



STREETLIGHT.VISION OVERVIEW

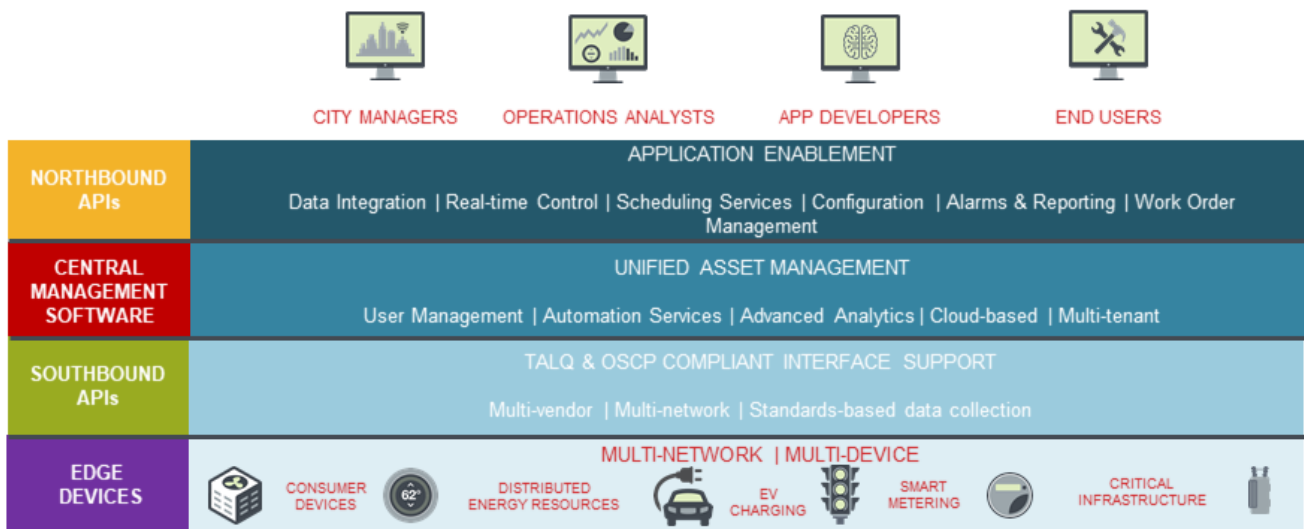
A SMART CITY AND SMART OUTDOOR LIGHTING SOLUTION

About Streetlight.Vision

The Streetlight.Vision CMS provides smart city and smart outdoor lighting projects with energy and maintenance savings while enhancing lighting service quality and safety in the street. The architecture of the Streetlight.Vision, illustrated in the image below, is designed to reach these goals without losing its robust, adaptable, and evolutionary capabilities.

ITRON SOLUTION

Manage all connected assets with open data governance for uses



NETWORKED LIGHTING CONTROLLERS (NLC)

In Area 1 of the Streetlight.Vision image (see above) end devices (and particularly networked lighting controllers (NLCs) are installed in the field to control and monitor a particular device. Such devices can include:

- » LED luminaire
- » weather station
- » street light cabinet
- » pollution sensor
- » electricity load
- » traffic controller or camera
- » and others.

These devices communicate using wireless technologies with their Access Points (or gateway) or over power-line with their segment controller. End-devices:

Send data (such as voltage, current, power, energy, lamp burning hours, and more) back to the gateway or segment controller

Receive commands (like ON/OFF switch and dimming for LPCs) to control and configure the device (for example, control program and calendars).

The Streetlight.Vision solution is open. In other words, it supports more than 40 types of end-devices and LPCs from more than 20 manufacturers using various wireless or power line control systems and protocols such as:

- » LonWorks over power-line
- » Philips Starsense wireless
- » Telematics Wireless
- » Thorn Zigbee 2.4 GHz wireless
- » Citybox high-bandwidth power-line
- » Dazzletek wireless
- » Itron Networked Solutions IPv6 wireless
- » LED Roadway Lighting Lumen IQ wireless system
- » INESO KNX wireless
- » and several others.

Thanks to the support of all these technologies, the Streetlight.Vision CMS offers control, command, and monitor capabilities of many type of end-devices, including:

- » LED luminaires
- » environmental sensors, cameras
- » conventional HPS/MH luminaires
- » trash-bin containers
- » energy meters
- » traffic control devices
- » electrical vehicle charging stations
- » and others.

Segment Controllers (SC) or Gateways (GW)

Area 2 of the Streetlight.Vision image describes how most power-line control systems supported by the Streetlight.Vision CMS rely on a segment controller (SC). The SC is usually installed inside the street light cabinet that also controls, commands, and monitors the cabinet itself (the cabinet includes contactor, energy consumption, and cabinet alarms). Most wireless control systems supported by the Streetlight.Vision CMS rely on gateways (GW) that communicate with end-devices. SCs and GWs are designed to exchange data with the CMS and provide the following services:

Log data sent from each end-device, and then send it to the Streetlight.Vision CMS

Receive commands from the CMS to control/command/monitor end-devices in real time

Receive control programs (also known as schedulers) and calendars from the CMS and deploy them to the end-device (applies to LPC) to run them in automatic mode

Receive configuration parameters from the CMS to configure the end-device correctly (for example, alarm threshold)

Central Management Software (CMS)

Area 3 of the Streetlight.Vision image illustrates how the CMS can be installed either on your own server or in the Streetlight.Vision CLOUD. The CMS controls, commands, and monitors power-line or wireless SCs or GWs from various manufacturers, gets historical data logs from each SC/GW, and filters and aggregates all the historical data in its central SQL database.

The CMS also provides a comprehensive north bound web service interface (also known as the API) that enables custom applications to receive data and services from the CMS. Such data can include information about:

- » inventory
- » data analytics
- » advanced alarming
- » scheduling
- » reporting

Additionally, the CMS features real-time control integration with your asset management tool simplifies metering/billing.

The CMS platform provides smart city applications thanks to its open data model and its support of many types of protocols and devices:

- » LPC
- » electrical vehicle charging stations
- » SC
- » environmental sensors
- » GW
- » and others.
- » energy meters

End-User Web Front-End

Area 4 of the Streetlight.Vision image illustrates how end-users benefit from Streetlight.Vision's web front-end advanced and intuitive applications. The web front-end is 100% web-based and is developed with HTML5 (JavaScript, CSS) technologies. No software installation is required on the end-user's computer. The web front-end provides intuitive web applications for:

- » user management
- » reporting
- » equipment inventory
- » real time command/control on maps
- » failure analysis
- » analysis of the end-device running hours
- » advanced alarm management
- » and more.
- » energy analysis



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