

GW-001 Series

Long Range Gateway with Cloud Connectivity

layer 
by  OMEGA

- Free Layer N Standard Cloud service accessible from any connected device¹
- Easy one-button pairing with Smart Sensor
- Transmits up to 3.2 km²
- AES-256 Encrypted wireless link keeps your data secure
- Wireless Gateways can connect up to 256 Smart Sensors³ per unit.

GW-001 Series gateways are designed for long range performance and ease of use. They aggregate data from all connected sensors and transmit it to the Layer N Cloud where it can be securely accessed from your PC, tablet or phone.

Long Range

The Wireless Gateways utilize Sub GHz Frequency Hopping Spread Spectrum (FHSS) technology to ensure robust, long range communications to Layer N Smart Sensors. Transmission ranges of up to 1.2 km can be achieved when the sensor is powered with the standard AA batteries, and transmission ranges of up to 3.2 km can be achieved with a Smart Sensor in range boost mode powered by a standard external 5V USB power supply.²

Plug and Play

The Layer N Gateway is easily paired to Layer N Smart Sensors with the press of a button and will automatically show up on your Layer N Cloud account. Local data logging for your Smart Sensor devices keeps your data secure in the event of a power or network outage. Reports, History, and E-mail alerts from the Layer N Cloud keep you informed on the status of all your vital processes.

Secure

Layer N wireless products are designed with state of the art security features to protect your data with robust AES256 encryption and advanced PKA-EC521bit (NIST) elliptic-curve cryptography to protect your data. The gateway features a Trusted Platform Module secure hardware element which protects the safety of all encryption keys and uses X.509 device certificates for secure communication between the gateway and the Layer N Cloud.

Wireless Standard: GW-001-2

This high performance wireless gateway seamlessly connects to up to 256 long range Layer N Smart Sensor devices. Ethernet connectivity ensures fast, easy connection to the Layer N Cloud. Local access is also available through the built-in web server.

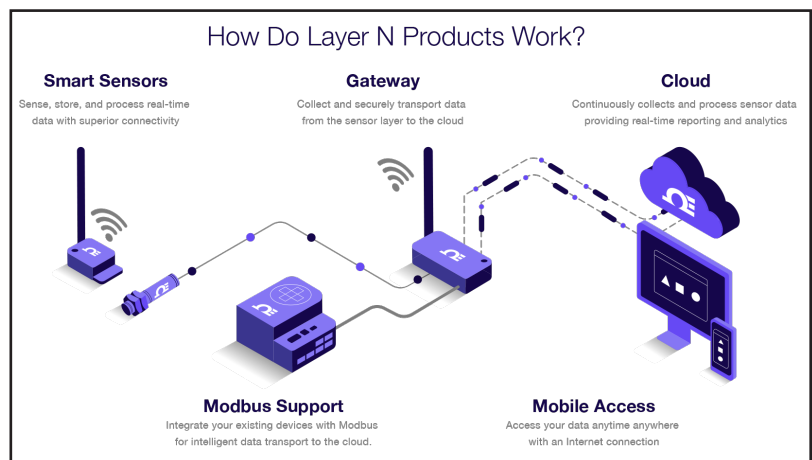
devices. Standard Ethernet connectivity ensures fast, easy connection to the Layer N Cloud.

Wireless Pro: GW-001-3

The Wireless Pro adds both Modbus TCP and RTU RS232/RS485 device support and two USB ports to enable local smart probe connections. It also features power over Ethernet (POE) which enables the gateway to be remotely powered.

Wired Standard: GW-001-0

This version is designed specifically for wired applications. It features standard Ethernet connectivity to the Cloud, plus both Modbus RTU RS232/RS485 and Modbus TCP connectivity suitable for a wide range of wired applications.



1. Visit <https://omega.com/en-us/cloud> for subscription options. Total number of sensors that can connect to Layer N Cloud varies with subscription tier.

2. Clear line of sight. Actual range may vary depending on environment and sensor type.

3. 256 sensors are supported at typical update intervals, on the order of 60 minutes, higher data rates or adverse environmental conditions may diminish the number of sensors supported.

Specifications

Wireless Communication

Frequency*: 868 MHz

Range**: Up to 3.2 km

**Wireless communication is only available on qualifying variants*

***Maximum range possible when Smart Sensor is powered by USB and without obstruction*

Power

AC Adapter: DC 12V @ 2A

Power over Ethernet*: IEEE 802.3at compatible Type 1 Class 3

**PoE only available on Wireless Pro variant*

Interface*

RJ45: 2x ports

USB: 2x USB 2.0

DC Jack: DC 12V power input

Serial Port: RS232/RS485

Alarm: SSR 36VDC 100mA

Antenna: One Antenna for Sub-1G

**Interfaces available vary according to model purchased*

Environmental

Rating: IP40

Operating Temperature: -20°C to 65°C, non-condensing

Mechanical

Dimensions: 170 mm L x 100 mm W x 42 mm H (6.69" x 3.93" x 1.65")

Certifications

Contains FCC ID: WR3-MOD16370915

Contains IC ID: 8205A-MOD16370915

Emission & Immunity for EMI/EMS

FCC: FCC Part 15B

CE: EN 301 489-1/-3

Radio Frequency & Human Exposure/SAR

FCC: FCC Part 15C (15.247)

FCC MPE

CE: EN 300 220

EN 62311 MPE

Safety

LVD: EN 62368-1

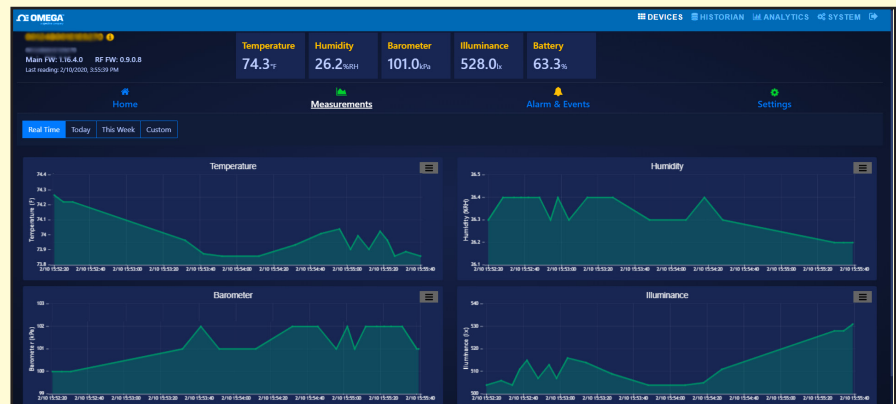


General

Max number of Smart Sensors: Up to 256 Smart Sensors can connect to a wireless gateway unit

Your Data at a Glance with Layer N Cloud

Layer N Cloud consolidates and brings your data to you when you need it, wherever you are. The intuitive cloud interface allows you to monitor and store your data, set alarms and alerts, and provides insights on device activity.



Variants

Model Number	Description
GW-001-0	Wired IIoT Gateway Standard
GW-001-2-EU	Wireless IIoT Gateway Standard
GW-001-3-EU	Wireless IIoT Gateway Pro

Smart Sensors

The Layer N ecosystem supports a variety of Smart Sensors. Up to 256 Smart Sensors can connect to a GW-001 unit. We currently offer the following options.

Model Number	Description
SS-001-1-EU	Temperature and Humidity Smart Sensor - 868MHz
SS-001-3-EU	Temperature, Humidity, Barometric Pressure, Light Smart Sensor - 868MHz