

intelligTMstreets

Intelligstreets / Catalog 2019



SternbergLighting

ESTABLISHED 1923



Features and Benefits

Sustainability:

Intellistreets is the most effective way to maintain and conserve natural and human resources needed to protect our country and reduce our carbon footprint. The Intellistreets multi-media system is described below:

- Intellistreets LED Streetlights can achieve up to 70% energy reduction over existing sources.
- Intellistreets LED Streetlights are able to save valuable energy through adjustment of lighting levels, available via programming or via on-demand basis.
- Intellistreets has multi-patented lighting and thermal management that can extend system life over competitors via on-board sensor input analysis.
- Accurate reporting and monitoring of streetlighting systems saves maintenance, energy and administration costs.

Security:

Intellistreets offers the only wireless mesh system using bidirectional/multi-media communication between individual luminaires and the web-based user interface.

- Audio storage and playback capability for mass notification concealed in light poles or light fixtures.
- Egress wayfinding- Only Intellistreets offers pre-programmed simultaneous routing via sequenced lights, graphic banners and audio.
- Encrypted control interface provides robust security against hacking and misuse.
- Real time dial-up lighting control and multimedia features with mobile devices

Community Engagement:

This system is an integral component to the environmental streetscape, enhancing the pedestrian experience through a wide variety of multimedia options.

- Dynamic Lighting- Wireless control of color-changing accessory lights facilitates the transformation of an ordinary space for a special event without additional equipment.
- Intellistreets facilitates the use of audio broadcast from playlists. The simple drag-and-drop interface acts like a standard MP3 player.
- Intellistreets wireless full range audio eliminates conduit and cabling costs; only wired audio systems are on the market.

Multi-Media Luminaire and Post Top Module (PTM)

The core component of Intellistreeets at the pole level is the ECM (Electronic Control Module). The ECM sound system and notification LEDs are integrated into a variety of luminaires. The PTM is a separate housing that includes the same features but allows for controlling virtually any LED luminaire without modification.



Integrated within LED luminaire

All lighting control multi-media components are concealed within the LED luminaire



Integrated within Post Top Module (PTM) with separate LED luminaires

All lighting control multi-media components are concealed within the PTM

Intellistreets - Glossary of Terms

- **Standard System Features**



Lighting Control

With patented wireless technology to communicate to individual luminaires, streetlights are able to save up to 70% in energy consumption and extend life to 10 years and beyond. The system provides unique flexibility in dimming and on-demand adjustability. Available in multi-media and on-off dim (OOD) formats.



Wireless Mesh Transceiver

With a centralized interface and wireless transceivers on each pole, the system allows for bidirectional communication between streetlights and other integral sensors. The mesh topology also provides self-healing for the network should one or more light poles become disabled. Available in multi-media and on-off dim (OOD) formats.



RGBA Notification

Visible 24 hours a day, with four selectable colors, the LED indicator provides customized indication for egress routes, notifications and managing traffic conditions. Standard for multi-media format.



Concealed Placement Speaker (CPS)

A fully integrated speaker within each multi-media luminaire provides audio at the street level for ambient music, pre-recorded announcements, dial-up mass notification and advertising. Standard for multi-media format.



Controlled Ground Fault Receptacle

Programmed through the user interface. Great for holiday lighting and vendor carts.

Intellistreets - Glossary of Terms

- **Optional System Features (Multi-Media Format)**



Digital Signage

The digital banner is a 2-sided LED display that provides street level visual communication. Custom graphics can be used for advertising, community announcements and real-time alert notifications. Additionally, digital street-signs allow for better traffic management.



Dynamic Lighting

Wireless control of color changing lights facilitates the transformation of an ordinary space for a special event without additional equipment.



“Push Blue” Emergency Call Station

The Push Blue emergency notification button is a communication device designed for the public to easily call for help. Available as a stand alone unit or mounted to a pole, utilizing the Intellistreets audio notifications and LED indicator lights.



Image Sensors

180 degree image sensors are concealed and offer a unique method of gauging pedestrian traffic, providing accurate data by the minute, hour or day. This is a powerful tool for tenants, landlords and public safety officials.



Environmental Sensors

Environmental sensors can detect and report the presence of Wind, Water Level, Temperature, Humidity, Barometric Pressure, Pedestrian Sensors, Pedestrian counters.



Post Top Module (PTM)

The PTM is designed to be mounted on an existing pole. The PTM utilizes the Intellistreets Electronic Control Module (ECM). Core features include the ability to control lighting, connect LED way-finding devices and DMX color controlled lighting, connect audio devices for background music, message playback and paging capabilities, and input connections for a variety of environment sensing devices. 2 LED control conductors extend to the luminaire.

Integrated Multi-Media Luminaire: Full Feature

• (Luminaire by Sternberg)

Wireless Mesh Transceiver

- App Based Wireless Control
- Dual 2.4 GHZS



RGBA Notification

- Indicator Light
- Red, Green, Blue, Amber

Digital Street Sign

Controlled Receptacle

Dynamic Lighting

- Color changing

Environmental Sensors

- Wind Detection
- Water Level Detection
- Temperature
- Humidity
- Barometric Pressure
- Pedestrian Sensors
- Pedestrian counters

 Many luminaire, pole and base styles available



Lighting Control

- Photocell Control
- 0-100% Dimming
- On-Demand Light Levels



Concealed Placement Speaker (CPS)

- Music
- Alerts
- Announcements



Digital Signage

- Way finding
- Traffic direction
- Alert notification
- Civic information
- Revenue generation (via advertising)



Push Blue

Emergency Call Station (Optional)



Integrated Multi-Media Luminaire: Core Product

- (Luminaire by Sternberg)

Wireless Mesh Transceiver

- App Based Wireless Control
- Dual 2.4 GHzs



Lighting Control

- Photocell Control
- 0-100% Dimming
- On-Demand Light Levels

RGBA Notification

- Indicator Light
- Red, Green, Blue, Amber

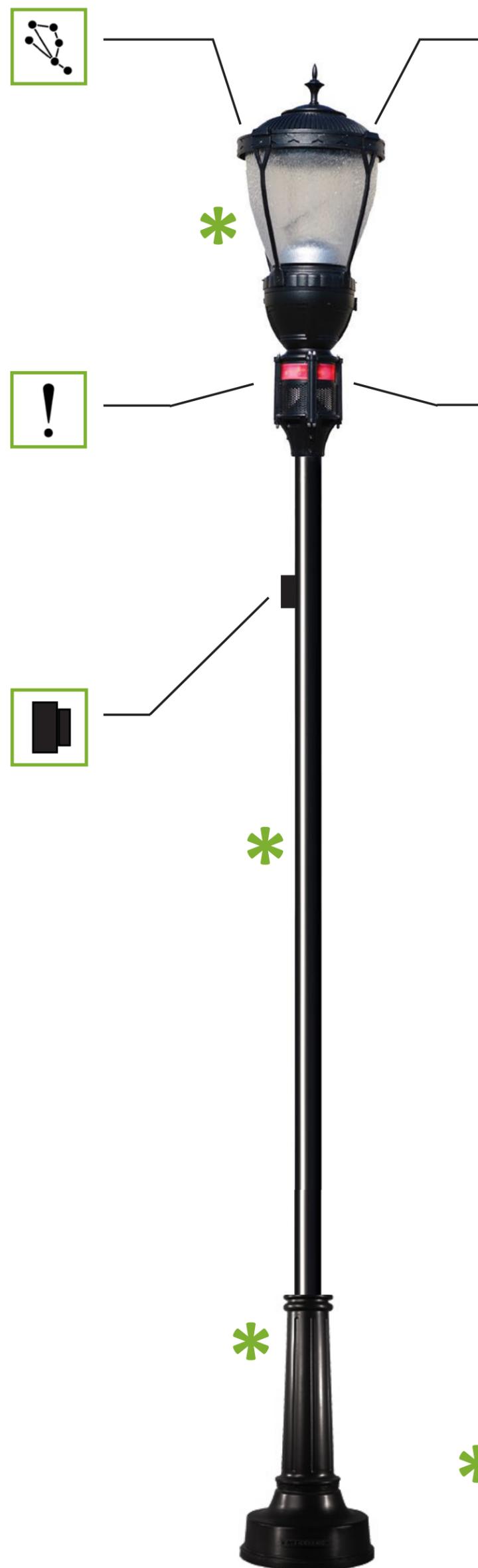


Concealed Placement Speaker (CPS)

- Music
- Alerts
- Announcements

Controlled Receptacle

- Holiday Lighting
- Vendor Carts



* Many luminaire, pole and base styles available

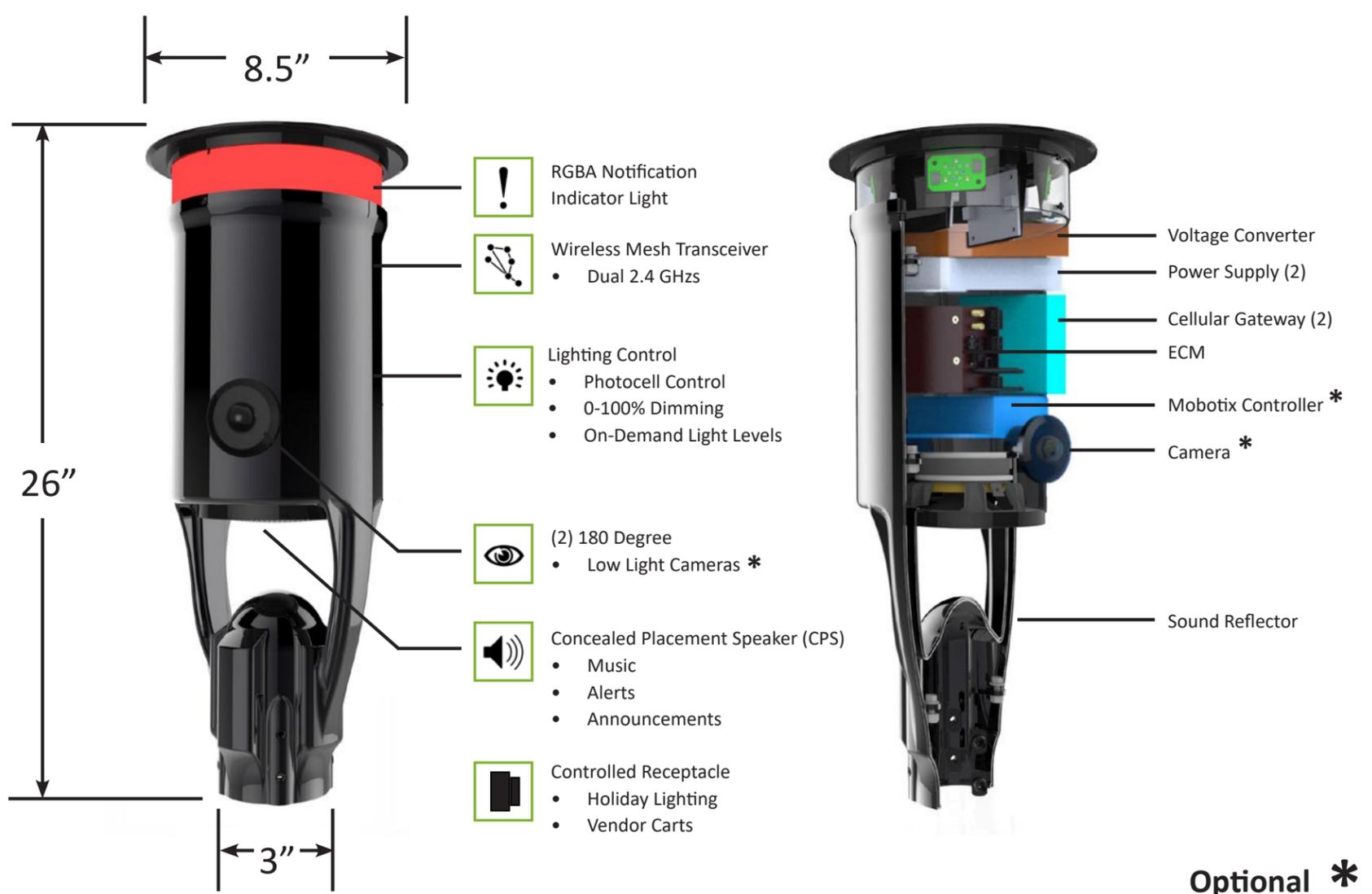
Post Top Module (PTM) - Features

The PTM is designed to be mounted on a new or existing pole. Initial design is for use with LED luminaires, but can be adapted to other light sources with some limitations. The PTM utilizes the Intellistreets Electronic Control Module (ECM). The ECM is a compact wireless device that provides a full set of lighting control, monitoring, and multimedia options for operation of LED luminaires.

Core Features Include:

- Ability to control lighting (patented energy management and LED optimizing software)
- Connect LED way-finding devices and DMX controlled lighting
- Connect audio devices for background music
- Message playback and paging capabilities
- Input connections for a variety of environment sensing devices

A cloud based web interface and content storage system are standard allowing a secure yet robust portal for accessing all the features of the system. Secure access to the module is only available through the Intellistreets Virtual Command Center portal.



Integrated Multi-Media: Post Top Module (PTM)

- (Luminaires by Sternberg)

Wireless Mesh Transceiver

- App Based Wireless Control
- Dual 2.4 GHZS



Lighting Control

- Photocell Control
- 0-100% Dimming
- On-Demand Light Levels



RGBA Notification

- Indicator Light
- Red, Green, Blue, Amber



Concealed Placement Speaker (CPS)

- Music
- Alerts
- Announcements

PTM (Top Mount Luminaire)



Controlled Receptacle

- Holiday Lighting
- Vendor Carts



PTM (Side Mount Luminaire)



Push Blue

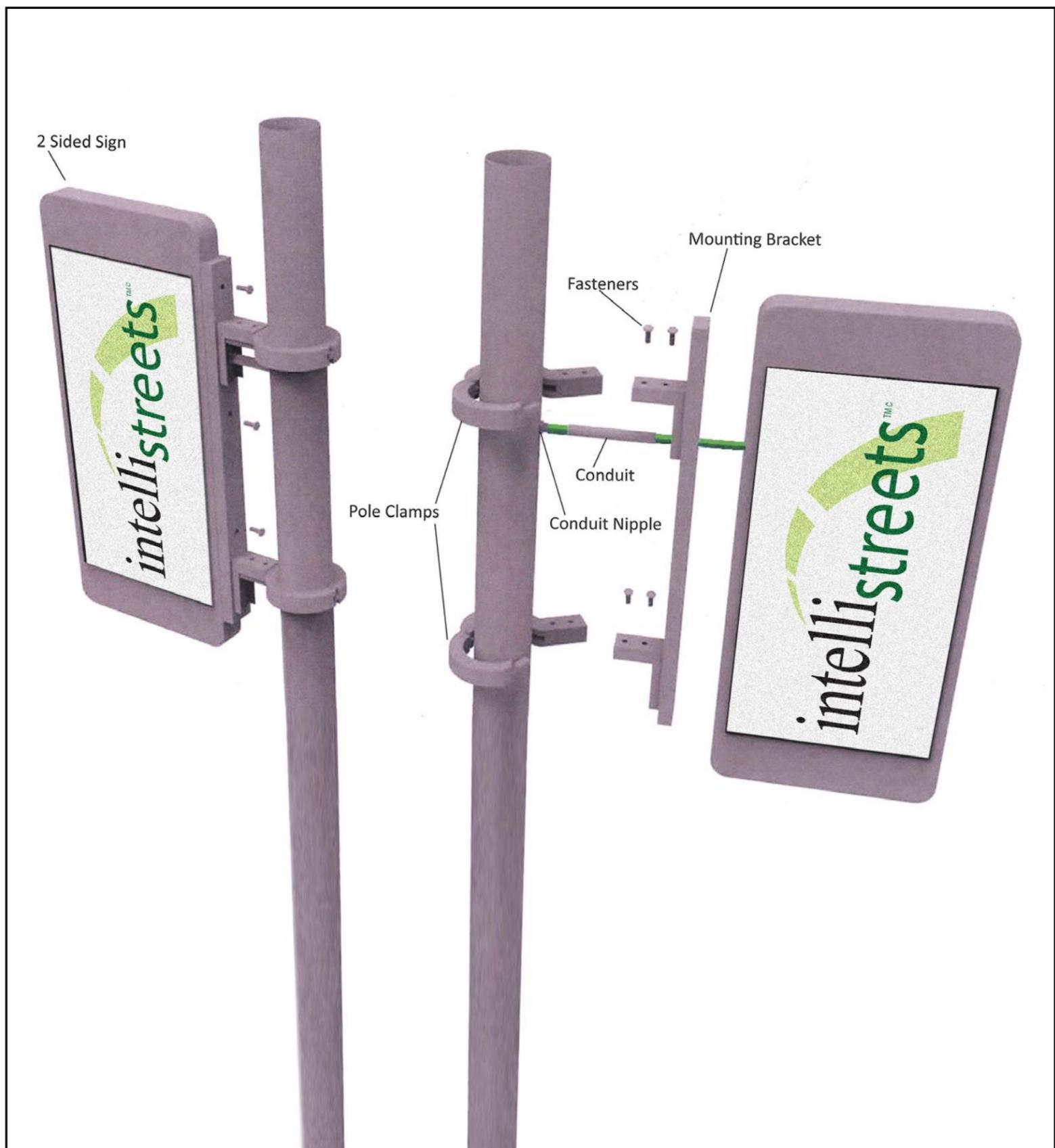
Emergency Call Station (Optional)

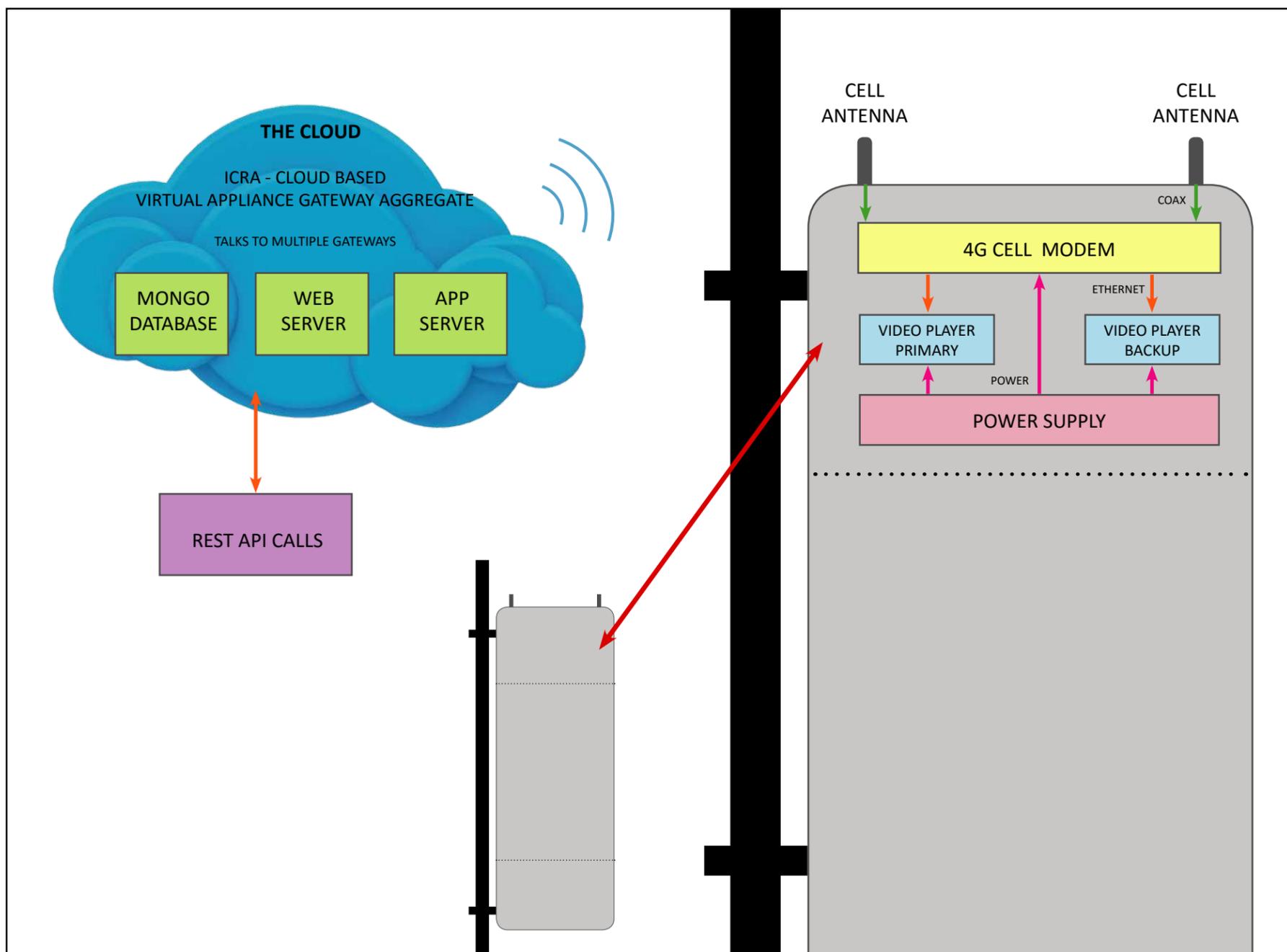


Many luminaire, pole and base styles available

Digital LED Banner - Features

The Intellistreets Digital Banner is a rugged, IP65 rated LED display delivering excellent brightness and contrast levels even in direct sunlight. Designed to resemble a typical double-sided vinyl banner the display system includes all components necessary to deliver on-demand messaging to the typical street corner. Key components of this system include the 6mm pitch LED display, Video Playback Module mounted internal to the display, and access to the Intellistreets web-based Virtual Communication, allowing easy upload and scheduling of all content.





The Intellistreeets Gateway module provides a secure connection from the Luminaire installed wireless controller units to the Intellistreeets cloud-based Virtual Command Center (VCC). The Gateway is provided with the same high power radio unit placed in each luminaire and then programmed with Intellistreeets proprietary compressed data-throughput software delivering the most secure and robust connections possible.

The Gateway module comes in 2 versions:

- Power/Over Ethernet Version (PoE) that can be mounted externally to a surface, structure or pole, and connected to the customer’s existing internet connection.
- Verizon M2M 4G-LTE cellular version that can be mounted anywhere.



Gateway Key Features - Standard

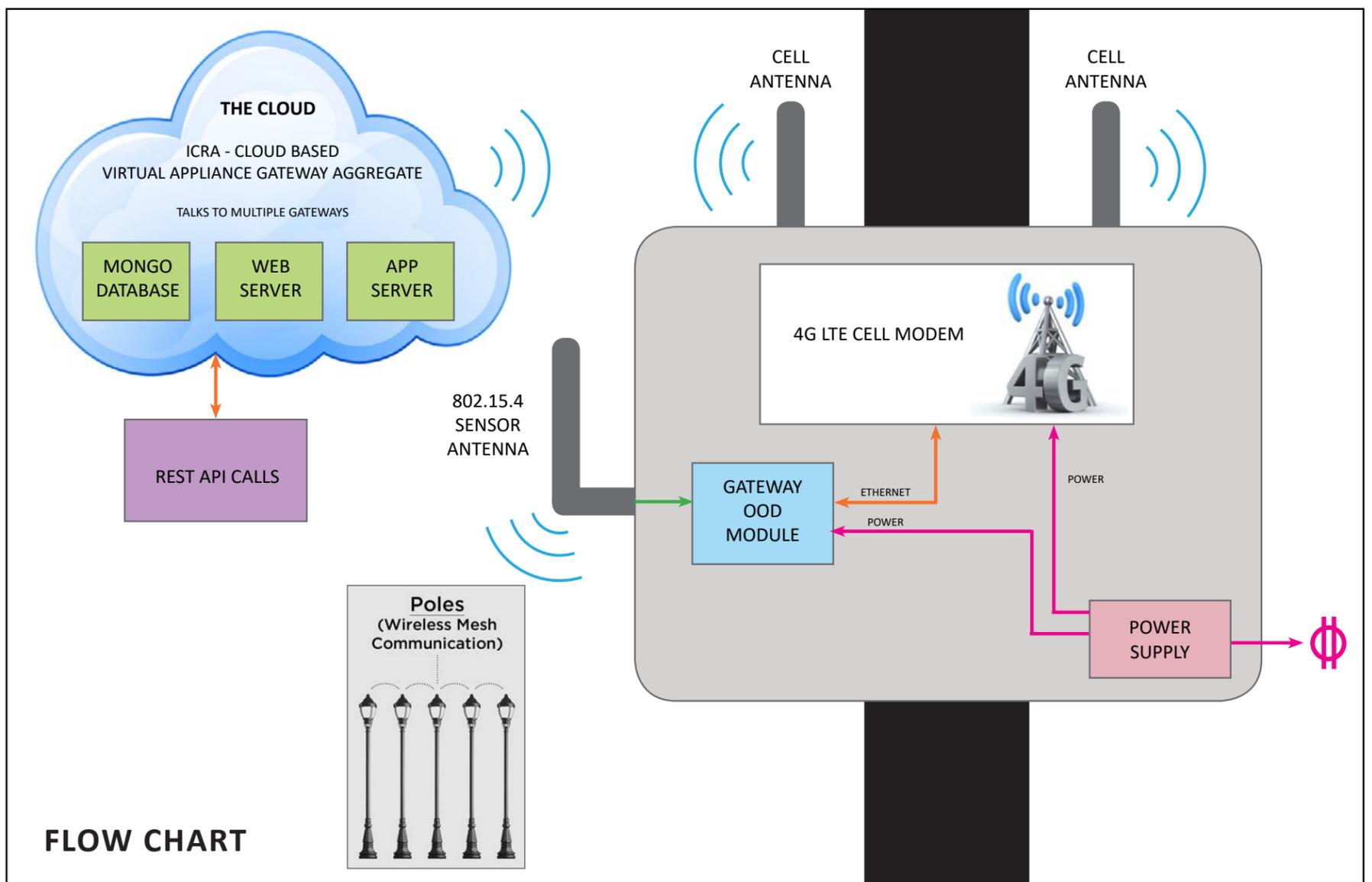
- Small Lightweight Weatherproof Enclosure
- Up to 5,000 feet to first node (Line of Sight)
- Low Power Consumption
- Compressed Data-Throughput Strategy

Power/Over Ethernet (PoE) - Option

- Power & Communications over CAT5 network cable
- Gateway must be installed within 100 meters of network switch

Cellular Unit

- Provided with 4G Cellular CDMA or EVDO Modem



The Intellistreets Gateway module provides a secure connection from the luminaire installed multi-media units to the Intellistreets Cloud based Virtual Command Center (VCC). The Gateway is provided with the same high power dual radio ECM core as the units placed in each luminaire and then programmed with Intellistreets proprietary compressed data-throughput software delivering the most secure and robust connections possible.

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Gateway Key Features - Standard

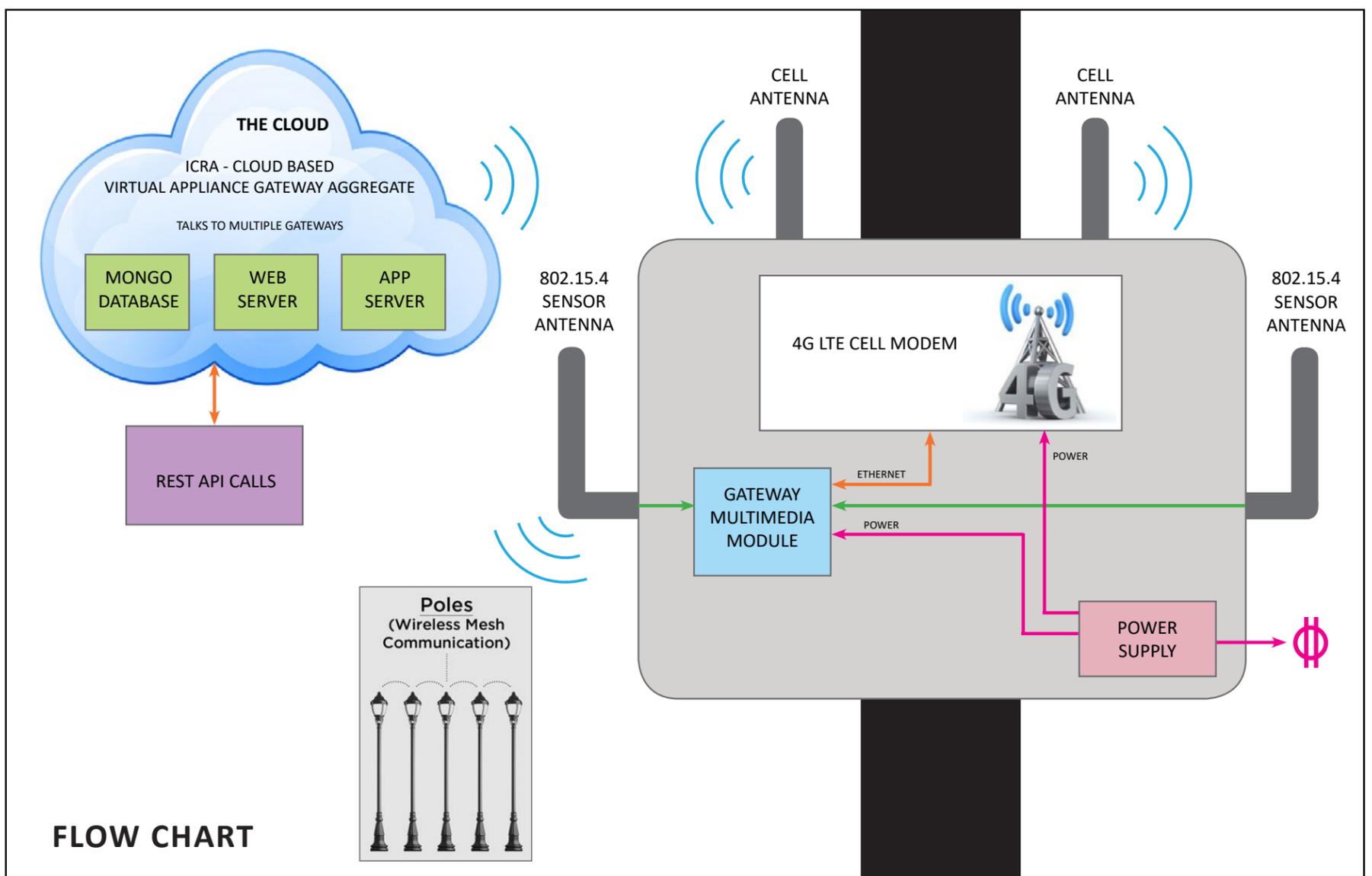
- Small Lightweight Weatherproof Enclosure
- Up to 500 feet to first node (Line of Sight)
- Low Power Consumption
- Compressed Data-Throughput Strategy

Power/Over Ethernet (PoE) - Option

- Power & Communications over CAT5 network cable
- Gateway must be installed within 100 meters of network switch

Cellular Unit

- Provided with 4G Cellular CDMA or EVDO Modem



The Intellistreets Gateway module provides a secure connection from the Luminaire installed ECM units to the Intellistreets Cloud based Virtual Command Center (VCC). The Gateway is provided with the same high power dual radio ECM core as the units placed in each luminaire and then programmed with Intellistreets proprietary compressed data-throughput software delivering the most secure and robust connections possible. An additional OOD module is included and connects via the same 4G LTE modem.

The Gateway module comes in 2 versions:

- Power/Over Ethernet Version (PoE) that can be mounted externally to a surface, structure or pole, and connected to the customer’s existing internet connection.
- Verizon M2M 4G-LTE cellular version that can be mounted anywhere.



Gateway Key Features - Standard

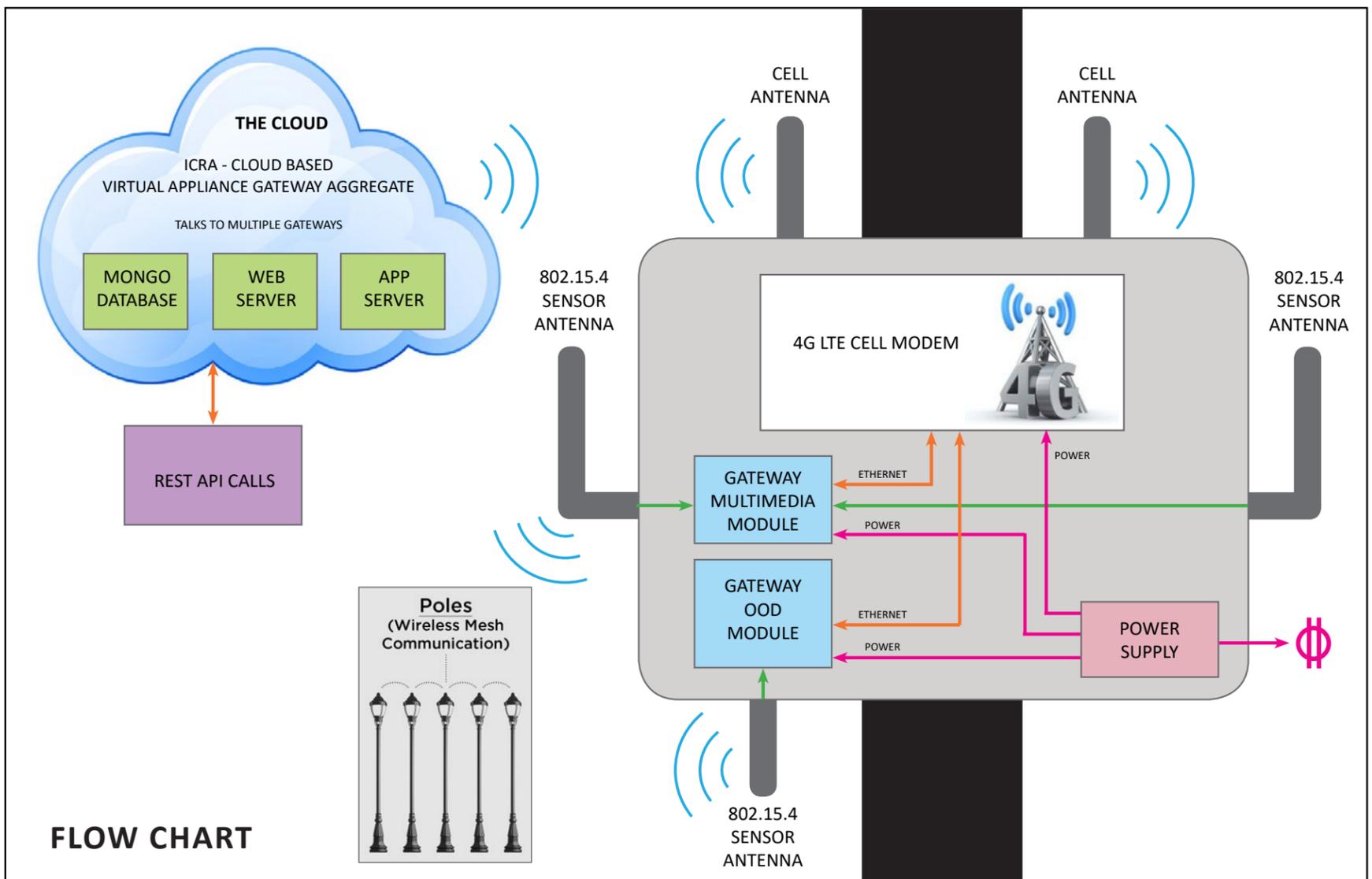
- Small Lightweight Weatherproof Enclosure
- Up to 5,000 feet to first node (Line of Sight)
- Low Power Consumption
- Compressed Data-Throughput Strategy

Power/Over Ethernet (PoE) - Option

- Power & Communications over CAT5 network cable
- Gateway must be installed within 100 meters of network switch

Cellular Unit

- Provided with 4G Cellular CDMA or EVDO Modem



FLOW CHART

On-Off Dim (OOD) Module - Embedded In A Luminaire Or Pole - Features



Dimensions

- 8.2" L x 2.3" W x 1.3" H

Features

- Utility Grade Power Monitoring
- Up to 80% Savings through smart dimming
- True On/Off functionality via switched relay
- Self-healing SNAP Mesh Networking
- Seamlessly integrates into the Intellistreets lighting control solution
- Relay closes on power loss
- Supports a wide range of LED drivers and fixtures
- Class 1/Class 2; 0-10V Dimming Control
- Direct Connect to 24V Occupancy Sensors and
- Photocells (consult sales for compatible list)
- Secure, over-the-air upgrades to support future enhancements
- Excellent RF Range- 1 mile Line of Sight (LoS) between controllers
- Available in a metal-cased version with quick connect terminal blocks
- Lights default to "on" for safety

Revenue Grade Energy Metering: Current, Voltage, Frequency, Power Factor, kW and kWh, and offer revenue grade metering accuracy for accurate consumption data and billing.

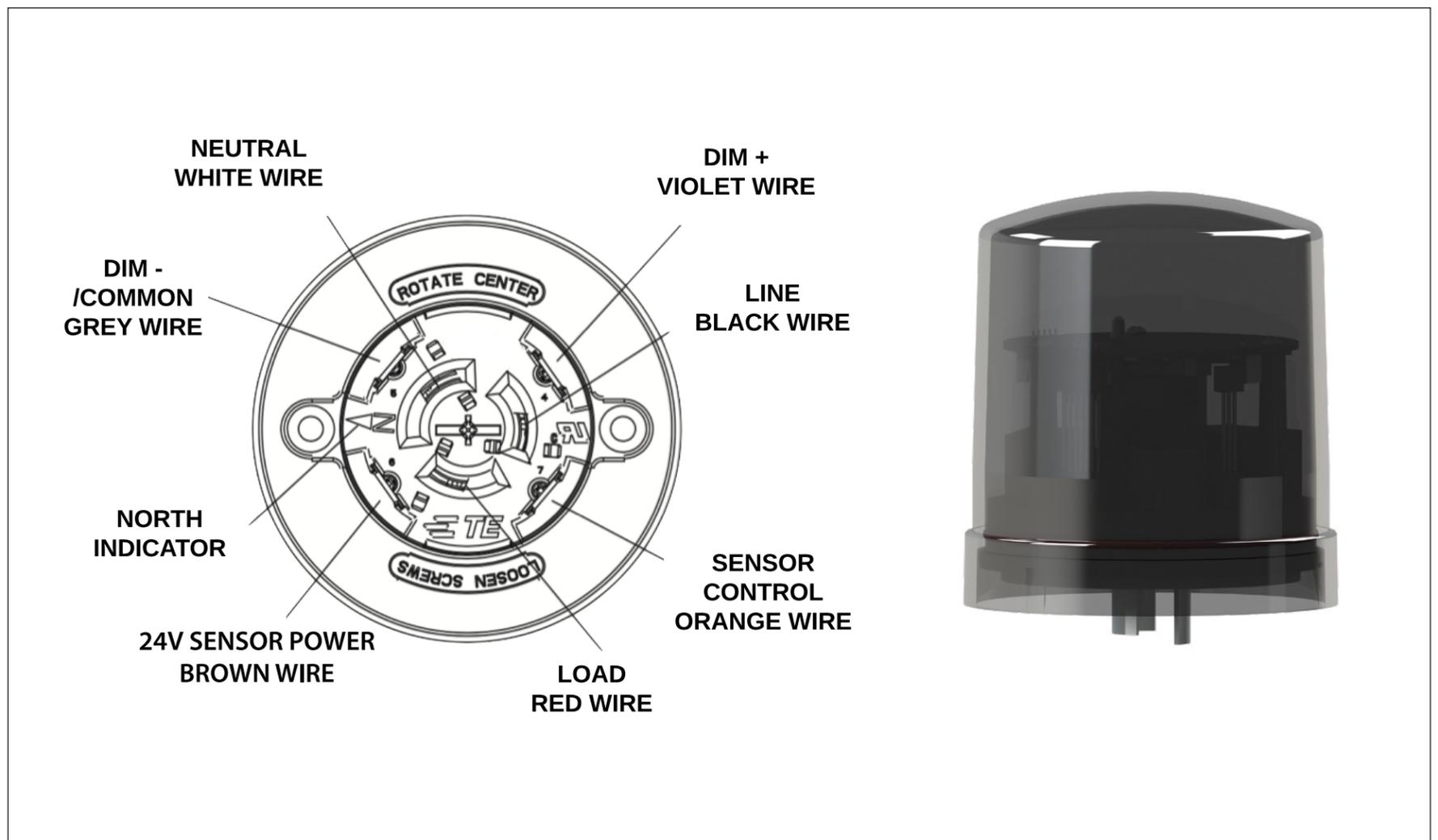
Fault Tolerance: This device utilizes the latest developments in self-organizing, self-healing, wireless technologies. Proper operation and execution of a light's schedule is not dependent on network communications.

Remote Control and Scheduling: Multiple lamp control modes such as user configurable ON/OFF/DIM schedules programmed on a daily/monthly/special events basis, local ad-hoc control, photocell and astronomical clock scheduling, and mixed mode scheduling incorporating sensor inputs.

Flexible Dimming Control: Dimming through 0-10 VDC, PWM or DALI interfaces.

Fault Monitoring: Extensive fault monitoring to report on day burners, burnouts, lamp cycling, ballast failures, over/under voltage, abnormal power consumption, low power factors, communication failures and more. Cloud-based management system for alarm routing, visualization and fault correction. Alerts can be sent directly to relevant users via email or text messages when they occur. Alerts are time stamped and contain key parameters associated with the fault/alarm.

On-Off Dim (OOD) Report - Twist Lock Lighting Controller



Dimensions	3.5" W x 3.86" H (88.6 mm W x 98 mm H)
Input Power	110-277VAC +/- 10% (Max 305V), 60Hz
Operating Environment	-40°C to +70°C; 0% to 90% RH non-condensing; IP66
Switched Output	Default ON
Load Rating	5A @ 110-277VAC (+/- 10%)
Surge Rating	6kV
Dimming Control	0-10 V with short circuit protection
Dimming Output	0-10V, 20mA
Radio	SNAP 2.4GHz; 802.15.4 +20dBm Transmit power -104dBm Receive Sensitivity
Sensor Input	0-24V Digital Input
Sensor Power	24V, 20mA
Power Monitoring	Utility Grade - 2% Accuracy
Power Readings	Voltage, Watts
Certifications*	FCC, IC, cULus, DLC
Warranty	5 Years

Features

- Integrated Photocell
- NEMA/ANSI C136.41 7-pin Dimming Receptacle Support
- Utility grade power monitoring
- Remote control and scheduling
- Flexible Dimming Controls
- Secure, over-the-air upgrades to support future enhancements
- Seamless integration into the lighting control system
- Digital sensor input for motion sensing
- 24V DC Power for Motion Sensors

Push Blue Emergency Call Station - Multimedia Luminaire - How It Works

1. User pushes illuminated button
2. Pre-recorded announcement is heard over the speaker in the multimedia luminaire
3. Call is made to a defined and secure phone (Callers Voice Heard)
4. The Multimedia Luminaire's notification light flashes blue & the sound system plays a pre-stored message
5. The first responder answers and their voice is heard over the loudspeaker
6. The caller speaks hands free
7. Call terminates when first responder disconnects

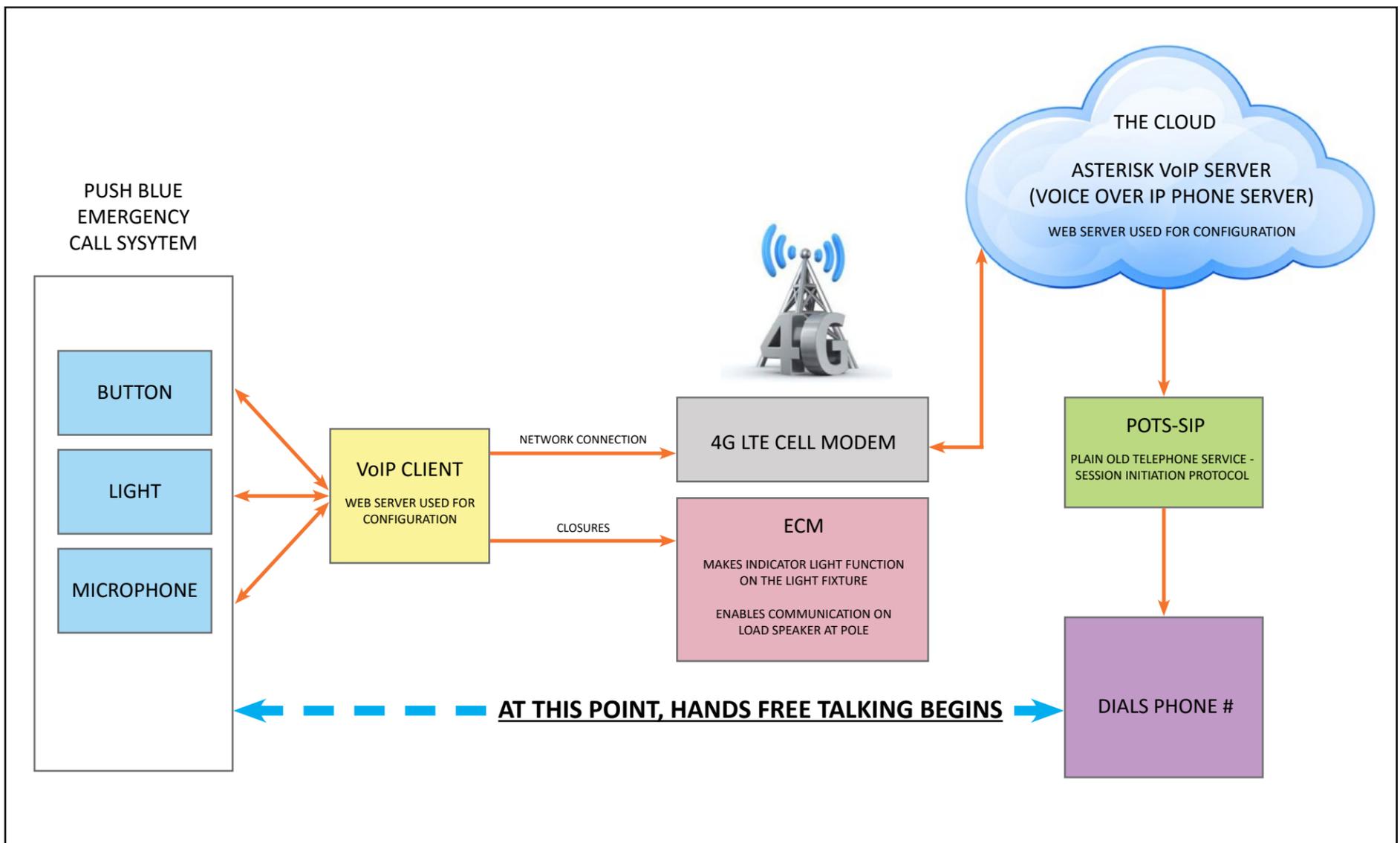


Push Blue Emergency Call Station - PTM Stand Alone - How It Works

1. User pushes illuminated button
2. Pre-recorded announcement is heard over the speaker in the PTM
3. Call is made to a defined and secure phone (Callers Voice Heard)
4. The PTM's notification light flashes blue & the sound system plays a pre-stored message
5. The first responder answers and their voice is heard over the loudspeaker
6. The caller speaks hands free
7. Call terminates when first responder disconnects



Push Blue Emergency Call Station - End To End Flow Chart



Integrated Luminaire Examples

- (Luminaires by Sternberg)



910 LED Boulevard Luminaire



910 LED Old Town Luminaire



910 LED Ripon Luminaire



910 LED Town Square Luminaire



910 LED Yale Luminaire



Solana LED Luminaire

Non-Integrated Decorative Luminaire Examples

• **(Luminaires by Sternberg)**

- For use with On-Off Dim (OOD) and PTM Options



A840 Old Town LED Luminaire
* use with PTM



1910 LED Reno
* use with PTM



E350 LED Euro Luminaire
* use with PTM



1914 LED Libertyville Luminaire
* use with PTM



1970 Gallery LED Luminaire
* use with PTM



1527 Omega LED Luminaire
* use with PTM

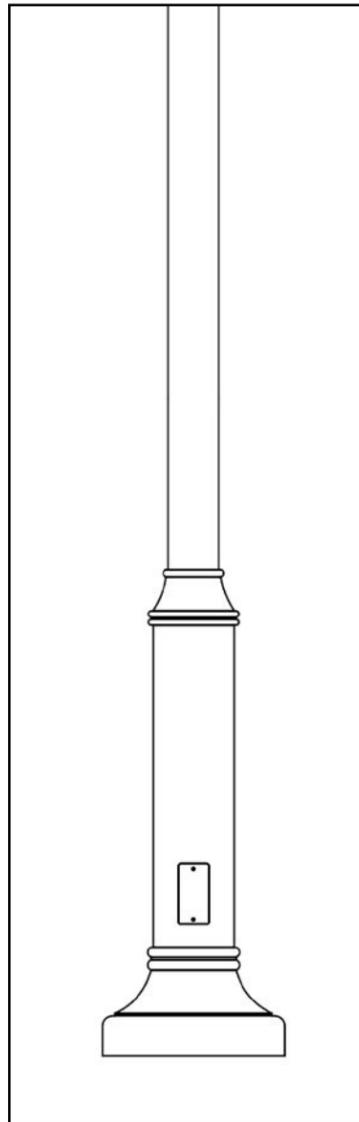
Non-Integrated Cobrahead Luminaire



AP650 Aspire LED Luminaire
* use with PTM or OOD

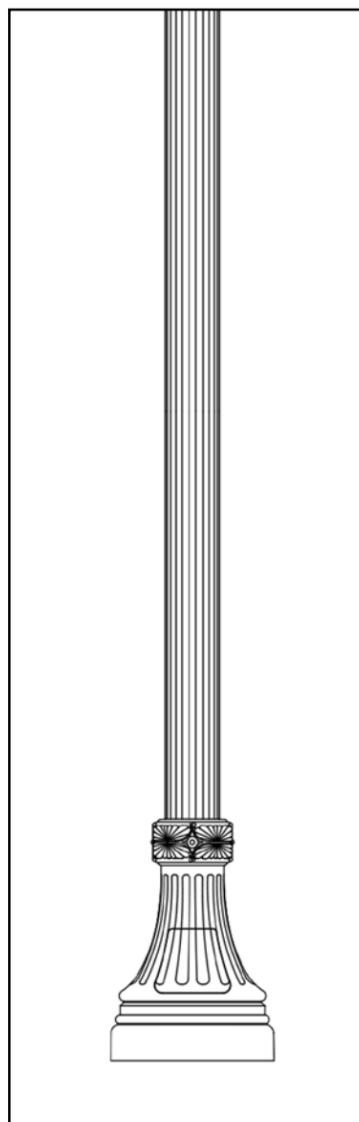
Pole Examples

- (Poles by Sternberg)



**3300 Gateway
Extruded Pole Options**

- Smooth Straight Shaft
- Smooth Tapered Shaft
- Straight Fluted Shaft
- 5" Outer Diameter
- 18" Diameter Base x 48" High
- Available in:
8', 10', 12', 14', 16', 18, 20'

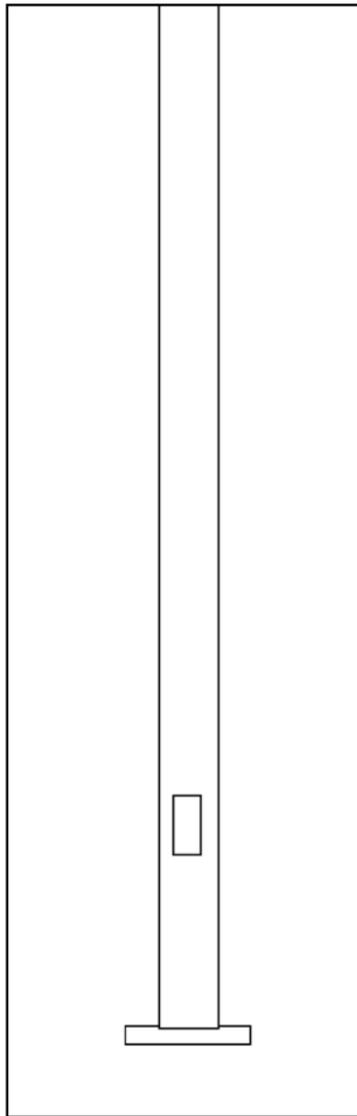
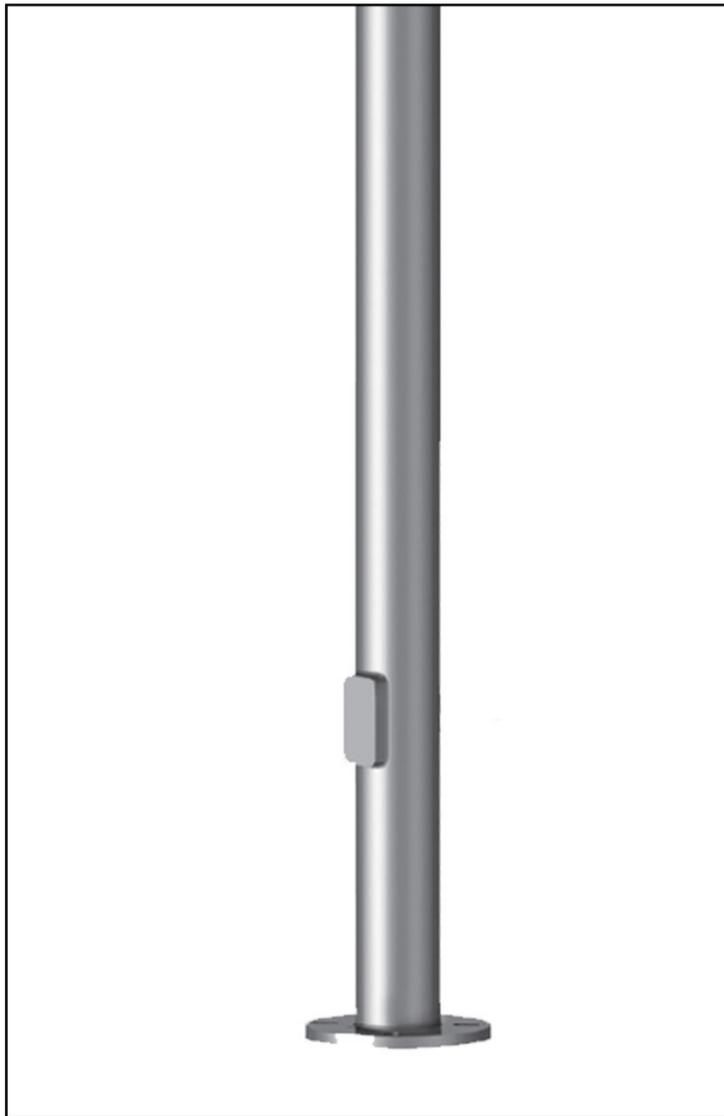


**6200 Oxford
Extruded Pole Options**

- Smooth Straight Shaft
- Straight Fluted Shaft
- 5" Outer Diameter
- 18" Diameter Base x 27" High
- Available in:
10', 12', 14', 16', 18'

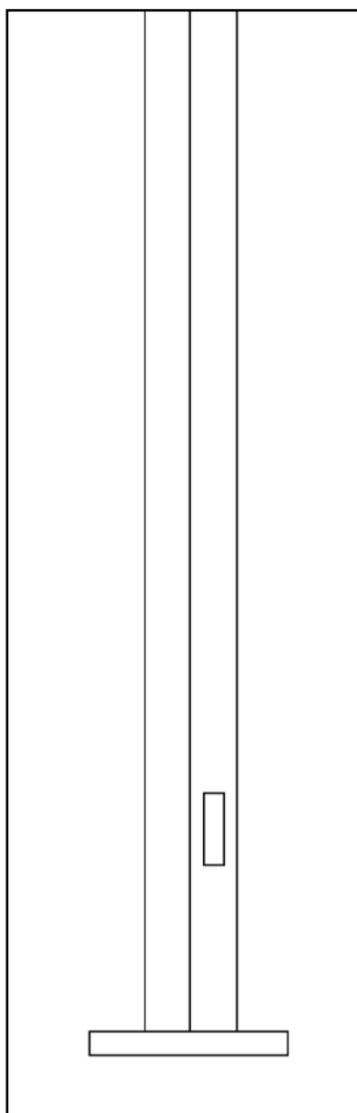
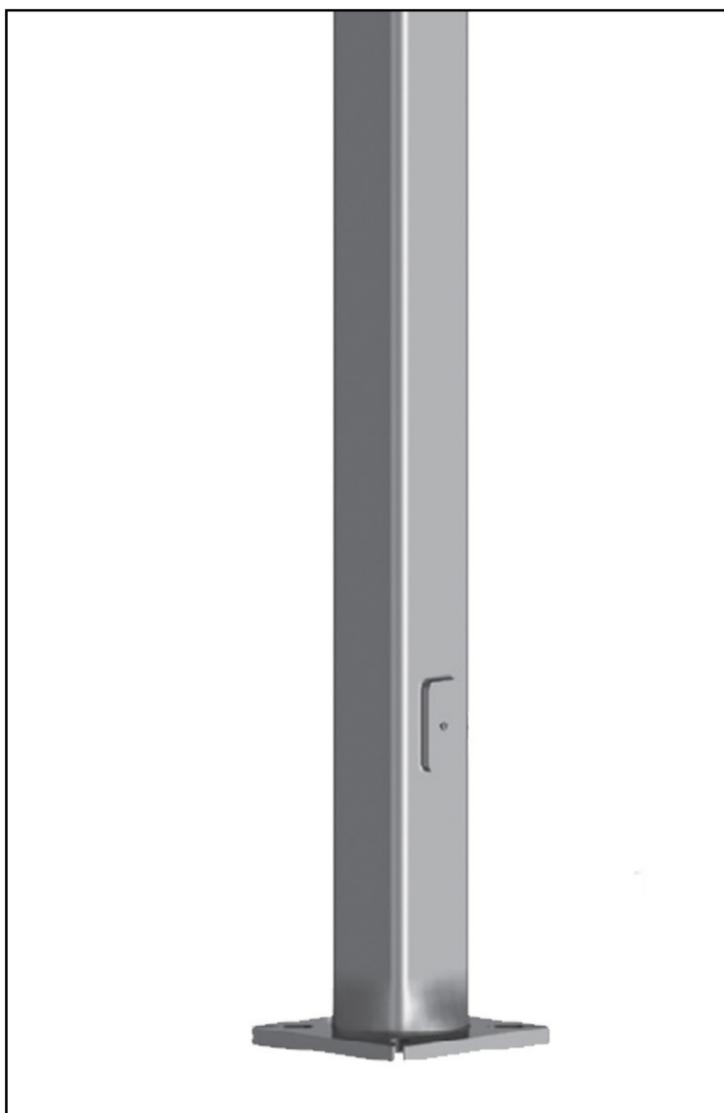
Pole Examples

- (Poles by Sternberg)



**UrbanLine
Extruded Pole Options**

- Round Straight Shaft
- 5" Outer Diameter
- 8" Diameter Anchor Base
- Available in:
10', 12', 14', 16', 18, 20', 25', 30'



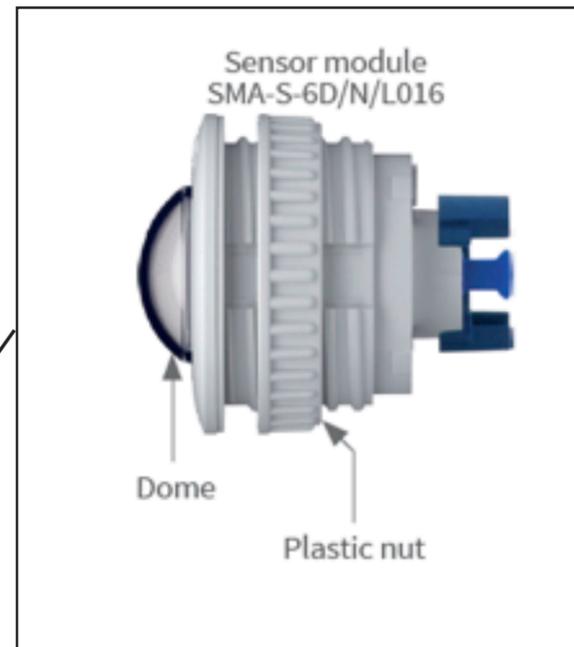
**UrbanLine
Extruded Pole Options**

- Square Straight Shaft
- 5" Outer Diameter
- 8" Diameter Anchor Base
- Available in:
10', 12', 14', 16', 18, 20', 25', 30'

Pole Features / i-Slot Camera



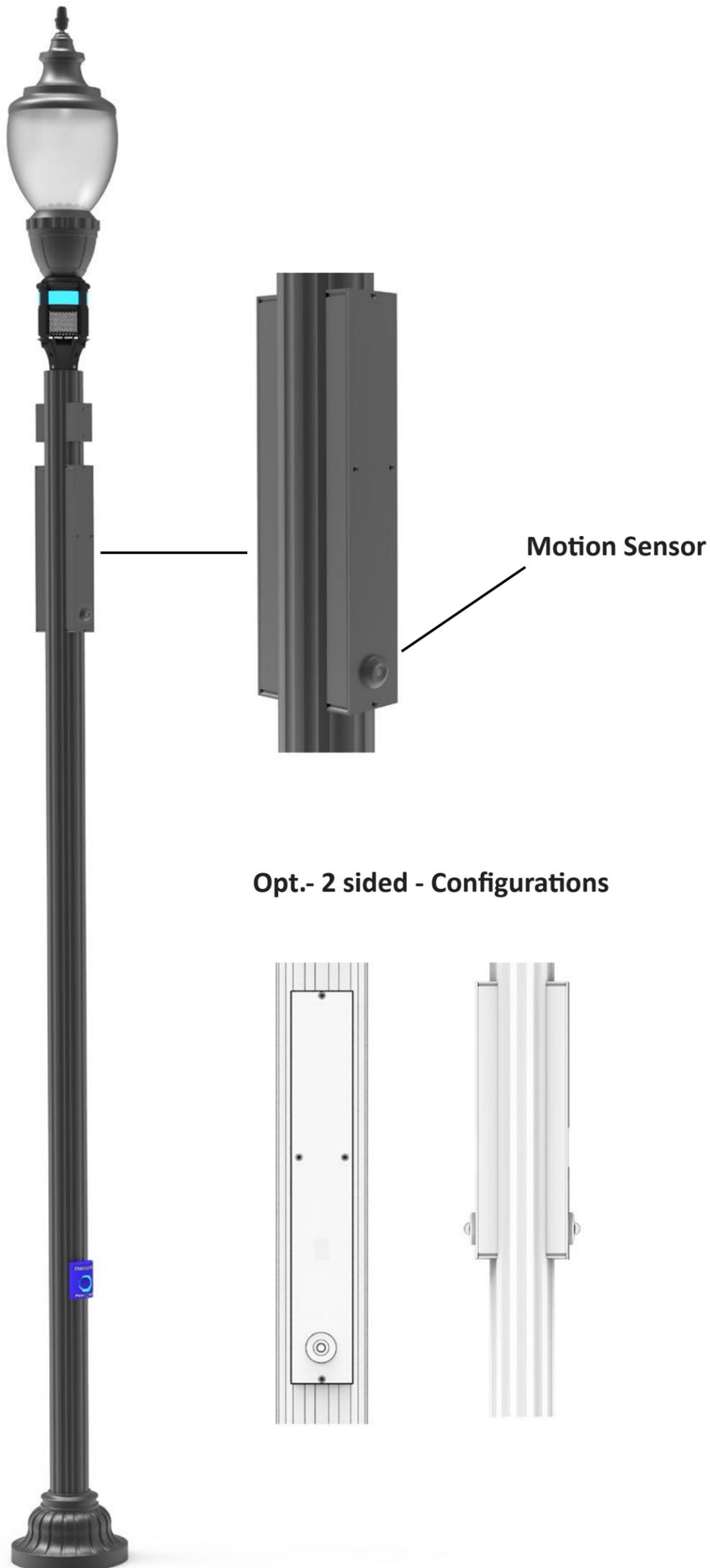
Robotix-Cam



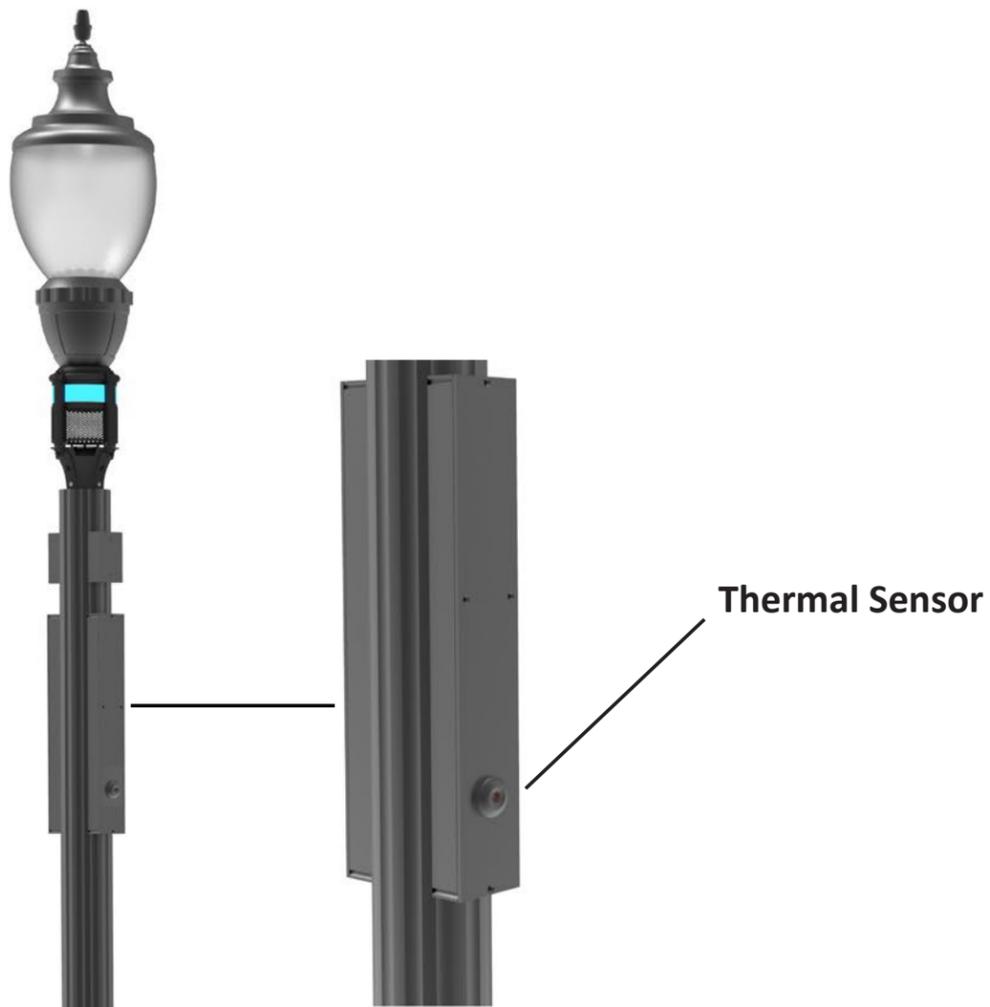
Opt.- 2 sided - Configurations



Pole Features / i-Slot Occupancy Sensor



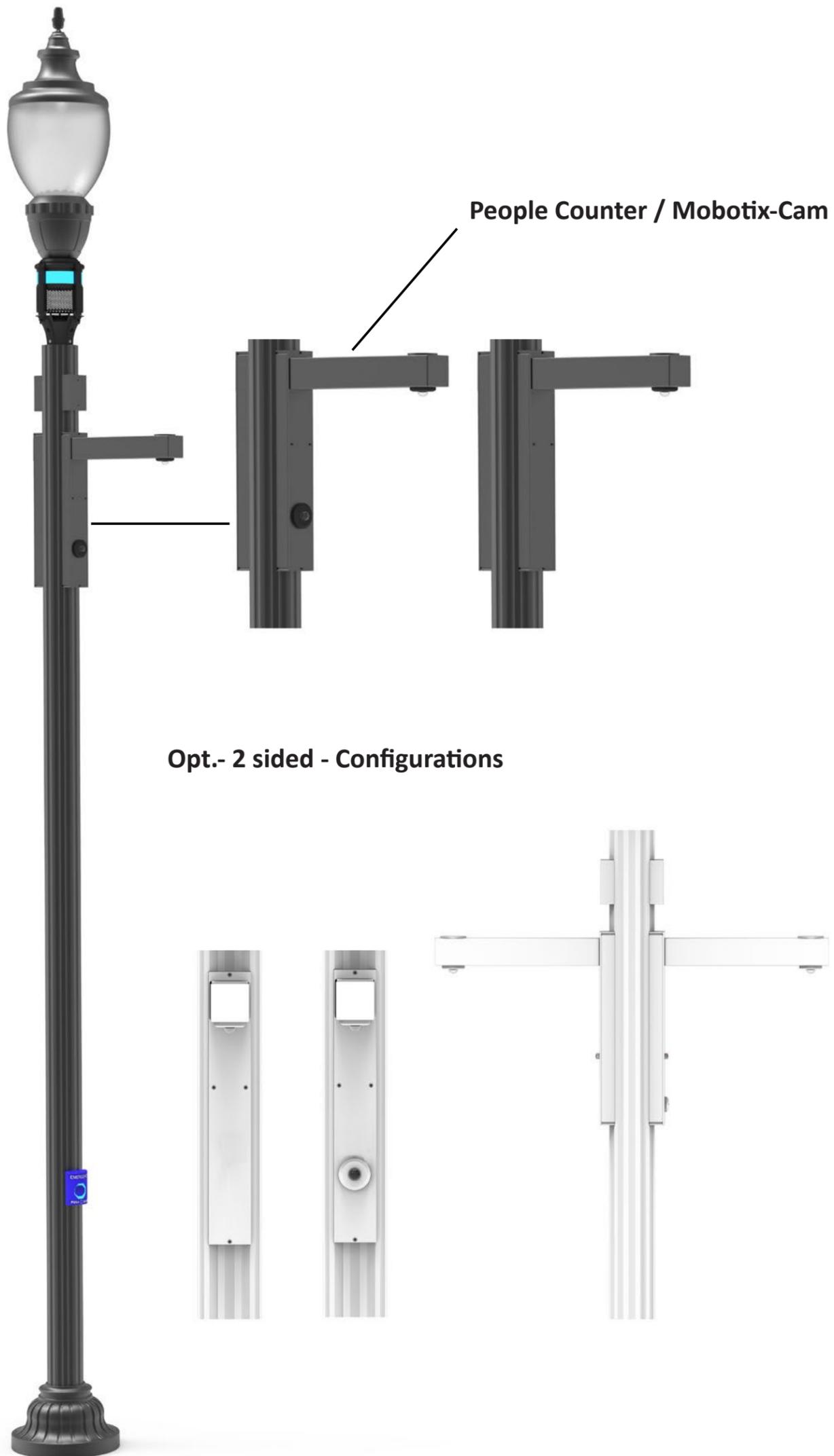
Pole Features / i-Slot Thermal Sensor



Opt.- 2 sided - Configurations



Pole Features / i-Slot People Counter



Pole Features - iSlot-WiFi



MR74 Dual Band Antennas

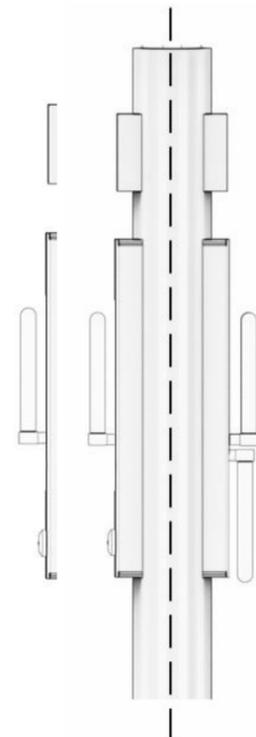


Antenna Configurations

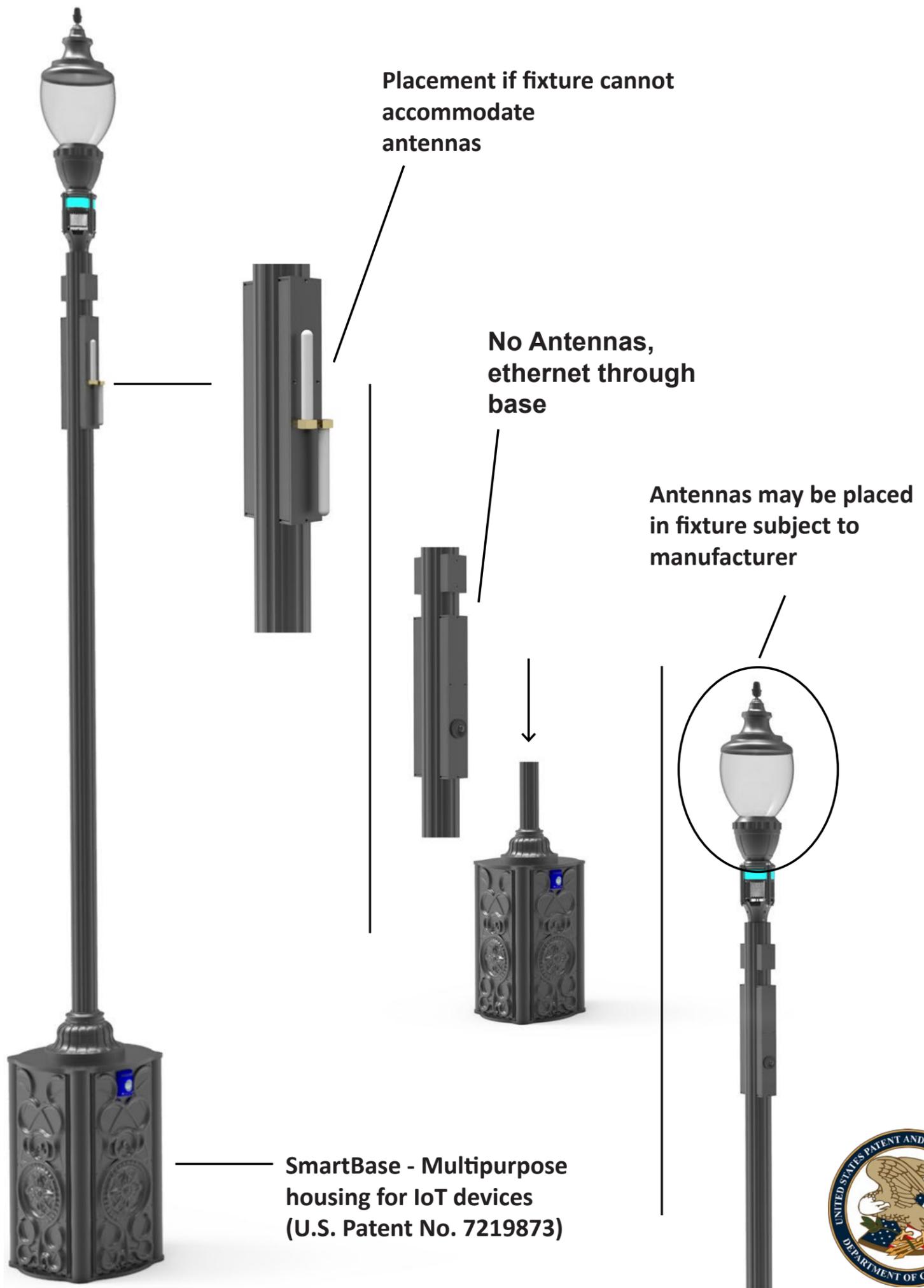


Reverse Side Configurations

(Thermal, Occupancy, Cam, People Counter) Opt..

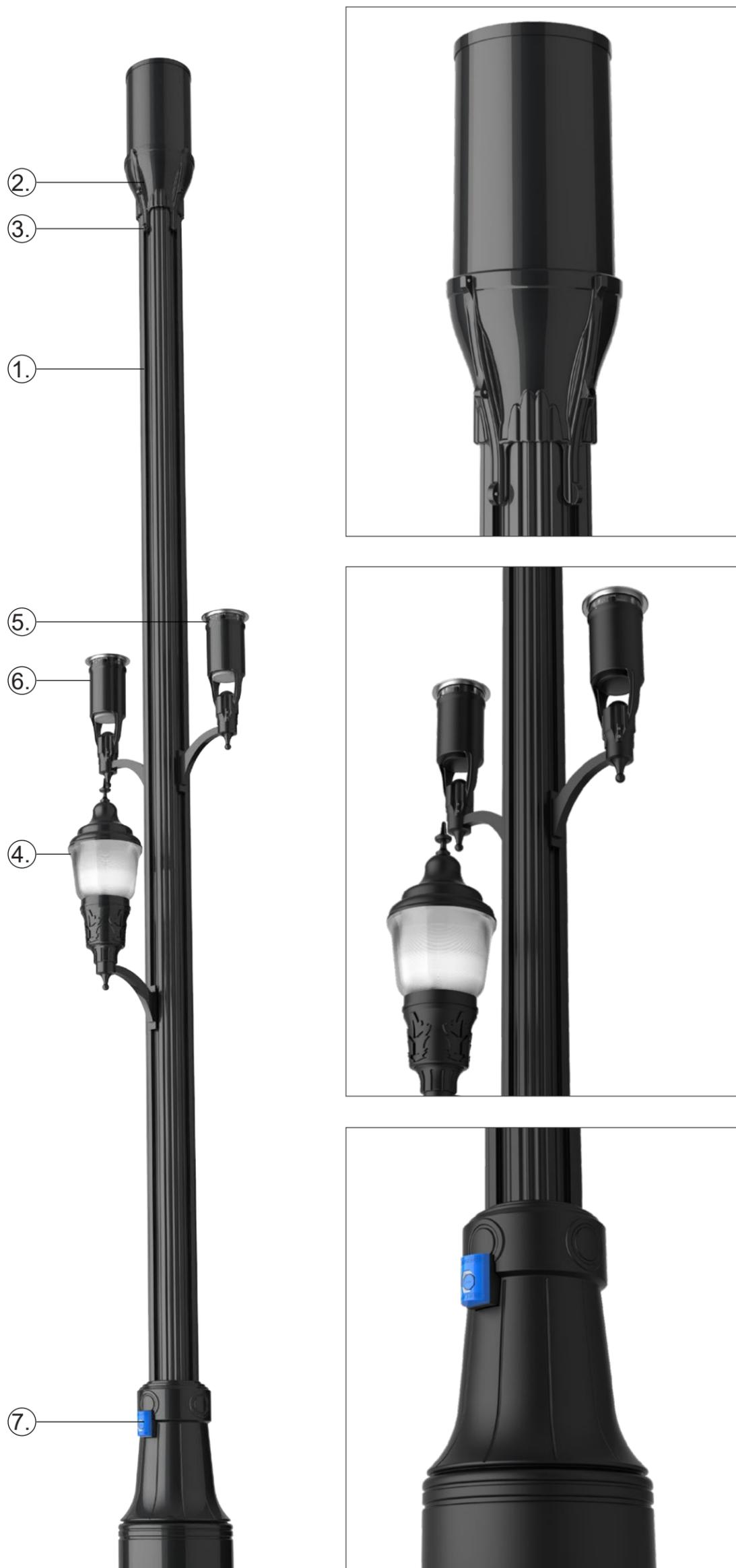


Pole Features - i-Slot Antenna Accommodations



*The base of the pole is RF transparent providing an effective location for placement of antennas for IoT devices.

Pole Features - Integrated 5G Small Cell Antenna



Safety First - Multimedia Smart Pole With Integrated Small Cell Antenna Mount

1. 25ft Painted Steel Pole With Hand Holes Black Finish
2. Small Cells Antenna To Pole Transition Cover
3. Integrated Small Cell Antenna Mount
4. LED Luminaire
5. PTM And Arm Mount
6. PTM Wireless Gateway And Arm Mount
7. Push Blue Emergency Call System





Intellistreets / **Catalog 2019**



SternbergLighting

ESTABLISHED 1923