Smart Street Lighting for Smarter Cities
OpenSky IoT Pole Mount
v2023.04.06
Why invest in Smart Streetlights?

**60% - 80% Energy Savings**

Dimming streetlights with predefined schedule and smart sensors significantly cuts energy waste.

**Predictive Maintenance**

Proactive alerts / notifications for faults, alarms or outages optimise maintenance and substantially reduce operational costs.

**Total Infrastructure Control**

Connected streetlights enable remote monitoring, management and control of complete citywide infrastructure.
Why invest in Smart Streetlights?

Foundation for Smart City
Standardised interface and Open APIs support inter-connectivity with applications such as traffic lights, security systems, etc.

50% Lower Light Pollution
Dimming streetlights during off-peak hours or through motion sensors significantly cuts light pollution.

Improved Public Safety
Right light and right place and right time enhances citizens’ sense of safety.
Why invest in Smart Streetlights?

Address Climate Change
Fine-tuning lighting levels on need-basis dramatically reduces carbon emissions.

Protect Flora and Fauna
Autonomous dimming during off-peak hours lower lighting pollution and benefits local flora and fauna.

Benefits from Day One
Unlike other smart city solutions, deploying smart lighting deliver benefits from day one!
Who are we?

Specialist in Smart Outdoor Lighting

We enable cities to take full control of their Lighting Infrastructure based on Open Standards.
Global presence: 100k+ connected streetlights, 650+ projects

Monitored by CityManager and supported by our Service Desk

Selected Projects
- Dortmund (DE) 25,000 smart streetlights
- Düren (DE) 5,000 smart streetlights
- Dutch Railways (NL) 10,250 smart streetlights
- Island of Texel (NL) 3,420 smart streetlights
- Helmond (NL) 8,500 smart streetlights
- Seoul (KR) 2,500 smart streetlights
- Busan (KR) 1,500 smart streetlights
- Bangladesh 4,300 smart streetlights
Smart Lighting with Secure IoT Network

CityManager
CMS dashboard

DigiHub
Database and Analytics

Internet

2G, LTE CAT M1, NB-IoT

Wireless Smart Lighting
- Open Standard Cellular Network
- Edge (EGPRS, LTE CAT M1 or NB-IoT (NB2) options
- No local gateway needed
- Higher security 128-256 bits encryption
IoT Pole Mount // Street Light Controller

- Remotely **monitor, manage** and **control** citywide streetlights

- **Single Controller** for up to 4 LED **Fixtures** (total max. 480W)

- Works with LED Luminaires **without** Nema or Zhaga receptacle

- Connects directly to **local Secure** Cellular network
Global Standard, Local Network

Lamp connects directly to local cellular tower

- Highest available security (3GPP)
- Fully managed network by local telco
- Excellent network uptime
- Automatically selects the best signal and the best operator: EGPRS (Edge/2G), LTE Cat M1, NB-IoT (NB2)
- Long range, deep coverage
Suitable for **Single, Dual & Four-Armed Poles**

**Single Controller for up to 4 Street Lights**

- Control multiple LED Luminaires (including switching and dimming) with a Single Controller.
- Total load capacity: max. 480W
- No need for luminaires with Nema or Zhaga receptacle
- An economical solution for a wide variety of luminaires and poles
Gateway Free Installation

Devices communicate directly with LMS

- Full control over individual streetlights
- Cost and hassle of multiple gateways eliminated
- Quick dimming / switching response
Auto Commissioning, easy Deployment

In-built GPS auto-commissioning device

- Device geo-locates automatically upon power, and auto-registers to your LMS
- Eliminates all network engineering efforts
Point Level Control at your Fingertips

Manage each lights individually

- Switch or dim each luminaire using custom light scenes
- Set different light levels for main roads, traffic junctions and zebra crossing.
- Maintain flexibility to adapt light profile to future city needs.
- Receive meaningful alerts and insightful data of every street light
Finer Control over Dimming & Switching

Regulate light levels as situation demands

- Photocell
- Twilight (Photocell / Ambient Light Sensor)
- AstroClock (Astronomical Clock)
- Time-based Light Scene
- Calendar-based Schedules
- Central ALS (Photocells in City)
- Adaptive (Motion Sensor)
- Autonomous Mode
Advanced Health Monitoring Data

Achieve Predictive Maintenance

- Pairing Smart D4I Driver delivers advance luminaire, driver and power-grid data
- Data set includes driver temperature, input voltage/power/current/power factor, etc.
- Notifications, alerts and error logs
Smart City Ready

Built on Open Standards & APIs

- Works with a range of IoT and Smart City systems
- Selected examples:
  - Cisco Kinetics
  - Siemens Atos
  - SixData luxData.light
  - Osram LumIdent
Flexible Dimming Control

Supports multiple dimming protocols

- 0-10V analog
- 1-10V analog*
- DALI
- DALI 2.0
- D4i
- SR

*Max. 480W
Features to improve day-to-day operations…

- **Integrated Light Sensor**
  Integrated photocell (twilight sensor) enables streetlight switching based on the naturally available ambient light

- **Interoperable**
  Supports multiple dimming protocols (0-10V, DALI, DALI 2, SR, D4I and ANSI C137.4)

- **Timely Notifications**
  Receive all updates about your street lighting infrastructure via email and CityManager platform
Features to improve day-to-day operations...

Pole Knock-Down Alert
In-built tilt sensor sends an automatic alert if the street pole suffers damage due to car crash

Over-the-Air Updates
Thanks to the faster communication with the device, software updates take place in matter of minutes

IP66 + UV Stabilised
IP66 and UV stabilised housing protects the device in the harsh environment and ensures prolonged life
Urban Streets | Industrial Zones | Residential Areas
Like it.

Why not give it a try?
Want to learn more?

Need datasheet?

Contact us at: sales@tvilight.com
Thank You

We look forward to working with you!

DISCLAIMER

THE INFORMATION PRESENTED IN THIS PRESENTATION IS PROVIDED AS-IS WITHOUT ANY GUARANTEE, WARRANTY OR ACCURACY. IN ASSOCIATION WITH THE INFORMATION, TVILIGHT MAKES NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OF TITLE, OR OF NONINFRINGEMENT OF THIRD PARTY RIGHTS. USE OF THE PRODUCT PROTOTYPES BY A USER IS AT THE USER’S RISK. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTIFICATION. ALL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL.

TVILIGHT Projects B.V.
Beechavenue 162-180
1119 PS Schiphol-Rijk
Amsterdam, the Netherlands

www.tvilight.com