infinium
solutionz unlimited

Illuminating
the future intelligently

Future Ready Streets With Intelligent Lighting

Streetlights are the pulse of our cities. They are the only known massive network of powered objects across the world that count over 281.4* million units! However, a vast number of them still work on the simple on-off legacy system which if calibrated on environment degradation, energy efficiency, operational costs and maintenance can pay us an overwhelming price. Since streetlights are vital in the development of our cities, the future of lighting inevitably lies in harnessing the power of intelligence. Streetlight is one of the omnipresent things in cities and societies which provide an opportunity to connect back through real sense IoT.

Infinium Solutionz, a market leader with IION, a line of intelligent power pack lighting solutions, provides a professional end-to-end network with an IOT based approach. Its revolutionary street lighting system puts control and efficiency directly in the citizen's domain. A comprehensive architecture using star topology based on RF technology allows remote monitoring and control of street lights with an in-depth analysis and health monitoring of the assets, networks and sensors providing environmental, financial and security benefits.

Key
Solutions

Real Time Monitoring and Control of Street Light

Infinium's smart solution provides real time monitoring and control of street light through dashboard itself. Real time power saving and power consumption information of area/street/zone can be monitored and controlled remotely.

Intelligent Scheduling with Motion Sensor

Street light can be scheduled intelligently with the help of motion sensor. This facilitates lighting based on 'where and when needed' approach. Street light scheduled with intelligent scheduling only lights up when some vehicle, pedestrian approaches it.

Scheduling over real time calendar

Real time calendar based scheduling can be enabled through Infinium's Street Light solution. Street lights automatically get dim, on and off based on the surrounding environmental illumination, in turn saving energy and money.

Remotely operated On/Off/Dimming Functionality

Street lights can be On/Off/Dim remotely through web based application. On/Off/Dim command can be sent to individual as well as group of lights at any time as per configuration.

Real Time Fault Detection and Alert Generation

Any fault or failure in executing command by street light is traced easily and appropriate maintenance steps can be taken. Street light solution software offers alert over such failure of faulty LED's and Gateway's.

Integrated IOT Platform

Intelligent Street light with low power, long range radio frequency communication technology facilitates easy integration of Internet of Things application. Any additional utility like surveillance camera, digital signage, video analytics can be easily integrated.

Personal Safety – SOS Alert

Any SOS request sent through smart application can directly locate a person with the help of intelligent solution. This is also valid when the person is offline and in turn helps in increasing the safety of an individual.
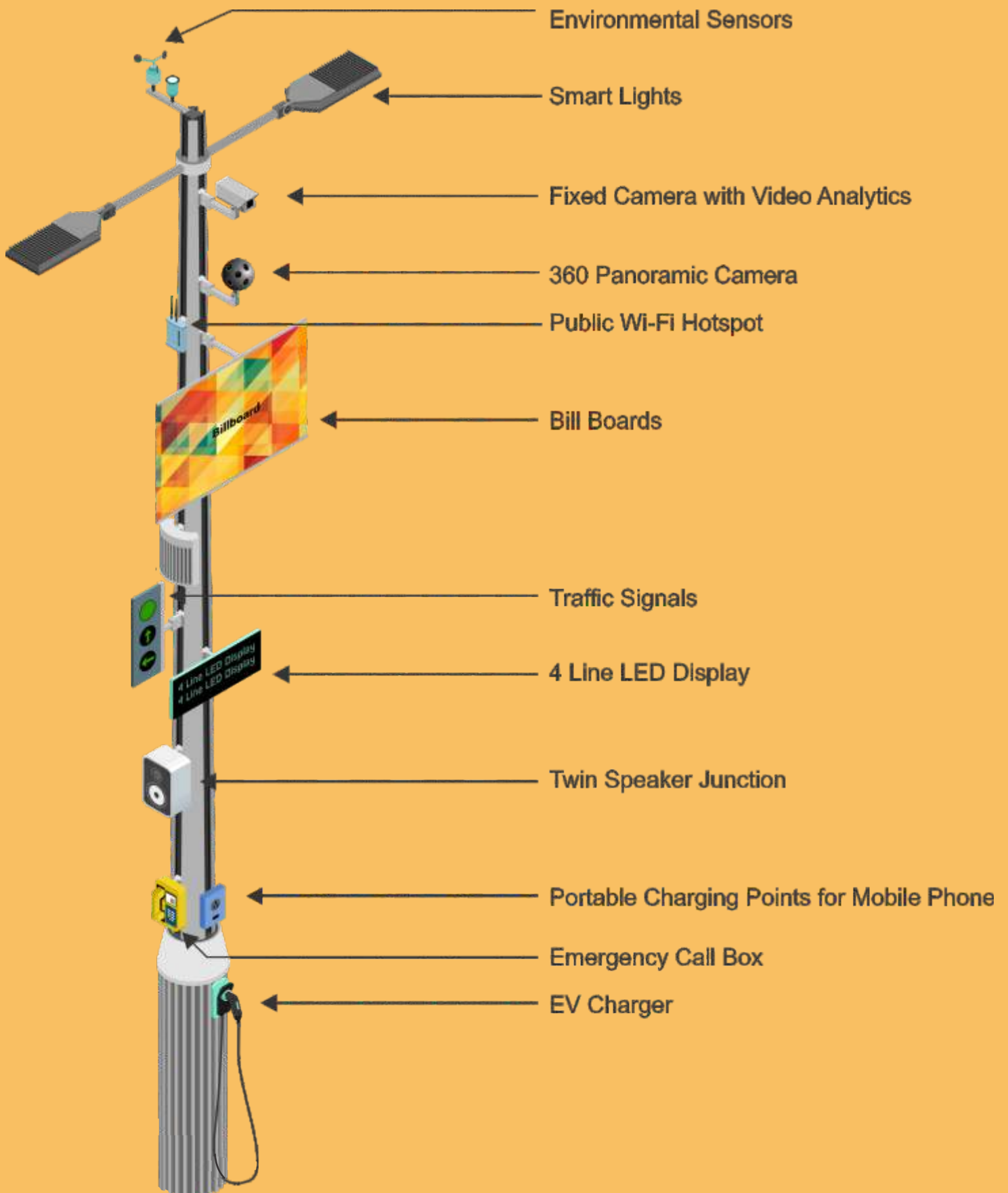
Tracking

Smart street light controllers at each street light can track activity of any valuable asset/person/device, only thing required is a Smart phone a beacon having unique identity linked to our software. Beacon's range is captured by smart controller within range of 90 meters. This system can easily identify the travel path of the object as well as last detected location.
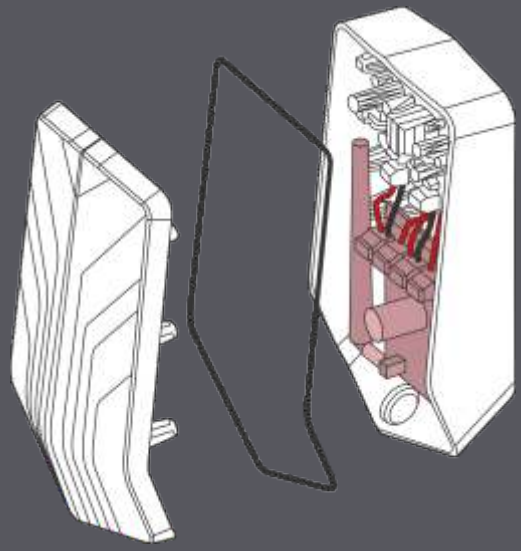
Smart pole

Our unique Smart pole design provides flexibility to integrate customized features to match user requirements. Some of the features that can be incorporated in our smart pole are; LED Light, Surveillance Camera, Motion Detection Sensor and Wi-Fi, EV Charging etc.

Smart Lighting Pole

- Environmental Sensors
- Smart Lights
- Fixed Camera with Video Analytics
- 360 Panoramic Camera
- Public Wi-Fi Hotspot
- Bill Boards
- Traffic Signals
- 4 Line LED Display
- Twin Speaker Junction
- Portable Charging Points for Mobile Phone
- Emergency Call Box
- EV Charger

Gasket Casing

- Waterproof & dust proof design for Master and Slave units with safe and reliable gasket having IP65 rating.
- Gasket is self-aligning and centering.
- Quick to install and no special tools are required.

IION is one of a kind smart streetlight with extraordinary features which helps your city to utilize energy efficiently and it adds extra value to your massive streetlight infrastructure and utilizes it in daytime also with features like asset tracking and emergency alerts (S.O.S feature), etc.

It works on LoRa technology. LoRa is long range, low power wireless platform. It is the prevailing technology choice for building IoT networks worldwide. IION can be used to upgrade existing streetlight system as well as configured with new streetlight systems. IION nodes work with any dimmable LED controllers. IION will not only help you reduce your electricity consumption but it will also help you reduce maintenance cost with our health check feature. IION give you full control of your streetlight system with our software IION Live. IION Live includes Realtime Operational Dashboard which features realtime electricity consumption trends, current Lux level, Policy configuration, scheduling, etc.
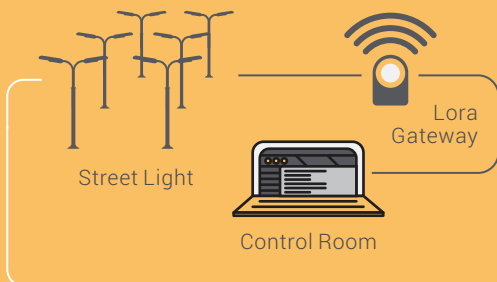
Product List

IION Essential

IION Node	Slave
IION Node +	Master
IION Whiz	Star Topology, Safe & Secure, Astronomical Clock, Automatic Firmware Update
IION Engine	Policy
IION Control	Remotely Monitor and Control
IION Live	SW

IION Advance

IION Diagnostics	Health Check and Maintenance
IION Alert	SoS
IION Sense	Ambient Condition Sensor, Node Power Sensor, Junction Power Sensor

IION SMART STREET LIGHTING SYSTEM

Iion Node

Street Light

Lora Gateway

Control Room

Connected Lights
· On / Off / Dim / Faulty
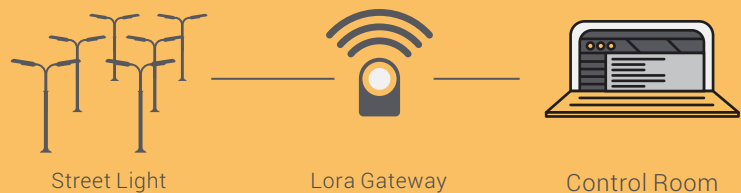· Current Power Consumption
· Current Power Saving

67% Energy Saving
1. 50% Lumens From 6PM to 7PM
2. 100% Lumens From 7PM to 12AM
3. 40% Lumens From 12Am to 5AM
4. 50% Lumens From 5AM to 6AM

Iion Whiz

Secured Communication
· Stay Communication Topology
· Safe & Secure Date Exchange
· Astronomical Clock
· Automatic Firmware Update

Street Light

Lora Gateway

Control Room

Iion Engine

Lighting Policy & Scheduling
· Based on Lighting and Power Saving Needs

Iion Control

Remote Control
On / Off / Dimming
· Remote Controlling
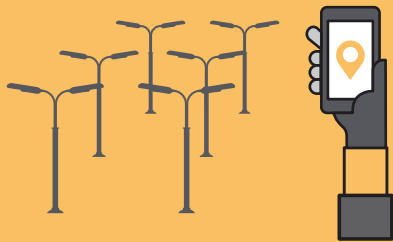· Real time Status Response

Ilon Live

Software Solution
- Real time Operational Dashboard
- Policy Configuration, scheduling, Direct Command
- Reports & MIS

Ilon Diagnostics

Health Check
- Asset Health Diagnostic
- Optimize Maintenance Cost

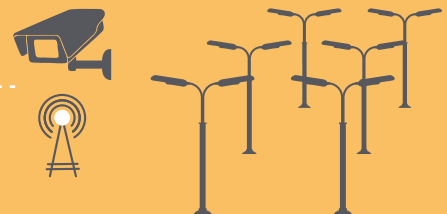**Up to 50% Cost Saving**

SOS Alert

Offline Panic Response
- Citizen Safety through offline Response to Emergency Alerts

Ilon Sense

Smart Pole
- Ambient Condition Sensor, Node Power Sensor, Junction Power Sensor
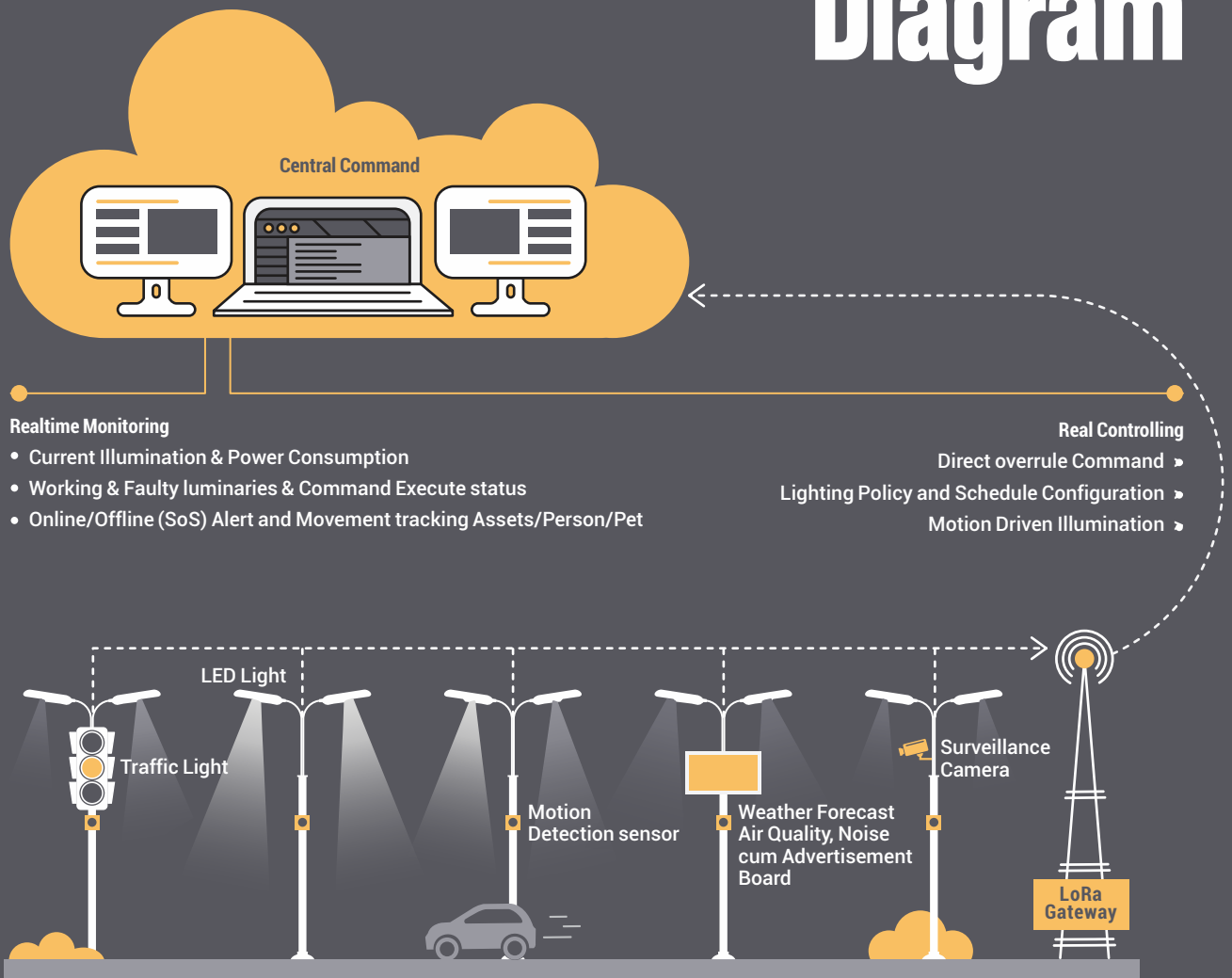
Up to 40% Cost Saving

Ilon Track

Ubiquitous Presences
- Rescue Support by indentifying last tracking pole
- Vehicles, Critical Asset, People, Pet, Mobiles, Etc

Architecture Diagram

Central Command

Realtime Monitoring
- Current Illumination & Power Consumption
- Working & Faulty luminaries & Command Execute status
- Online/Offline (SoS) Alert and Movement tracking Assets/Person/Pet

Real Controlling
Direct overrule Command »
Lighting Policy and Schedule Configuration »
Motion Driven Illumination »

LED Light

Traffic Light

Motion Detection sensor

Weather Forecast Air Quality, Noise cum Advertisement Board

Surveillance Camera

LoRa Gateway

Benefits and Objectives Served

Smart street lighting serves an important purpose in the grand scheme of making the cities Smart, with a major aim of reduction in energy consumption and avoidance of energy diffusion.

- Real-time monitoring and control of street light becomes easy through dashboard, which helps in multiplying efficiency.

- IIon works on LoRa technology, which will prevent malfunction in one street light to affect another one.

- Energy costs are immediately reduced through intelligent targeted progressive dimming and efficient management of the electricity consumption.

- Reduction in maintenance cost, result of our smart control system which detects a light failure and other maintenance problems in real-time so that most malfunctions can be fixed quickly without any physical inspection to find faults.

- Overall operational costs can come down through detailed maintenance if preventive measures are taken based on system generated reports.

- Massive streetlight infrastructure can be efficiently utilized during the daytime with our one of a kind tracking feature.

- With revolutionary feature like SOS alert, this solution Increases Citizen safety and allows police control room to get location of distress signal within seconds.

- This energy efficient solution helps in improving environment by reducing the CO2 emission in the atmosphere.

Differentiators

Subject Matter Expertise

The team brings extensive research and application principles to guide clients in proper implementation and execution of the project. Providing the best technological solutions help Organizations achieve their business objectives.

Innovation

Constant effort of bringing new technologies by anticipating future consumer behavior and risk factors helps in making future – safe investment and realization time. Experience working at Different levels ensures that the solution is well integrated.
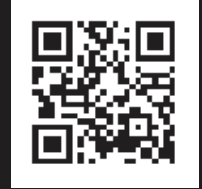
Broad Project Experience

Infinium has completed numerous projects across various geographic areas; the understanding of various business needs along with policy risks and compliance factors help the projects to run on scheduled time and avoid disruptions.

Product Fitment

Infinium offers a clearly differentiated product that is secure, flexible, compliant, robust and scalable. The services offered with the customization options guarantees a strong fit with the business model.

Certifications

CMMi LEVEL 3   ISO 9001:2008 CERTIFIED   TRAC

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