CE Certification

Safety:
    EN 61010-1:2010

EMC:
    EN 301 489-1 V2.2.0
    EN 301 489-3 V2.1.1

Radio:
    EN 300 320-1 V3.1.1
    EN 300 220-2 V3.1.1

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 ROHS Directive EU 2015/863, and carries the CE-marking accordingly. Only use approved power supplies with this device.

The following CE Mark $C\mathcal{E}$ is affixed to this equipment. The CE declaration is available at the website listed on the cover page of this manual.

General Public License Statement

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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:
https://www.gnu.org/licenses/lgpl-3.0.en.html

━━ 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.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use if its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

━━ RETURN REQUESTS/INQUIRIES ━━

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:	FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:
1. Purchase Order number under which the product was PURCHASED,	1. Purchase Order number to cover the COST of the repair or calibration,
2. Model and serial number of the product under warranty, and	2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.	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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QUICK START

$C\epsilon$ FC layer

GW-001-NA
Layer N Long Range Gateway

ΩΞ OMEGA™

omega.com info@omega.com

Servicing North America:

U.S.A.
Headquarters: Omega Engineering, Inc.
800 Connecticut Ave. Suite 5N01, Norwalk, CT 06854
Toll-Free: 1-800-826-6342 (USA & Canada only)
Customer Service: 1-800-622-2378 (USA & Canada only)
Engineering Service: 1-800-872-9436 (USA & Canada only)
Tel: (203) 359-1660   Fax: (203) 359-7700
e-mail: info@omega.com

For Other Locations Visit omega.com/worldwide

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

Introduction

⚠️ **Important: Do not power on the Gateway or Smart Sensor before Gateway registration is complete.**

Use this Quick Start Guide to set up your Layer N GW-001 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
• Antenna

Additional Materials Needed
• Access to an Ethernet port on your network
    -Network must have Internet connectivity
• A registered user account with **cloud.omega.com**
• A Layer N compatible device that will connect to the gateway
• Any device with web browser access

▽ **Note:** See the section below for instructions on how to create and register a Layer N Cloud account.

Creating a Layer N Cloud Account

To setup your Layer N Gateway, 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**

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.
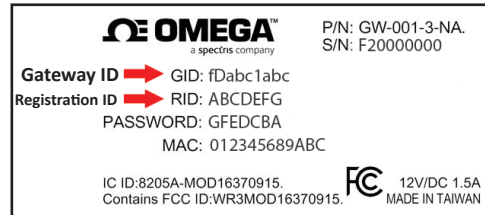

Registering your Gateway

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 Registration ID is located on the bottom of the gateway unit.

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

Step 3: Type in the **Registration ID** on your gateway label and click **Register**.

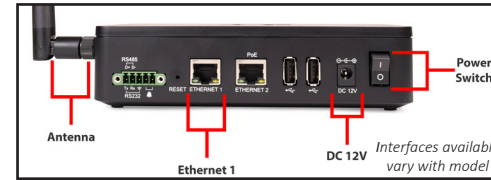**Step 4:** Once you have successfully registered your gateway, a ⚠️ icon will appear next to your registered device. You can now change the name of your gateway.

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

Layer N Gateway Setup

Once your gateway is registered to your Layer N Cloud account, follow these instructions to power on your gateway:

Step 1: Connect 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 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.
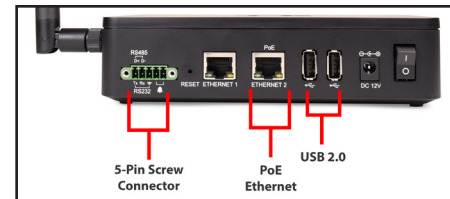
Measurement Device Setup

The GW-001 Series gateways offer the following measurement interface options:
• Smart Sensor one-button pairing
• 2x USB 2.0 connectors
• 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:

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.

Gateway Internal UI

The GW-001 Gateway contains an internal UI that can be used to upgrade various firmwares and configure the external accessories.

▽ **Note:** It is recommended that you only use Layer N Cloud to upgrade firmware for the Gateway.

While your GW-001 is connected to the Internet, the Gateway UI can be accessed by typing: http://X.X.X.X (where **X** is the IP address of the gateway) **OR** by typing:

http://omegaiotgatewayXXXX.local

(where **XXXX** are the last 4 digits of your **Gateway MAC Address**). This will only work if your browser/computer has **Bonjour Service** installed. For either method, the computer and gateway must be on the same local area network.

Once you have access to the gateway internal UI, you will be prompted to enter a password. Follow these instructions:

Step 1: Enter the password located on the label of your gateway unit.

Step 2: Enter the same password from **Step 1** under **Existing Password**, and then follow the instructions to create a new password.

In the Web UI, you can add external accessories by clicking on the ➕ sign. Follow the dropdown bar selections and fill out all fields as required.