

# IF-006

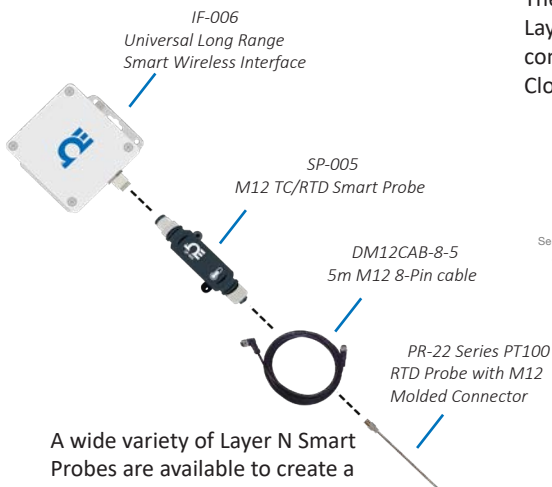
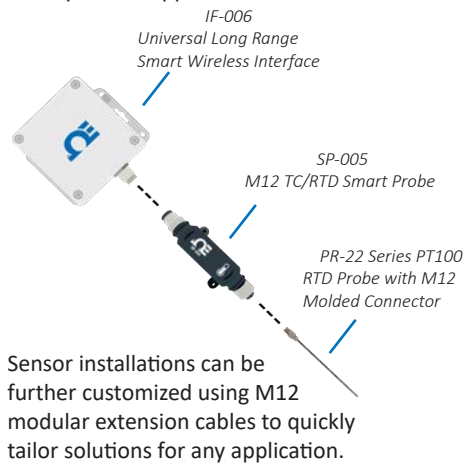
## Layer N Wireless Universal Smart Interface



- Modular M12 Connectivity with Layer N Smart Probes
- Robust Long-Range Sub GHz Communications
- Wireless Communication up to 3.2 km<sup>1</sup>
- IP65 NEMA 4 Environmental Rating
- Password Protection for data
- Up to 5-year battery life<sup>2</sup>

### Modular Universal Design

The Layer N IF-006 Interface is designed to be used in conjunction with Layer N Smart Probes. The two elements snap together with a twist of an M12 connector to create a universal solution for any sensor application.



A wide variety of Layer N Smart Probes are available to create a customized wireless solution that fits your application. Including temperature, humidity, pressure, light, thermocouple, RTD, process, count, pulse, load cell, heat flux, and more.

### Plug and Play

The IF-006 is easily paired to the Layer N Gateway with the press of a button and will automatically show up on your Layer N Cloud account. The Layer N Gateway can connect up to 256 Smart Sensors<sup>3</sup> per unit. Local data logging 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.

### Intuitive Configuration

Configure your Layer N Smart Probes using your IF-006 and our free SYNC configuration software. An integrated Command Line Interface allows for quick serial configuration and monitoring of your IF-006 using any standard terminal emulator.

### Compatibility

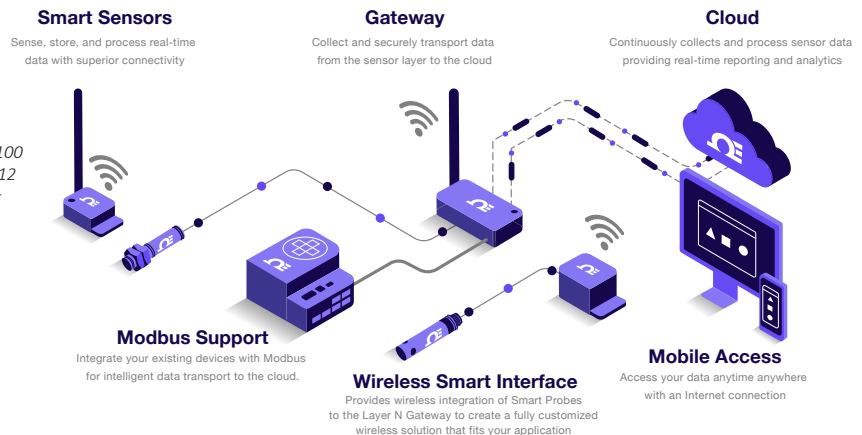
The IF-006 is fully compatible with the Layer N ecosystem of devices, SYNC configuration software, and the Layer N Cloud.



### Security and Access Control

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. Password protection ensure that access to device data is restricted and only accessible by authorized users. Device Authentication ensures that Layer N Smart probes connect to validated Omega devices.

### How Do Layer N Products Work?



1. When in High Power Mode, without obstruction.  
2. Actual battery life may vary depending on the user set reading frequency and power setting.  
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 1.2 km in low power mode  
Up to 3.2 km in high power mode

\*Clear line of sight. Actual range may vary depending on environment.

### Power

**Alkaline Battery:** 2x C-Cell batteries (included)

Transmit Power	Update Time	Battery Life*
Low	2 Mins	2 Years
Low	90 Mins	5+ Years
High	2 Mins	1 Year
High	90 Mins	3 Years

\* Typical. Actual battery life may vary depending on the connected sensor, signal strength and environmental conditions.

**External Power:** 5 V<sub>DC</sub> @ 1.75 W

\*External power adapter optional. External power specification based on Omega specific power adaptor.

### Environmental

**Operating Conditions for Base Unit:**

-20°C to 70°C (-4°F to 158°F), 90% RH non-condensing

**Rating:** IP65

### General

**Software:** Compatible with SYNC configuration software and Layer N Cloud

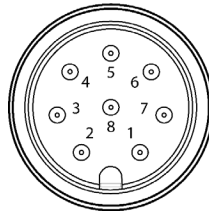
### Certification

Contains FCC ID: WR3-MOD16370915

Contains IC ID: 8205A-MOD16370915



## M12 8-Pin Wiring



Pin	Name	Function
Pin 1	OUT 1	No Connection
Pin 2	INTR	Interrupt Signal
Pin 3	SCL	SCL Signal
Pin 4	SDA	SDA Signal
Pin 5	Shield	Shield Ground
Pin 6	OUT 2	No Connection
Pin 7	GND	Power Return
Pin 8	VCC	Nominal 3.0 V <sub>DC</sub> to Smart Probe



## Wireless Sub GHz Smart Interface

Model Number	Description
IF-006-1-EU	Wireless Sub-GHz Smart Interface with optional external power, 868 MHz

## Layer N Smart Probes

Compatible Layer N Smart Probes are integrated with an advanced suite of IIoT Smart Core features. These features enable plug and play connectivity, alarms and notifications, data assurance, data logging, and storage.

Model Number	Description
SP-001-0	Smart Probe IR, 6:1 field of view
SP-001-1	Smart Probe IR, 6:1 field of view, with discrete I/O
SP-002-0	Smart Probe IR, 10:1 field of view
SP-002-1	Smart Probe IR, 10:1 field of view with discrete I/O
SP-003-1	THB Smart Probe with I/O Tube Housing
SP-004-1	TH Smart Probe with I/O Tube Housing
SP-004-4	TH Smart Probe with I/O Bulkhead Housing
SP-005-1	Temperature and RTD Smart Probe with discrete I/O
SP-010-1	Load Cell Smart Probe with discrete I/O
SP-013-1	Digital Interface Smart Probe with discrete I/O
SP-014-1	Process Monitoring Smart Probe with discrete I/O
SP-016-1	Heat Flux Smart Probe with discrete I/O

See <https://www.omega.com/en-us/layer-n/c/smart-probes> for an updated compatible Smart Probe list.

## Layer N Wireless Gateways

A Layer N Wireless Gateway is **required** to connect your IF-006 to the Layer N Cloud.

Model Number	Description
GW-001-2-EU	Wireless IIoT Gateway Standard, Ethernet connectivity, connects up to 256 Layer N Smart Sensors - 868 MHz
GW-001-3-EU	Wireless IIoT Gateway Pro, Ethernet connectivity, power over Ethernet, connects up to 256 Layer N Smart Sensors, Modbus RTU RS232/RS485 and Modbus TCP, 2x USB ports - 868 MHz

## Accessories

Model Number	Description
M12.8-T-SPLIT	Smart Probe M12 8-pin shielded T-Splitter - enables access to I/O pins
M12.8-S-M-FM	M12 8-pin straight plug field mountable connector
DM12CAB-8-1-RA	1m (3.3') cable dual M12-8 connector, right angle terminator
DM12CAB-8-3-RA	3m (9.8') cable dual M12-8 connector, right angle terminator
DM12CAB-8-5-RA	5m (16.4') cable dual M12-8 connector, right angle terminator
DM12CAB-8-1	1m (3.3') cable dual M12-8 straight connector
DM12CAB-8-3	3m (9.8') cable dual M12-8 straight connector
DM12CAB-8-5	5m (16.4') cable dual M12-8 straight connector