Lumity™ Plenum Gateway

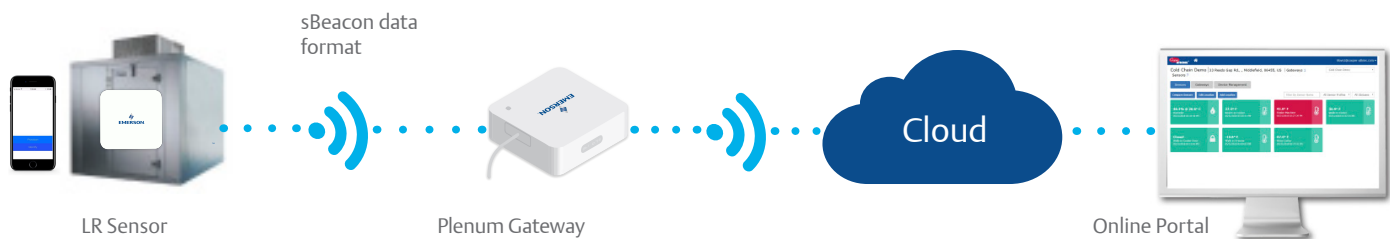## Gateway for sensor network management.

Wi-Fi gateways for use with LR sensors for walk-in cold storage locations.

Emerson's plenum gateways are used to relay signals between Emerson's wireless sensors and the Emerson cloud as part of the Remote Temperature Sensing System. These gateways can be centrally managed remotely through the cloud service.

Designed to transmit through thicker rooms like walk-in cold storage, their unique design allows these gateways to broadcast reliably even in densely populated Wi-Fi environments. Alerts can be retrieved via Rest API calls.

Gateway devices make it easy and cost efficient to centralize management of temperature monitoring with a fraction of the effort required by alternative technologies.

Technology Highlights

• Bluetooth 4.2 (supports Low Energy feature) and Wi-Fi compliant

• sBeacon (Emerson) data format

• Models for any standard AC power outlet

How It Works

sBeacon data format

LR Sensor

Plenum Gateway

Cloud

Online Portal

1	2	3	4
Using a smart device with Bluetooth wireless technology, provision and install sensors	Data is transferred from the sensor to the gateway using Bluetooth Low Energy wireless technology	Plenum gateways transmit data over Wi-Fi networks to the Emerson cloud	Data is integrated into software via the online portal

EMERSON

Technology Highlights

Battery	No battery – use BluFi DC if battery power is required
Power Plug	USB Type A
Weight	4.13 oz (117 g)
Size	3.4" X 3.2" X 1.2" (86.1mm X 82.2mm X 31.8mm)
Temperature Range	-4° to +158° F (-20° to +70° C)
Bluetooth Type	Bluetooth Low Energy 4.2
Bluetooth Sensitivity	-98 dBm
Bluetooth Max Power Output	+5 dBm
Bluetooth Antennas	-3 dBm Antenna, Omni Directional +10 dBm Directional Antenna with optional LNA with an additional +5 dBm amplification"
Frequency Supported	2.4 GHz ISM Bluetooth LE channels: 1- 40 & Adv Ch: 37; 38; 39 Non-Bluetooth Channels: SDR from 2400Mhz to 2500Mhz"
Bluetooth Data Rate	1Mbit/s
Bluetooth Security	128 bit AES
WiFi Type	802.11 b/g/n
WiFi Security	WPA2 Personal and Enterprise Security
WiFi TX Power	"20.5dBm @ 1DSSS and 11 CCK 15.0 dBm @ 54 OFDM"
WiFi RX Sensitivity	"-97.5 dBm @ 1DSSS -88.5 dBm @ 11 CCK"
WiFi Frequency	2.4 GHz with coexistence built-in with Bluetooth
WiFi Antenna	0 dBm Single Antenna, Omni Directional
Power Consumption	200 mA when TX 20 mA on sleep
Power Consumption – TX	9 mA at 0dBm
Power Consumption – Sleep	1.2 µA (SRAM retention and RTC running)
CPU	ARM Cortex M4 and ARM Cortex M3
Memory	256 KB Flash (100KB free for custom applications)
Managed services	Cloud real time managed
Data output to cloud	0.1 to 1 Mbit Up data
Certifications	FCC/CE
Flame Resistance Level	Gateway complies with UL2043 criteria; CMP rated cable UL file E348815

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