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**Step 4:** Open and log in to OEG.

**Step 5:** Click the **+** icon or **Add Devices**. Then select **Layer N** from the Product Family dropdown and **GW-XXX-X** from the Product Model dropdown.

**Step 6:** Input the **IP Address** of the connected Layer N Gateway as it appears in your local area network.

**Step 7:** Click **Advanced** to reveal the text field for **User Name** and **Password**. Input the User Name and Password assigned to the Layer N Gateway.

**Step 8:** Click **Add** to finalize your configuration.

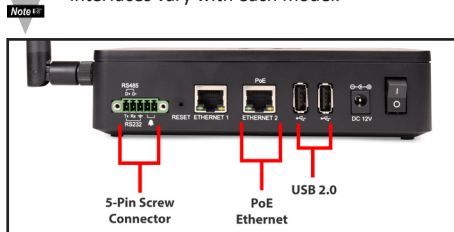
All devices connected to the Layer N Gateway will now appear in OEG, including those that are offline.

## Measurement Device Setup

The GW-001 Series gateways offer the following measurement interface options:

- Smart Sensor one-button pairing
- USB 2.0 connector
- Serial data and alarm connector
- Ethernet RJ45 connector

**Note:** Layer N GW-001 Series connectivity interfaces vary with each model.



### Smart Sensor Pairing

Pairing a Layer N Smart Sensor to your Layer N Gateway is made easy with one-button pairing. Simply press the pairing button on your gateway and press the pairing button on your sensor to connect the two. Your Smart Sensor will now be visible on your Layer N Cloud interface.

### USB 2.0 Connectors

The USB 2.0 connectors are used to connect Layer N Smart Probes with an IF-001 Smart Interface Cable directly to your Gateway.

### Serial Data and Alarm Connector

The 5-pin screw terminal can accept RS232 or RS485 inputs from authorized OMEGA accessories and devices such as OM240, CN6161A, and DP612. The 5-pin screw connector on the gateway is labeled as follows:

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Pin	Description
Pin 1	TX (D+)
Pin 2	RX (D-)
Pin 3	GND
Pin 4	Alarm (N/O)
Pin 5	Alarm (N/O)

Contact Omega or visit our website to see other compatible devices.

### Ethernet Connector

A second Ethernet port for Modbus TCP devices and Power over Ethernet is available on certain models.

## CE Certification

### Safety:

EN 62368-1:2014 +A11:2017 (Second Edition)

### EMC:

EN 301 489-1 V2.2.3 (2019-11)

### Radio:

EN 300 220-2 V3.1.1 (2017-02)

### CE:

The product herewith complies with the essential requirements and other relevant provisions of the Radio Equipment Directive 2014/53/EU, the EMC Directive 2014/30/EU, the Low Voltage Directive 2014/35/EU, the ROHS Directive EU 2015/863, and carries the CE-marking accordingly. Only use approved power supplies with this device.

The following CE Mark  is affixed to this equipment.

The CE declaration is available at the website listed on the cover page of this manual.

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[iiot-opensource@omega.com](mailto:iiot-opensource@omega.com)

Please include SKU of this product in your request. The subject should be: **GW001 GPL license statement request**

The original source code is available on the corresponding hosting website:

GNU General Public License:  
<https://www.gnu.org/licenses/gpl-3.0.en.html>

GNU Lesser General Public License:  
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## WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

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FOR WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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MQS5813/0422

## QUICK START



## GW-001-NA Series Layer N Long Range Ethernet Gateway



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## Introduction



**Important:** Do not power on the Gateway or Smart Sensor before Gateway registration is complete for Layer N Cloud connections.

Use this Quick Start Guide to set up your Layer N GW-001 series Gateway. For additional information regarding your GW-001, refer to the User Manual available on the Omega website.

## Materials

### Included with your Layer N GW-001

- Layer N GW-001 Unit
- Quick Start Guide
- 12 V Power Adapter
- Ethernet Cable (RJ45)
- Antenna

### Additional Materials Needed

- Access to an Ethernet port on your DHCP Router or local-area network PC
- Web browser access
- A Layer N compatible device that will connect to the gateway

### For Layer N Cloud Integration

- A registered user account with [cloud.omega.com](http://cloud.omega.com)

### For Local-Area Network OEG Integration

- An OEG non-trial license



**Important:** Users who will connect to the Layer N Cloud can begin at [Creating a Layer N Cloud Account](#). Users who will connect to OEG can skip ahead to [Layer N Gateway Hardware Setup](#).

## Creating a Layer N Cloud Account

To setup your Layer N Gateway with Layer N Cloud, you must first create and register a Layer N Cloud account. Using any device with a web browser, complete the following steps:

**Step 1:** Open your browser to [cloud.omega.com](http://cloud.omega.com)

**Step 2:** Click **Sign Up** and complete the registration process.

Registered Email: \_\_\_\_\_

New User Password: \_\_\_\_\_

Once your user credentials are verified, you can sign in and you will be presented with the Layer N Cloud homepage.

## Registering your Gateway to Layer N Cloud

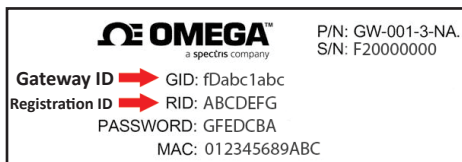
Sign in to your Layer N Cloud account using any device with a web browser. Once you are logged in, register your new gateway by following these steps:

**Step 1:** From the cloud homepage, click **Add Gateway**.

Add Gateway



**Note:** The label containing your Gateway ID and Register ID is located on the bottom of the gateway unit.



**Step 2:** Type in the **Gateway ID**.

**Step 3:** Type in the **Registration ID** and click **Register**.

**Step 4:** Once you have successfully registered your

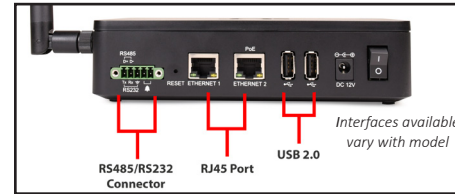
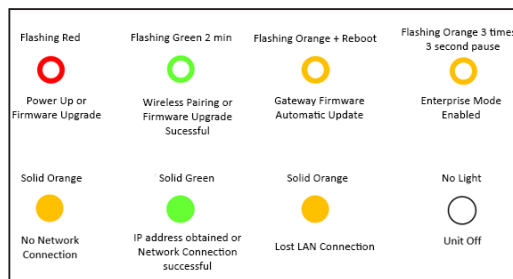
gateway, an icon will appear next to your registered device. You can now change the name of your gateway.



**Note:** The icon will disappear once the registered gateway is powered on.

## Layer N Gateway Hardware Setup

Follow these instructions to power on the Gateway unit:



**Step 1:** Connect the antenna included with your gateway to the side of the Gateway housing.

**Step 2:** Connect the DC 12V adapter to the back of the gateway.

**Step 3:** Connect the included Ethernet cable to the port labeled **Ethernet 1** on the gateway.

**Step 4:** Connect the other side of the Ethernet cable to a router or LAN that will provide Internet or local-area network access.

**Step 5:** Turn the power switch on the gateway to the ON position.

**Step 6:** The LED light on the **Pairing Button** will blink red to indicate that it is booting up.

Once it is connected to the Internet, the light will stay a solid green.

Your gateway can now accept connections from a Layer N Smart Sensor, wired sensors, controller devices such as TCP ModBus or Serial Modbus depending on the gateway model you have purchased.

## Gateway Internal Web UI

All Layer N Gateway models contain an internal user interface (UI) that is used to add Layer N Smart Probes to the gateway, upgrade firmware, and configure other external accessories and peripherals. There are two methods to access the UI from a computer:

- The first method requires a DHCP-enabled router that will keep the gateway and computer on the same local network.
- The second method requires the user to configure the PC's network properties to communicate directly with the gateway's static IP address.



**Note:** Both methods require the Layer N Gateway to be directly connected to the router or PC via Ethernet/RJ45 cable.

### Method 1: With a DHCP-Enabled Router

The Layer N Gateway UI can be accessed on a web browser by typing: <http://omegaiotgatewayXXXX.local> (where the XXXX are the last 4 digits of your Gateway MAC Address) or by typing: <http://omegaiotgatewayXXXX>. All Windows computers with OS newer than Windows 2000 already have the

Bonjour Service necessary to access the Gateway UI via this method.

If the user is still unable to access the Gateway UI, the Bonjour Service may need to be installed. The service can be downloaded from the following URL: <https://omegaupdates.azurewebsites.net/software/bonjour>

### Method 2: Static IP; Without a DHCP Router

Without a DHCP router, the gateway will attempt to give itself a non-duplicate IP address randomly with a subnet mask: **169.254.0.0/16**, or a range of: **169.254.0.0-169.254.255.255**. Using this method, users can add more than one gateway without causing IP conflict issues in the same network.

To access the gateway UI with a static IP address, the TCP/IP Properties of the PC **must** be configured to be in the same local network. Before proceeding, identify the gateway's IP address. For more information on how to change the TCP/IP Properties of your PC, refer to section **3.2.1 Changing the TCP/IP Properties of your PC** of the Gateway User's Manual.

## Registering your Gateway to OEG

A Layer N Gateway can be added to OEG in a non-Internet environment by enabling **Enterprise Mode** on the Gateway unit. To add a Layer N Gateway to OEG, the Cloud Registration option needs to be disabled by accessing the **System Settings** in the Gateway web UI. Once disabled, the gateway will be in Enterprise Mode.

Begin by ensuring your gateway is connected to a DHCP-enabled router or directly to a computer and navigating to the assigned IP address of the gateway. Once in the Layer N Gateway UI, follow these steps:

**Step 1:** Navigate to the **System Settings** in the Gateway UI.

**Step 2:** Click the **Turn off Cloud Registration** checkbox to disable the feature and set the Gateway to **Enterprise Mode**.

**Step 3:** Click on the **Update** button to save the setting.

The Gateway LED will flash orange 3 times indicating that it has entered **Enterprise Mode**.

