

How to Install Verdigris Building Data Gateway

Welcome! This manual will guide you on how to install your new system. If you need direct assistance, call our support line at **1-844-837-3447** or email **support@verdigris.co**.

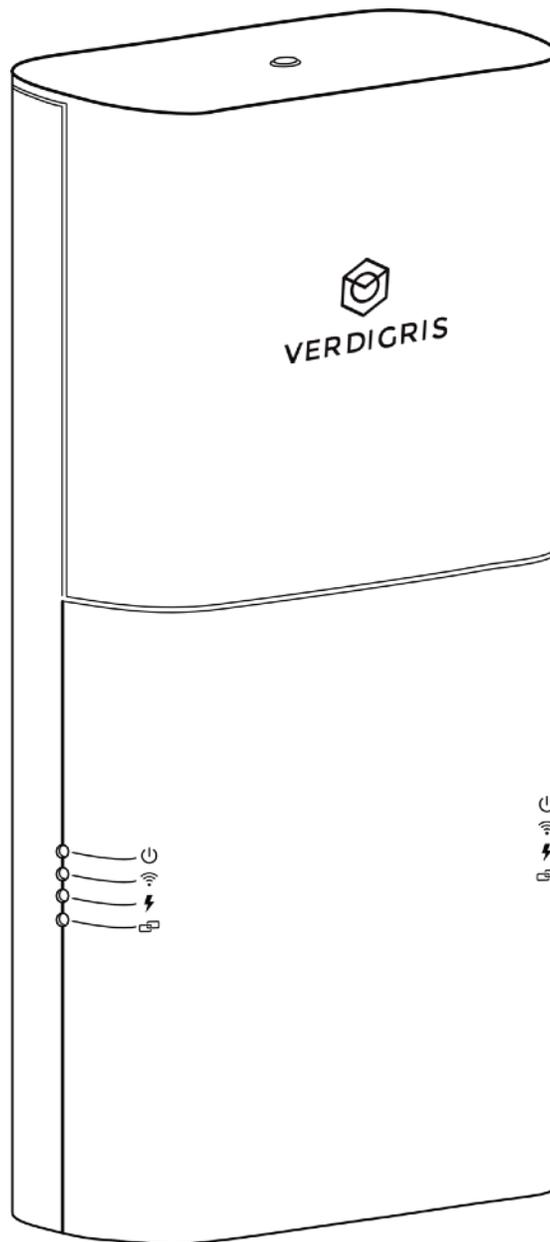


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Overview

The intended use of Verdigris hardware systems is to collect data from building management systems (BMS)

Data Transmission

Data is transmitted securely via 4G LTE, WiFi, or Ethernet, stored on the cloud, and available 24/7 on any desktop web browser. Data also available through CSV export, API, and integration via BACnet IP or Modbus TCP.

- Data access via API: unlimited
- Historical data available:
 - 5-minute
 - 1-hourly
 - Daily

Major Steps for Installation and Commissioning

Getting a Verdigris Building Data Gateway up and running consists of two parts: installation and commissioning. Both parts must be completed successfully for data to be monitored and accessible.

- A. Installation
 1. Prepare Installation
- B. Setup, Connect and Commission Energy Data Gateway

Follow this instruction manual for both parts A and B.

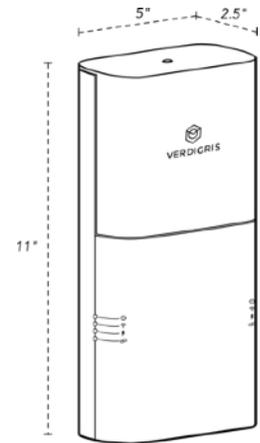
Technical Specifications

Building Data Gateway

- Physical Size and Weight: 11 x 5 x 2.5 inch [280 x 127 x 64 mm], 2 kg
- BACnet / Modbus supported
- Temperature Range: -40 °F-145 °F [-40 °C-63 °C]
- Power Supply: 100-480 Vac 50/60 Hz, 20 W
- Degree of Protection: IP30

Data Transmission

- Ethernet: 100/1000 Mbps (RJ-45)
- 4G/LTE Cat 4 and LTE Cat M1/NB-IoT
(4G/LTE is only available in the US and select countries and areas, other areas will be wifi only.)
- Bands 3,4,8 and 13 (US and China, for more Band support inquire with your account representative.)
- WiFi: 802.11 b/g/n
- Local Networks: BACnet/IP, Modbus/TCP

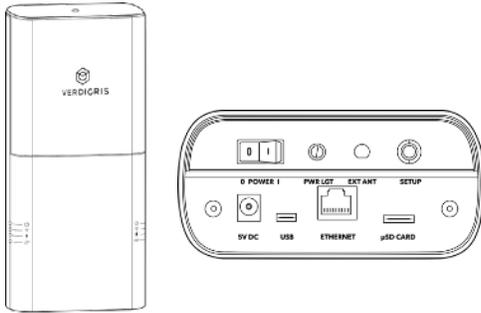


Symbols on Equipment

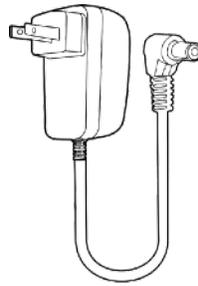


De-energize Verdigris system before accessing field wiring compartment.

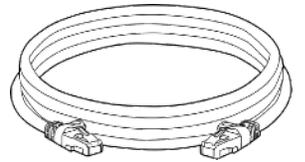
Component List (Provided by Verdigris)



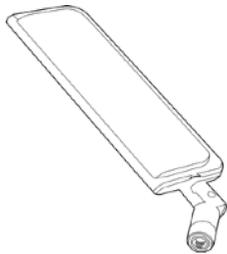
Building Data Gateway (BDG)
(1x per system)



5 V AC plug adapter with a
5.5 mm barrel jack
*(to power system on independent
of voltage taps)*
(1x per system)



Ethernet Cable
(1x per system)



External Antenna

Setup & Commission Energy Data Gateway

Installation

Determine where the Building Data Gateway will sit.

- Must be near a wall plug (See wall plug specifications above)
- If a 4G or WiFi system, ensure there is a strong signal

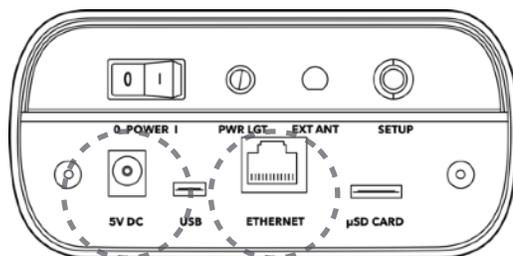
The 5V AC plug adapter with 5.5 mm barrel jack has been provided to enable the Building Data Gateway to power from a standard 120-volt power outlet, like the kind you would find in your home or in an office receptacle.

If the system is going to be connected to ethernet ensure:

- The ethernet cable is the correct length (See specifications above)

Once the home location for the Building Data Gateway has been determined and the wall plug and ethernet cable are within the desired range, installation can begin.

- Plug in the 5.5mm barrel jack into the appropriate port at the bottom of the gateway. Connect the opposite end of the cable into a wall plug.
- Plug in the ethernet cable into the appropriate port at the bottom of the gateway. Connect the opposite end into the network modem port.
- Power on the gateway.
- Installation complete, proceed to commissioning.



Commissioning

Once installation is complete, power on the system safely. Begin setting up the system with our setup application. Setup ensures the metered data is transmitted to the cloud.

1. The Building Data Gateway is emitting a local wireless hotspot. Connect to the hotspot via smartphone, tablet or laptop. Look for a wifi network called "Verdigris- BBEXXXXXXXX", with the serial number of the specific Building Data Gateway. It may be necessary to disconnect the regular mobile data network on your mobile device which can also be achieved by switching to airplane mode, and even enabling wifi.
2. Open any web browser and navigate to connect.verdigris.co (URL address: 192.168.8.1). The system should automatically connect to the setup screen.
3. Select network connectivity options for Wifi, 4G LTE, or Ethernet. Make sure you setup internet connectivity and BMS connectivity (typically ethernet). These could be on two different options.
 - **Wifi:** Be prepared to identify the network name and enter the password.
 - **4G LTE:** The system should connect automatically. For a reliable connection, the "LTE" menu page signal should show a "signal strength" indicator greater than 10 out of 100.
 - **Ethernet:** The system should connect automatically using DHCP IP. If a static IP is required, contact support@verdigris.co.
4. Under the main menu the "Network Preference" option should list the connectivity option selected in the previous step as number 1 in priority (esp. important for 4G LTE if you are also using ethernet to connect to the BMS)

Please contact Verdigris support@verdigris.co to let us know that you have completed installation and commissioning.

Error Codes

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The top indicator light serves as a guide to overall system health. If the light starts blinking red, there is a problem with one or more devices within the system. The solid white means everything is good.

To troubleshoot system: Identify indicator lights on the sides of the panel pictured on the right. **Fig 31**, refer to the table below.

Wait for at least 1 minute for the system to cycle through diagnostics. If the indicator lights are blinking white for greater than 2 minutes, please contact support.

To reboot the system: Hold the system Setup button for approximately 8 seconds.

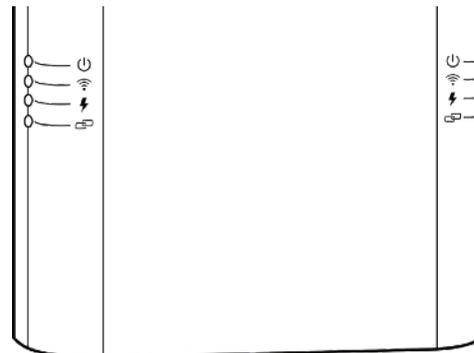


Fig 31

Service Panel Operation Mode	Energy Data Gateway LED Indicator	Interpretation	Troubleshoot
 Wireless (LTE, Ethernet and/ or WiFi)	Blinking Red	Cannot connect to Internet, system WiFi hotspot is broadcasting	Error with connectivity, please connect to the system via your mobile device to debug wireless connectivity.
	Red	Cannot connect to Internet, no system hotspot is broadcasting Not connect to building LAN	Error with connectivity, please press the reset button for 1second to bring up setup-tools and debug wireless connectivity.
	Blinking White	Busy system	
	Blinking Green	Connected, system hotspot broadcasting	
	Green	Connected, no system hotspot broadcasting	To broadcast hotspot press the reset button for one second.

