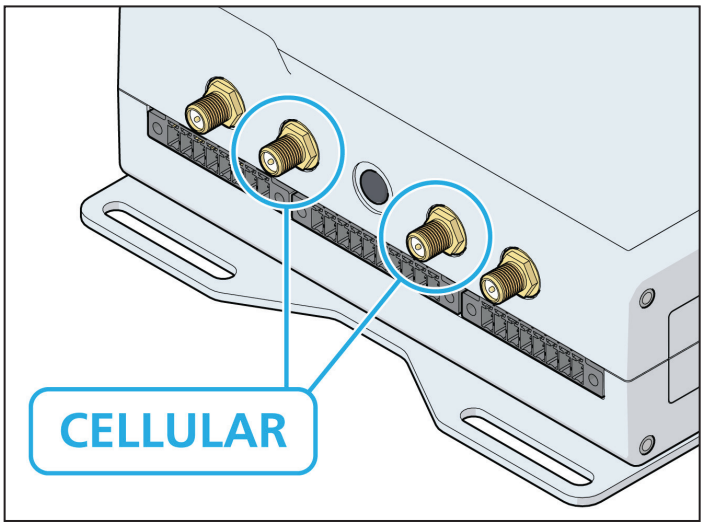


Figure 7: Generation 2 Gateway Wi-Fi Connection

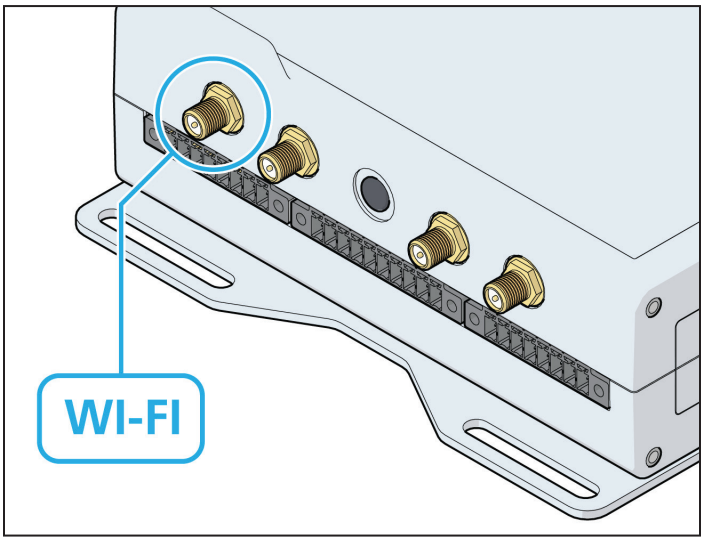
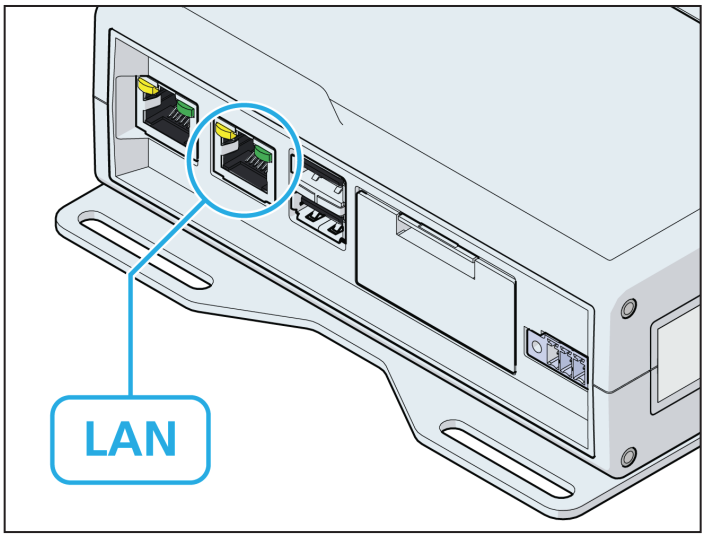


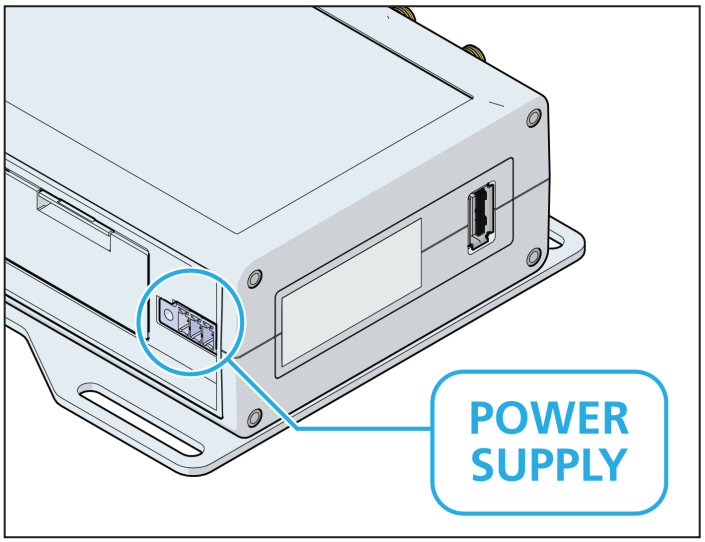
Figure 8: Generation 2 Gateway LAN Connection



Generation 2 Gateway Connection to Power Supply

Remove the power supply red wire from the Gateway terminal marked, “PWR IN +”, and the power supply black wire from the Gateway terminal marked, “PWR IN -” (Figure 9).

Figure 9: Generation 2 Gateway Power Supply Connection



Removing the Generation 2 Gateway from Bracket or Backplane

The existing Generation 2 Gateway may be installed on a mounting bracket or directly on the control panel backplane (Figure 10 and Figure 11). The location of the Gateway varies based on the equipment type. Prior to removing the existing Gateway, ensure all wiring interconnections have been removed as described in the preceding sections. Remove the existing Gateway by unscrewing the sheet metal screws located at the four corners of the Gateway (Figure 12). Set these screws aside, as they will be reused for the new SiteLine Gateway.

Figure 10: Generation 2 Gateway Installed on Mounting Bracket

Figure 11: Generation 2 Gateway Installed on Control Panel Backplane

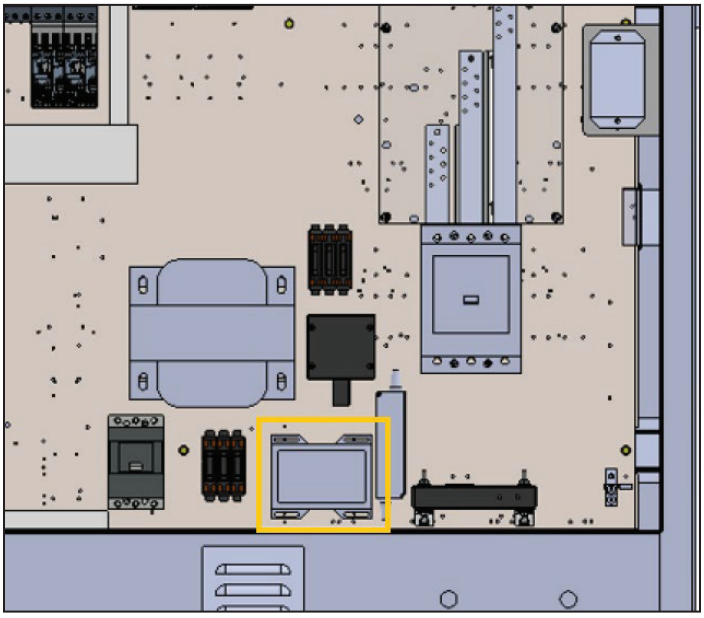


Figure 12: Generation 2 Gateway Installation Screw Locations

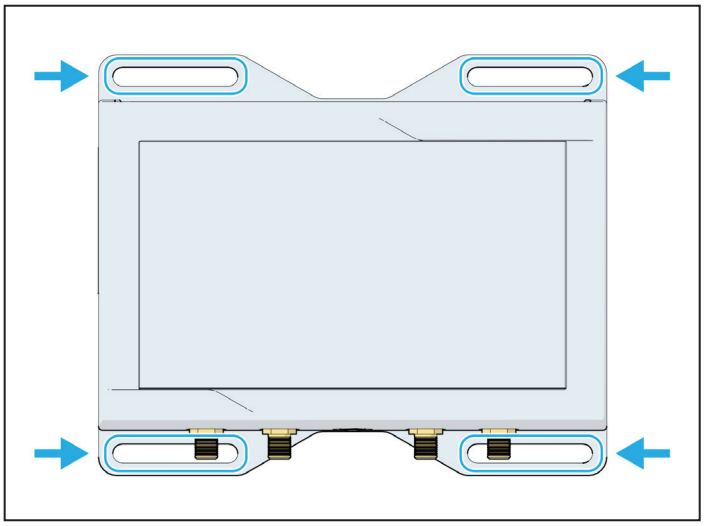


Figure 13: Energy Management Module (EMM)

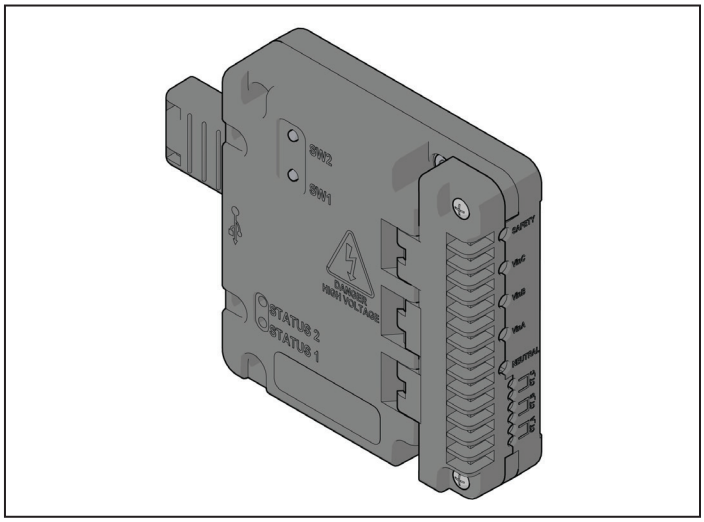


Figure 14: Fuse Block

Figure 15: Current Transformers (CTs)

Removing the EMM and Associated Hardware

The EMM is not supported by the SiteLine Gateway. The EMM and related hardware, along with wiring connections, should be removed from the equipment.

Hardware

The hardware to remove includes the following:

1. The EMM (Figure 13). NOTE: The EMM and accompanying Fuse Block may be installed on a mounting bracket or directly on the control panel backplane. If installed on a mounting bracket, both components can be removed as part of the mounting bracket assembly.
2. The Fuse Block (Figure 14).
3. The Split-core Current Transformers (Figure 15). NOTE: The size and location of the Current Transformers (CTs) varies by application.

Wiring Connections

The wiring connections to remove include the following:

1. Fuse block wiring to the unit power block (Figure 16 and Figure 17). These wires will be brown (Line 1), orange (line 2) and violet (line 3).
2. Fuse block wiring to the EMM (Figure 18). These wires will be brown (line 1), orange (line 2) and violet (line 3).
3. CT connections to the EMM (Figure 19).
4. USB connection from Generation 2 Gateway to the EMM (Figure 20).

Figure 16: Example Rooftop Unit Power Block Connection

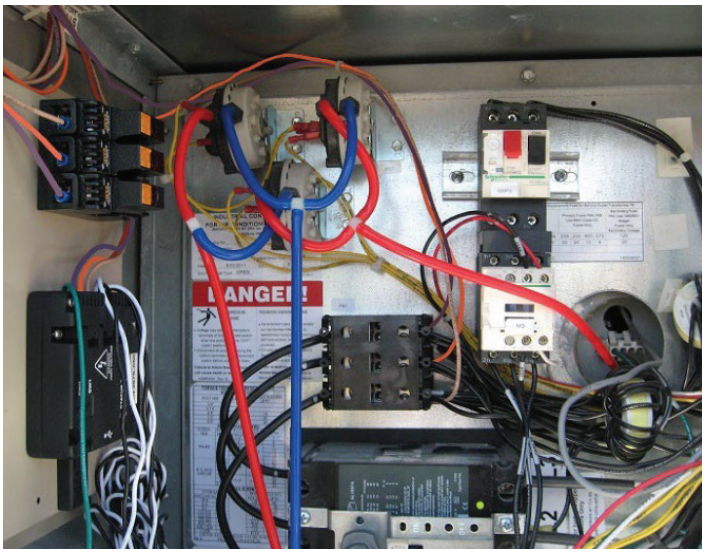


Figure 17: Example Chiller Power Block Connection

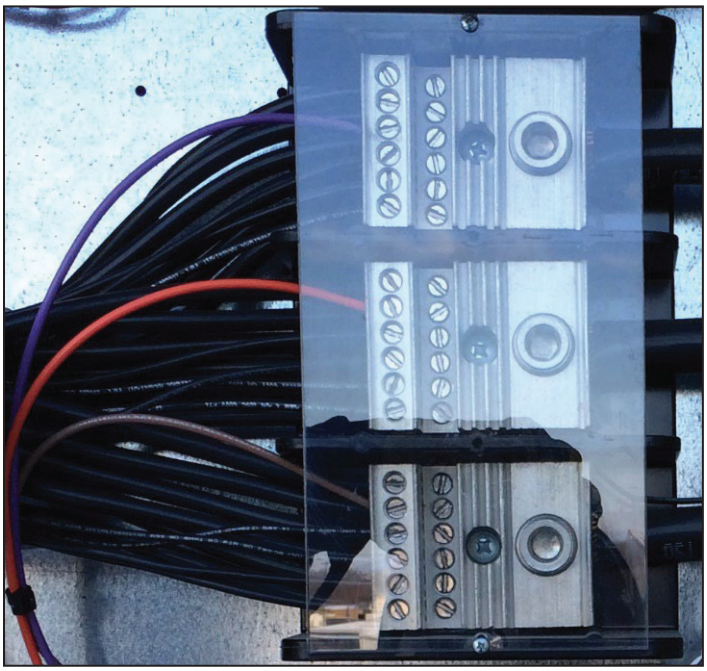


Figure 18: EMM Connection to Fuse Block

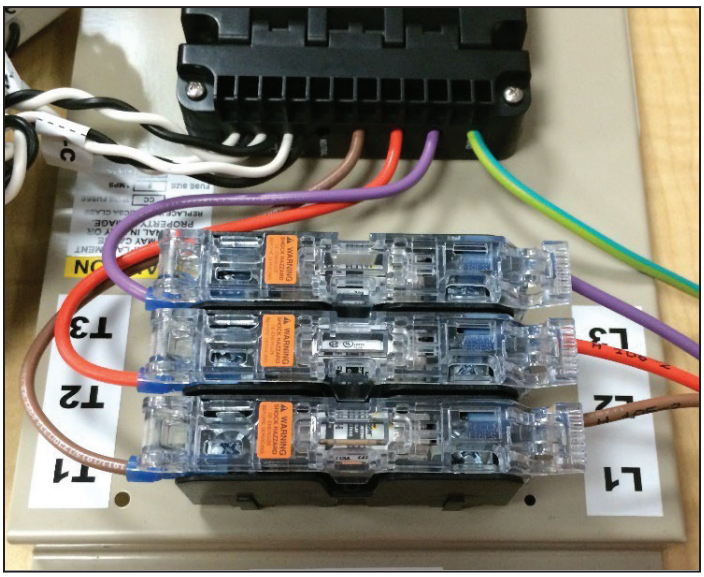


Figure 19: CT Connections to EMM

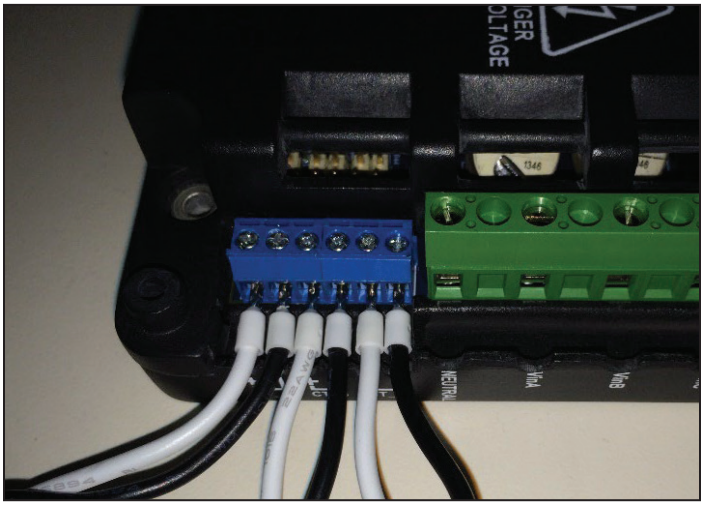
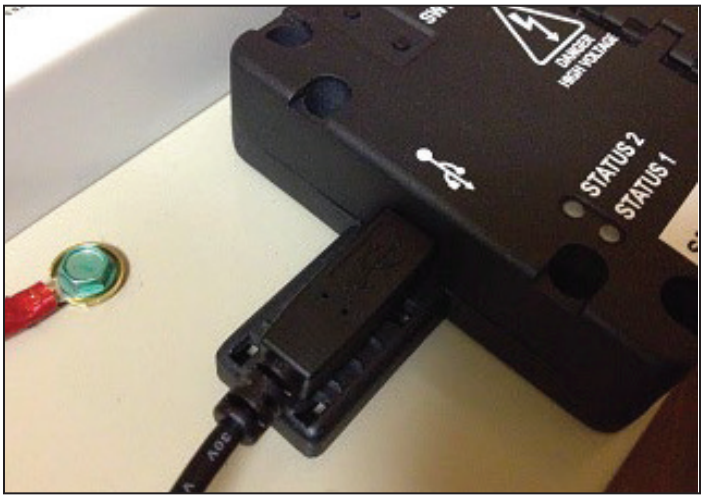


Figure 20: USB Connection to EMM



Rogowski Coil Assembly (if applicable)

Chillers with larger incoming power bundles require the use of a flexible CT called a Rogowski coil. In this case, the Rogowski coils and associated hardware must be removed. The hardware to remove includes:

1. The Rogowski Coil Integrator and Power Supply (Figure 21).
2. Rogowski Coil CTs (Figure 22).

Figure 21: Rogowski Coil Integrator and Power Supply

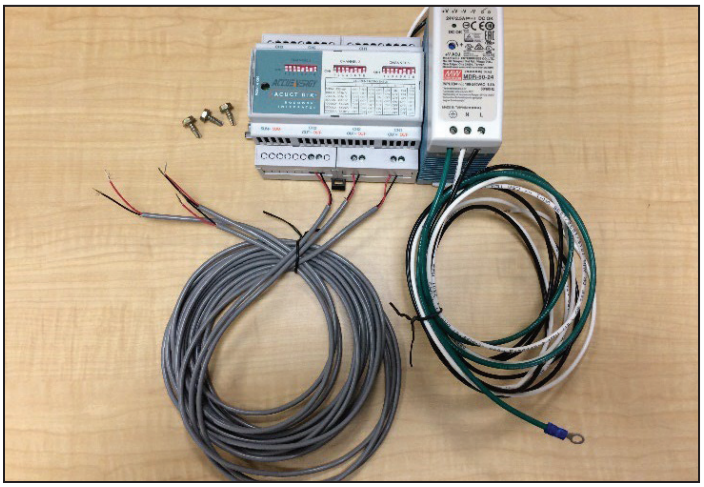


Figure 22: Rogowski Coil CTs

The wiring connections to remove include the following:

1. Rogowski Coil CT connections to Rogowski Coil Integrator (Figure 23).
2. Rogowski Coil Integrator connections to EMM (Figure 24 and Figure 25).
3. Power Supply wiring to unit 120VAC (Figure 26).

Figure 23: Integrator Input from Rogowski Coil CT

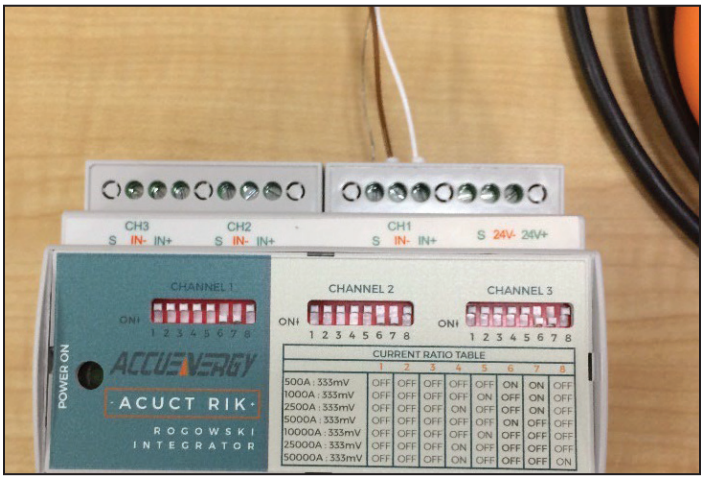


Figure 24: Integrator Output to EMM

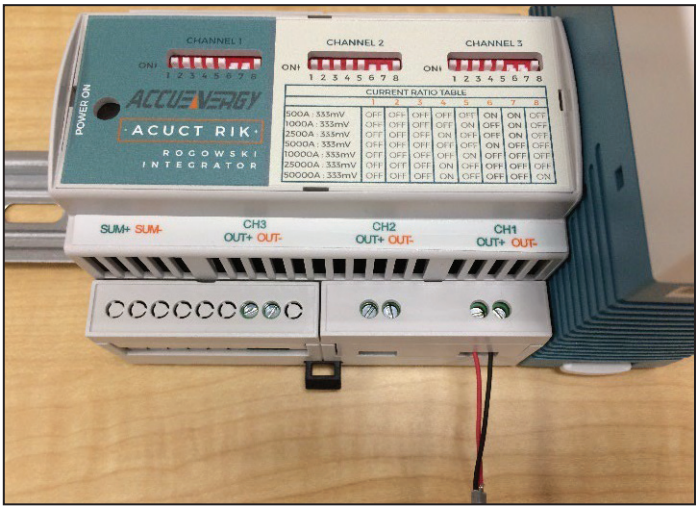


Figure 25: EMM Input from Integrator

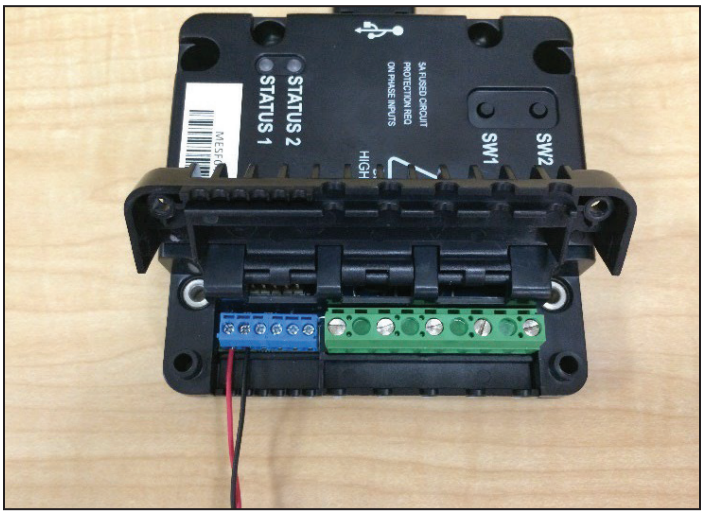


Figure 26: Power Supply Wiring to 120VAC

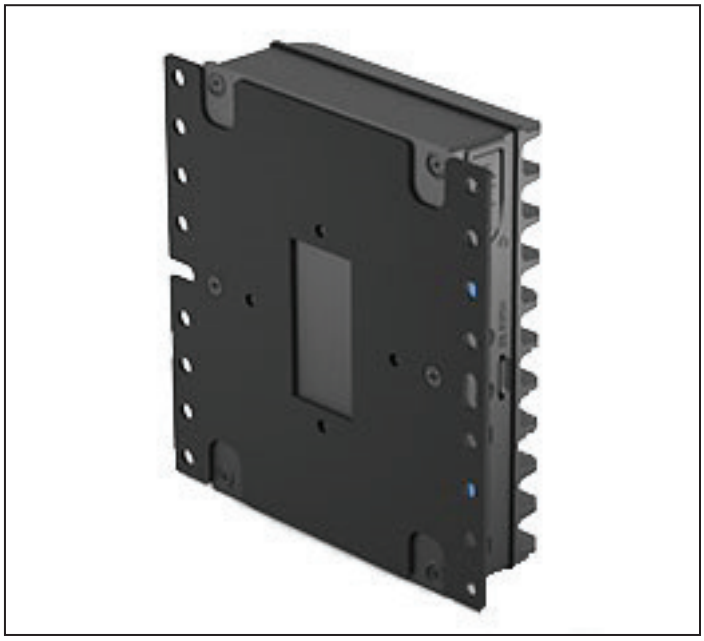
Installing the Replacement SiteLine Gateway

The new SiteLine Gateway should be installed in the same location as the removed Generation 2 Gateway.

Mounting the SiteLine Gateway

Align the SiteLine Gateway on the existing mounting bracket or control panel backplane and mark the new screw locations needed for the Gateway's integrated mounting flange (Figure 27). Place the Gateway so existing cables can be connected without undue strain on the wires. After marking the locations, drill the necessary screw holes. When drilling, be careful to prevent any metal particles from entering or covering any electronic components. Remove any metal particles before proceeding with the installation. Secure the SiteLine Gateway to the mounting bracket or control panel backplane using the sheet metal screws recovered when the Generation 2 Gateway was removed.

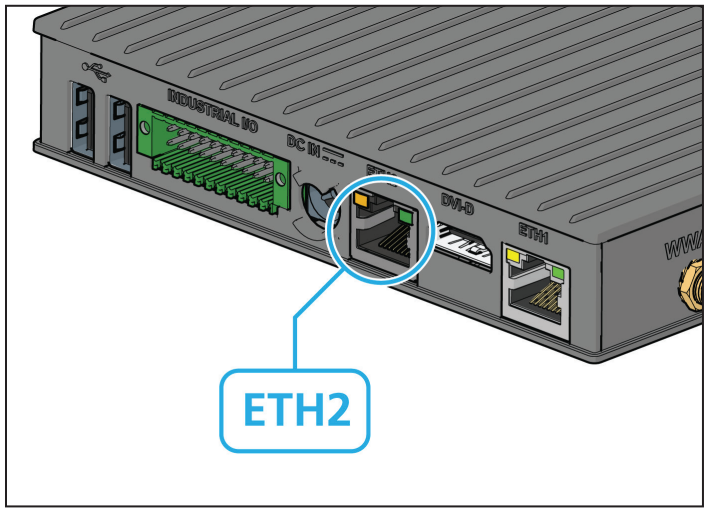
Figure 27: SiteLine Gateway Mounting Flange



SiteLine Gateway Connection to MicroTech Controller or HMI

Connect the existing Ethernet patch cable from the MicroTech III- or 4-unit controller or chiller HMI to the “ETH2” port of the SiteLine Gateway (Figure 28).

Figure 28: SiteLine Gateway ETH2 Connection



SiteLine Gateway Connection to Antennas or Ethernet

If the application is cellular, screw the SMA coaxial connector from one antenna to the “WWAN” connection on the SiteLine Gateway, then screw the SMA coaxial connector from the other antenna to the “AUX” connection on the SiteLine Gateway (Figure 29).

If the application is Ethernet LAN, connect the Ethernet patch cable from the LAN network to the “ETH1” port of the SiteLine Gateway (Figure 30).

Figure 29: SiteLine Gateway WWAN and AUX Connections

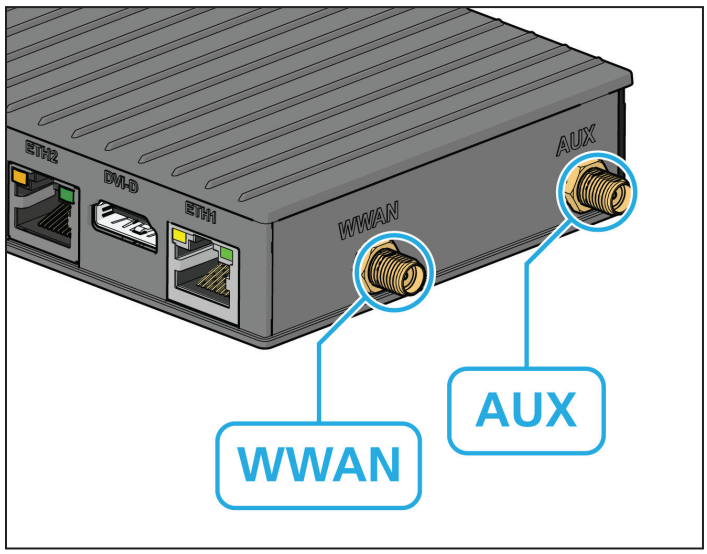
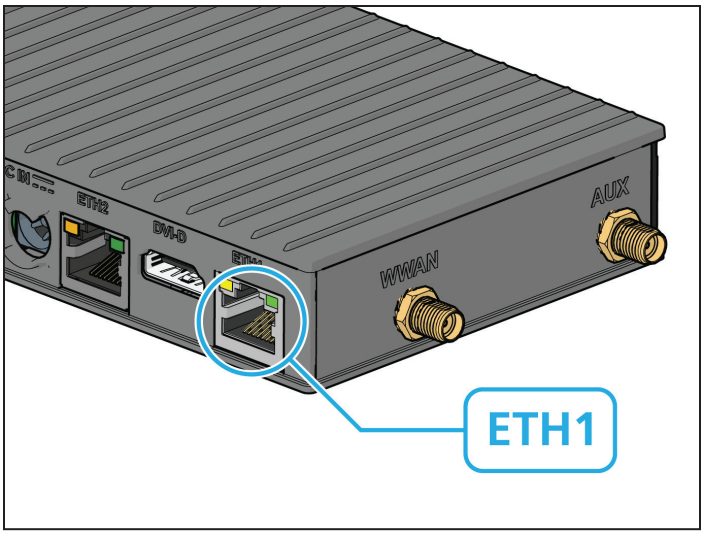


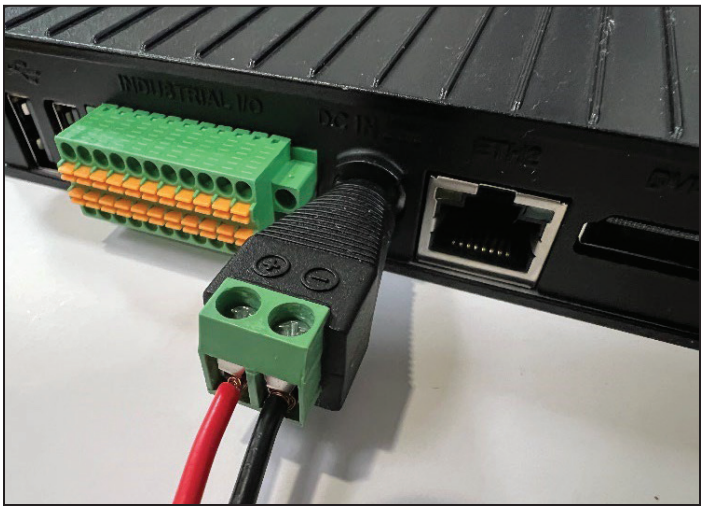
Figure 30: SiteLine Gateway ETH1 Connection



SiteLine Gateway Connection to Power Supply

Retrieve the DC Terminal Block Adapter provided with the SiteLine Gateway. Connect the Red (V+) wire from the power supply to the “+” (plus) terminal of the provided DC Terminal Block Adapter and tighten, then connect the Black (V-) wire from the power supply to the “-” (minus) terminal of the DC Terminal Block Adapter and tighten. Once both connections are secure, insert the DC Terminal Block Adapter into the “DC IN” port on the SiteLine Gateway, then turn it 1/4 turn clockwise to lock the adapter in place (Figure 31).

Figure 31: SiteLine Gateway DC Terminal Block Adapter



Prior to Commissioning Gateway

Before commissioning the gateway, it is important to not expected LED Behavior. Below is a summary of the expected behavior.

Connectivity LED States (LED 1)

- Solid Green - Device has IoT cloud connection and strong cellular signal.
- Blinking Green @ 2Hz - Cellular quality is poor but still has IoT Cloud and internet connection.
- Blinking Red @ 2Hz - IoT cloud connection is not available with the current internet connection.
- Solid Red - Device doesn't have internet connection / Unknown network status.

Product LED States (LED 2)

- Solid Green - There are no product data provider alarms.
- Blinking Green @ 2Hz - There is at least 1 active product data provider alarm and the highest severity across all active alarms is Info.
- Blinking Red @ 2Hz - There is at least 1 active product data provider alarm and the highest severity across all active alarms is Warning.
- Solid Red - There is at least 1 active product data provider alarm and the highest severity across all active alarms is Problem/Unknown product status.
- Alternate Red/Green @ 2Hz - There is at least 1 active product data provider alarm and the highest severity across all active alarms is Shutdown (for example, when a reboot is done).

Power Button LED

The power button normally is solid green, but if the power button is pressed to issue a request to the Product Data provider, then there are three possibilities from the request made:

- Solid orange - After the presses are made, the LED will stay in solid orange color until the timer allows more presses to finish, once the timer expires then two different types of blinking can be made.
- Fast blink - The requests were issued and accepted by the Product Data provider.
- Slow blink - The requests were issued but rejected by the Product Data provider.

LED Behavior While Loading the Image

When the SLGW is installed, the LEDs will start blinking green while performing the process. Once the image is installed there are two possible behaviors from both LEDs:

- LEDs are Solid Red - the image had an error while installing.
- LEDs are turned off - the image was successfully installed, and the device is off, waiting to reapply power.

Commissioning the SiteLine Gateway to the Equipment

An online Commissioning Tool is used to associate the SiteLine Gateway with the equipment on which it is installed. The same tool is also used to configure the SiteLine Gateway for Ethernet LAN connection to the customer's network (if applicable). Once the commissioning process is completed, the equipment will begin sending data to the cloud. To complete the SiteLine Gateway commissioning process:

1. Using a web browser, navigate to https://SLCommissioningTool.daikinapplied.com.
2. When prompted, enter the username and password (Figure 32). NOTE: this is a user-specific password associated with the user's email address. If accessing the Commissioning Tool for the first time, the user will be asked to set a password.
3. Once logged in, enter the Serial Number found on the SiteLine Gateway, then click the search icon (Figure 33). NOTE: the Serial Number will begin with, "iotg-imx8plus-" followed by thirteen digits.
4. Once the gateway record is located by the online Commissioning Tool, the "Let's GO" button becomes active (Figure 34).
5. After clicking the "Let's GO" button, the Commissioning Tool will connect to the SiteLine Gateway and attempt to confirm proper operation (Figure 35).
6. Confirm all settings and properties have a green "Check" icon (Figure 36).
    a. If any setting or property is in an error state, it will appear with a red "X" icon, along with a context specific error message.
    b. It is expected that the "Connected over LAN" icon will appear with a red "X" icon until the units is configured for and connected to a LAN network (if applicable).
    c. Should any unexpected errors occur, contact Daikin Applied Controls Technical Support.
7. If the method of cloud connectivity is Ethernet LAN, click the "Change Network Settings" link in the lower-light corner of the screen. This opens the Change Network Settings screen (Figure 37).

NOTICE

Ethernet LAN is one of two possible methods of cloud connectivity. The method of connectivity is specified at the time of order. The SiteLine Gateway should only be configured for Ethernet LAN connectivity if certain that Ethernet LAN was specified at the time of order. If unsure, contact the salesperson or Daikin Applied Controls Technical Response Center. Prior to configuring the M2M Gateway for Ethernet LAN, please refer to the Appendix of this document for required IT information.

8. By default, DHCP is enabled. If the SiteLine Gateway "ETH1" port is already connected to the customer's network, the IP Address, Subnet Mask and Gateway fields will already be completed. In this case, the Ethernet configuration is complete.

9. If the SiteLine Gateway needs customer-specific LAN addressing, set the DHCP setting in the configuration screen to “Off”. This enables the IP Address, Subnet Mask and Gateway fields.
10. Enter the required addressing in each field, then click “Apply” (Figure 38).
11. Click the Unit Setup tab.
12. The Commissioning Tool will automatically perform diagnostics to confirm the gateway’s status and connection to the equipment controller.
    a. If any setting or property is in an error state, it will appear with a red “X” icon, along with a context specific error message.
    b. Should any unexpected errors occur, contact Daikin Applied Controls Technical Support.
13. If the gateway passes all diagnostics on the Unit Setup screen, all unit fields will be completed, and all connectivity and context settings will be marked with a green “Check” icon (Figure 39).
    a. If any setting or property is in an error state, it will appear with a red “X” icon, along with a context specific error message.
    b. Should any unexpected errors occur, contact Daikin Applied Controls Technical Support.
14. Click the “Orchestrate New Units” button.
15. Enter the equipment Serial Number, then click “Start Orchestration” (Figure 40).
16. When prompted (Figure 41), press the power button on the gateway twice.

NOTICE

Be careful to only press the power button twice consecutively, as pressing three consecutive times will cause the gateway to reboot and interrupt the orchestration process.

17. Once the orchestration has completed, a success message appears. Once the message appears, Log Out of the Commissioning Tool webpage.
    a. If a message appears indicating the orchestration failed, contact Daikin Applied Controls Technical Support.

Figure 32: Online Commissioning Tool Login

Figure 33: SiteLine Gateway Serial Number Entered

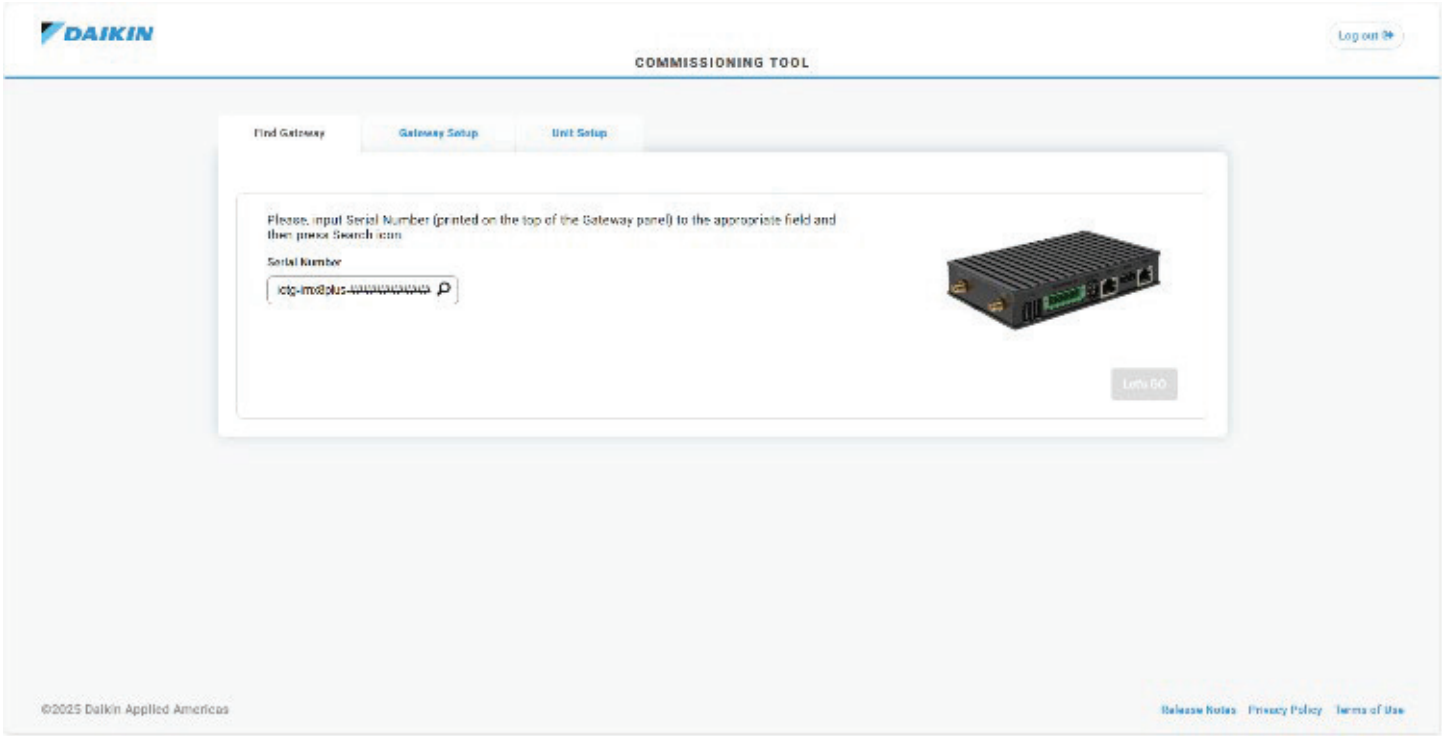


Figure 34: SiteLine Gateway Record Located

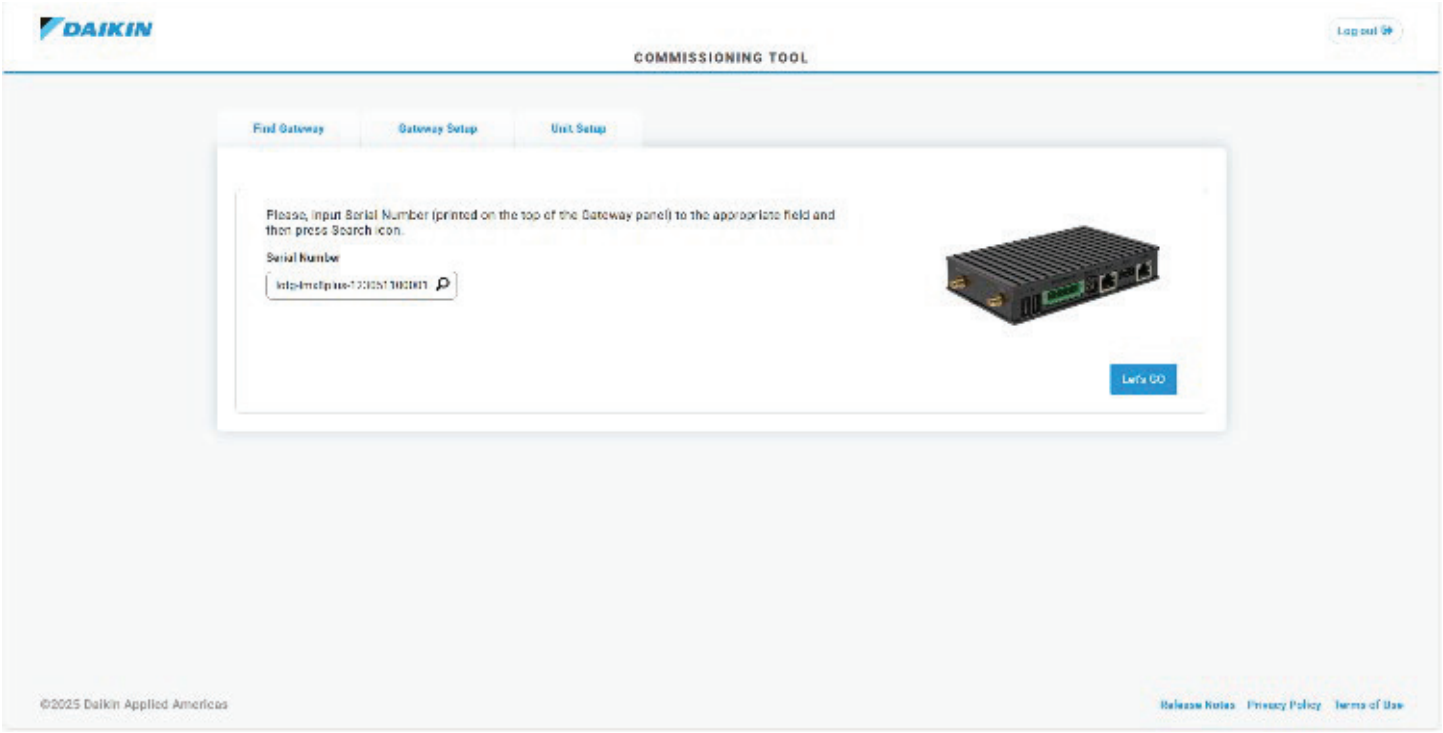


Figure 35: Commissioning Tool Confirming Gateway Operation

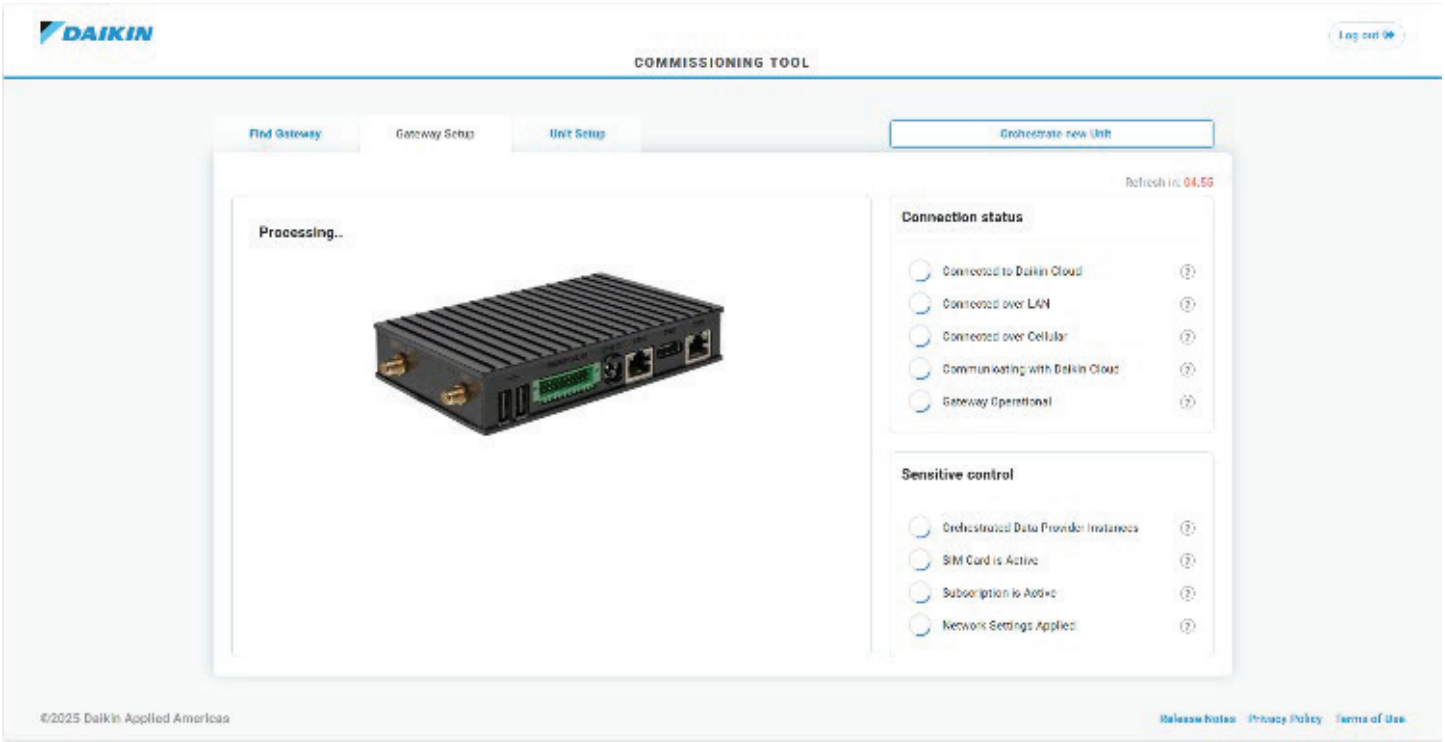


Figure 36: SiteLine Gateway Confirmed as Operational

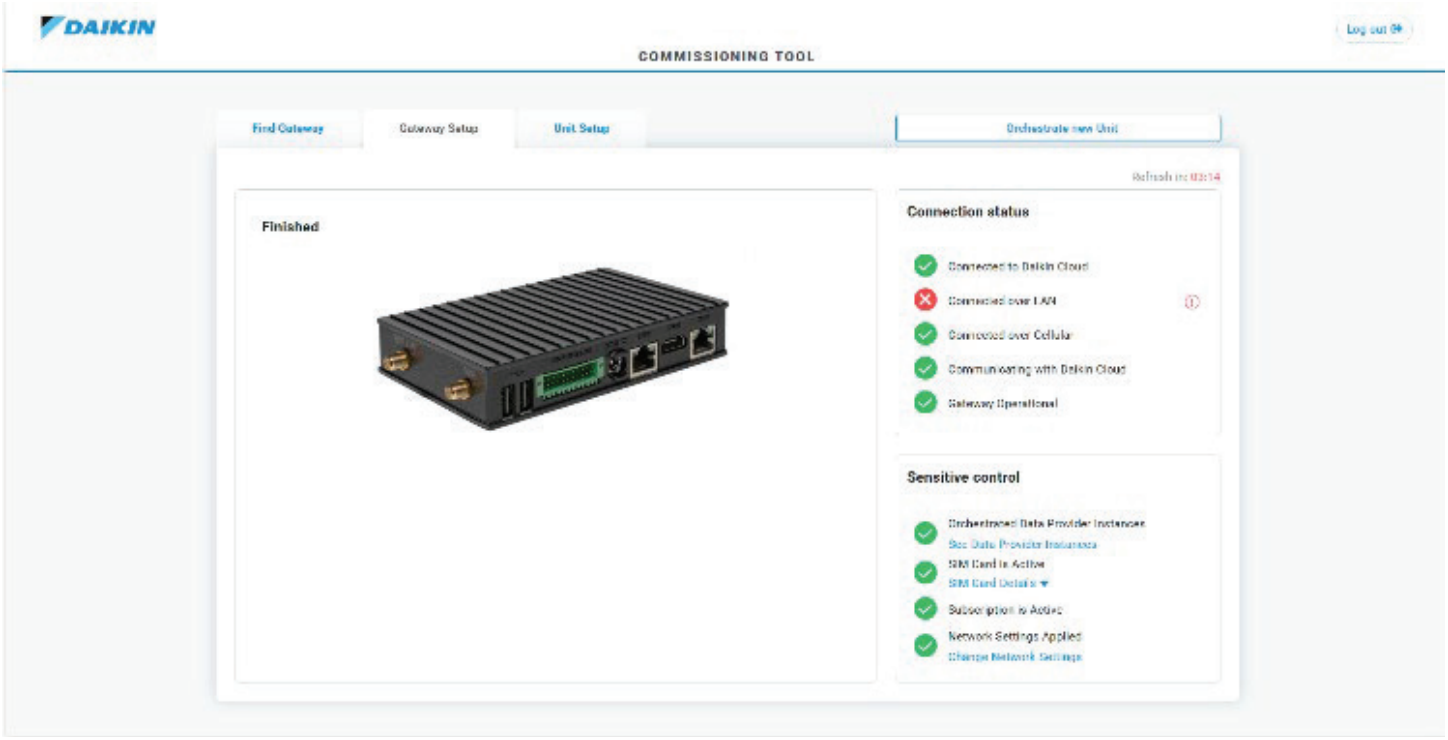


Figure 37: Change Network Settings Screen

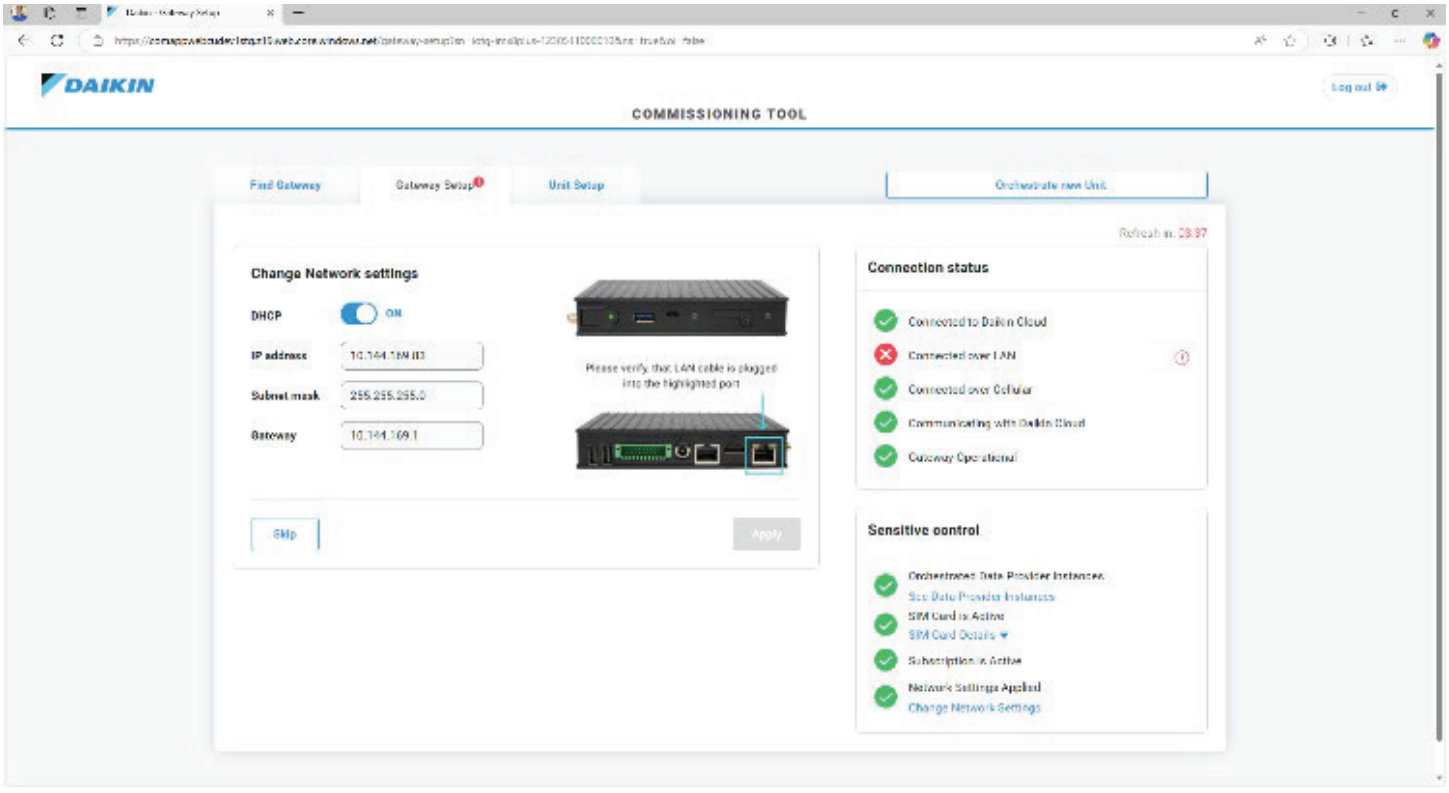


Figure 38: Ethernet Addressing Entered

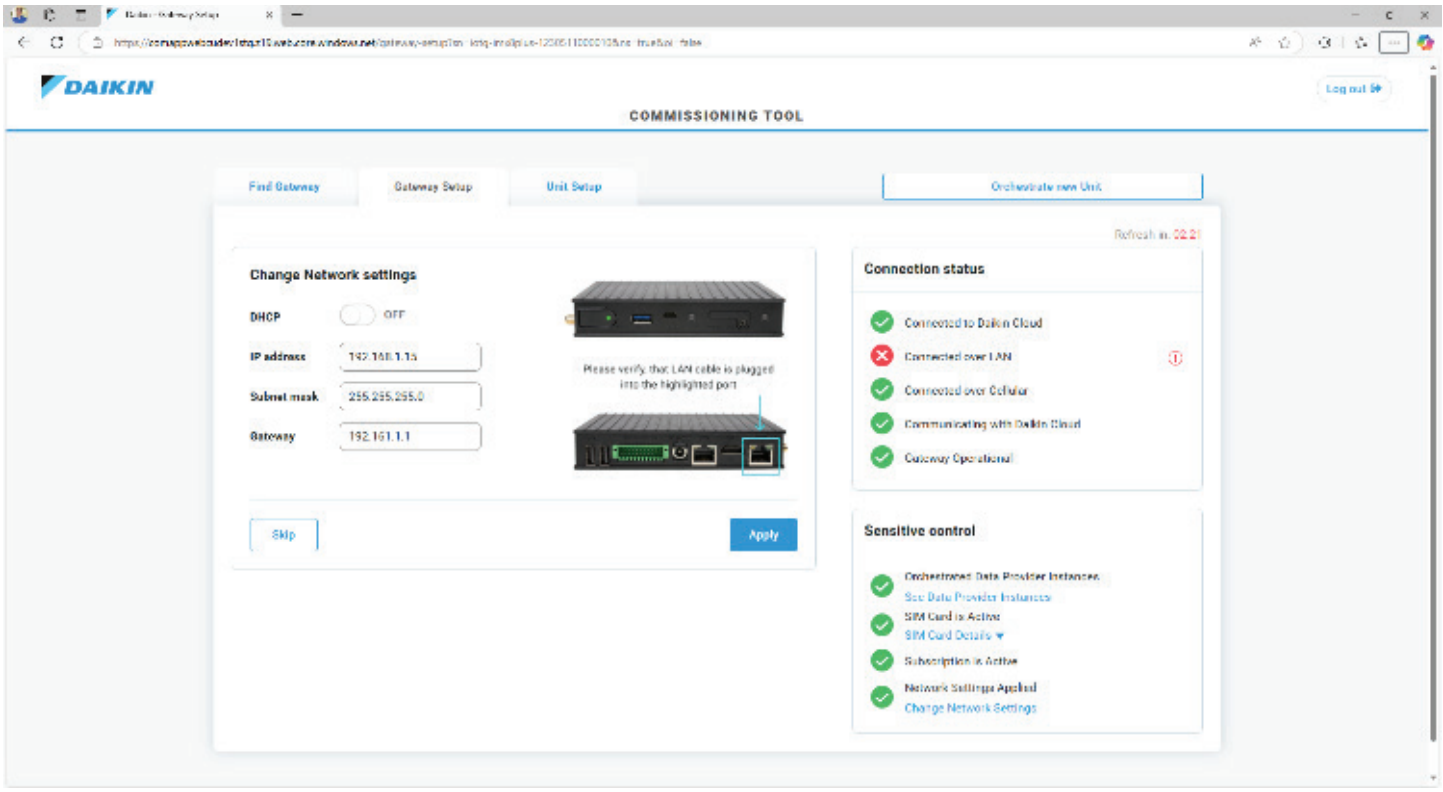


Figure 39: Unit Setup Screen – Diagnostics Passed

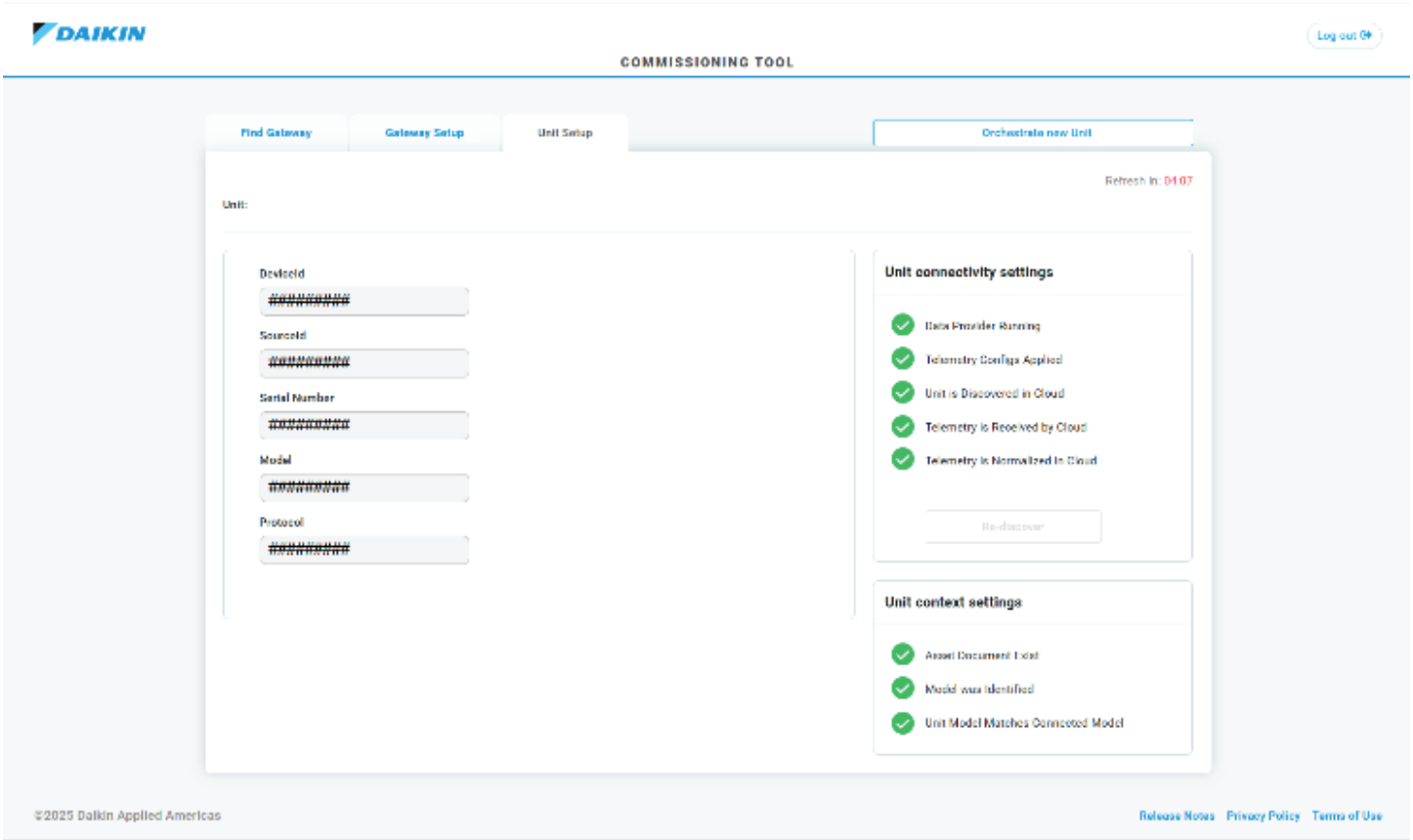


Figure 40: Equipment Serial Number Entered

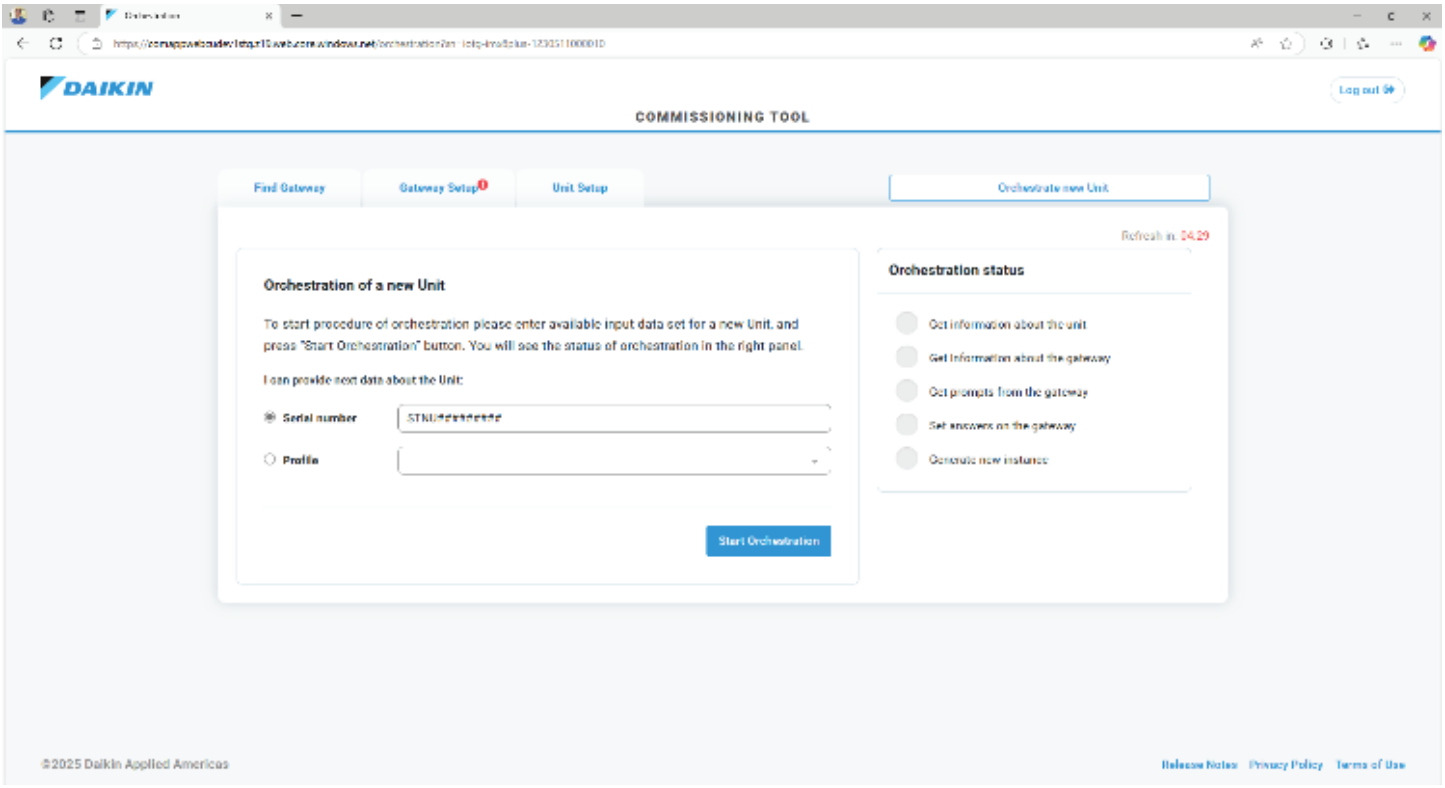
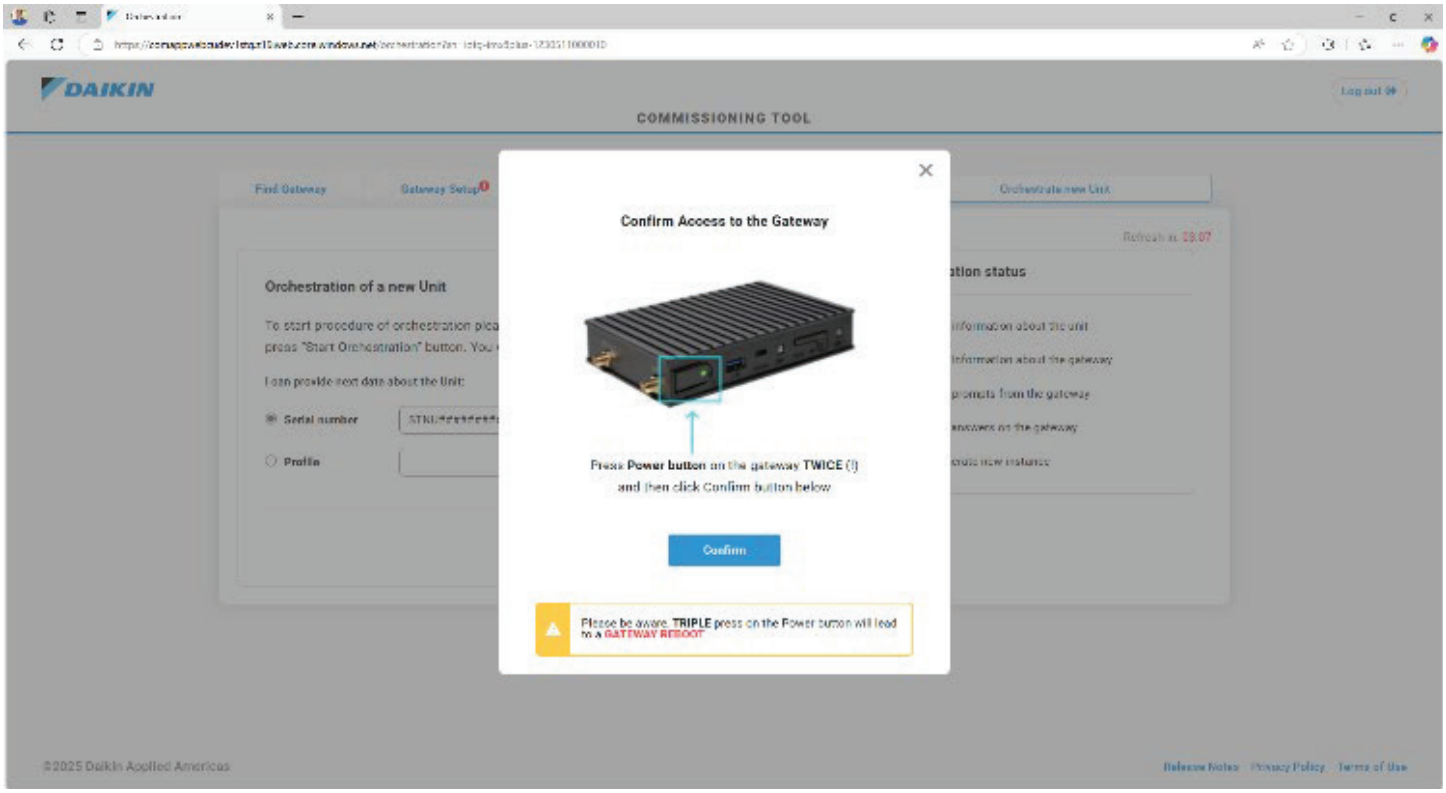


Figure 41: Gateway Power Prompt



Troubleshooting

Gateway does not power up (power LED does not illuminate green)

- Verify the power button is in the “ON” position
- Verify power at the unit terminal board
- Verify power supply wires are properly installed to unit terminal block
- Verify power supply is properly connected to the SiteLine Gateway
- Contact Daikin Applied

Cell connection cannot be established

- Check for solid antenna connections to WWAN and AUX ports on SiteLine Gateway
- Contact Daikin Applied

LAN connection cannot be established

- Verify LAN addressing through the online Commissioning Tool
- Connect to LAN and try to ping the SiteLine Gateway’s IP address to prove the gateway is on the network
- Contact Daikin Applied

MicroTech III or MicroTech 4 Data not appearing in Cloud User Interface

- Confirm Ethernet cable is plugged into ‘ETH2’ port on SiteLine Gateway
- Confirm Ethernet cable is plugged into ‘TIP’ port on MicroTech III or MicroTech 4 controller
- Check for LED activity on SiteLine Gateway’s ‘ETH2’ port
- Verify IP address of the MicroTech III or MicroTech 4 controller is 192.168.1.42
  - Menu Path (Chillers): View/Set Unit -> Ctrlr IP Setup
  - Menu Path (RTU’s): Service Menus -> IP Set Up
- Contact Daikin Applied

MicroTech II Chiller Data not appearing in Cloud User Interface

- Confirm Ethernet cable is plugged into ‘ETH2’ port on SiteLine Gateway
- Confirm Ethernet cable is plugged into ‘LAN2’ or ‘X1P1’ port on MicroTech II HMI PC
- Check for LED activity on SiteLine Gateway’s ‘ETH2’ port
- Confirm the chiller HMI’s ‘API Server’ is “Enabled”
- Contact Daikin Applied

WME Gen 1 Data not appearing in Cloud User Interface

- Confirm Ethernet cable is plugged into ‘ETH2’ port on SiteLine Gateway
- Confirm Ethernet cable is plugged into Ethernet switch within the WME Gen 1 Control Panel
- Check for LED activity on SiteLine Gateway’s ‘ETH2’ port
- Contact Daikin Applied

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