

# Smart City

## Street Lighting



www.aaeon.com

Focus • Agility • Competitiveness

### Introduction

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Bright street lighting improves road safety, helps to reduce crime, and makes cities more vibrant and attractive places for both businesses and communities. Traditional street lights, however, are a massive drain on public finances and a major contributor towards climate change.

To save money and meet a growing public demand for energy efficiency, cities around the world are in the process of replacing old street lights with low-power LEDs. But this upgrade can't be the end of the story for 21st century lighting systems. Even if modern cities never sleep, the people who live in them do, and lights don't need to shine at the same intensity throughout the night.

In the smart cities of the future, we need a way to manage when – and how brightly – public lights shine. With a network of sensors and intelligent management systems, AAEON Intelligent Lighting Controls can respond to real-time factors to dim or turn on and off lights on a system-wide, specified-group, or individual level.

With this technology, we can begin shaping the smart cities of the future right here in the present.

## **AAEON Intelligent Lighting Controls Benefits**

#### **Advanced controls**

• Inefficient timers can be replaced with flexible, individual controls

#### **Energy efficiency**

• By dimming unnecessary lights and diverting power away from faulty units, energy consumption can be slashed

#### **Improved maintenance**

• Maintenance work can be sped up through the real-time reporting of faults

#### **Financial prudence**

• Installing controls as part of a pre-arranged LED upgrade makes good business sense

#### An IoT platform

• Additional sensors and smart city infrastructure applications – such as air quality, smart parking, and smart waste sensors – can easily be added later







### Wireless IoT Network

Each street lamp is equipped with a plug-and-play controller. Controllers and lighting gateways form a mesh network with autonetworking and self-recovery features. AAEON's radio frequency (RF) network combines a decentralized mesh architecture with a star-of-stars topology to create a system that can easily grow to handle billions of endpoints. By applying this model, we can enhance network coverage and support a highly scalable, high-density network.



**NB-IoT Star Network** 









## **CMS (Central Management System: Edge X)**

### AAEON Intelligent Lighting Control Functionalities

AAEON Street Light Control is a versatile software application that helps operators manage street lighting networks. The tool is effective with networks of all sizes, and it can even handle networks comprising street light systems in separate municipalities.

Even with very large projects, AAEON Street Light Control makes it easy to manage small groups of street lights or specified actions. Through the application's notification services, operators will be informed in real time about hardware malfunctions, and they can also take advantage of the application's powerful management tools to more efficiently and cost effectively ensure that networks run as designed.

AAEON Street Lighting Control can be based on either a server or the cloud, and it supports LoRa<sup>™</sup>, NB-IoT, and Sub-GHz communication channels. As such, it can consolidate street lighting control hardware produced by a range of different companies and also manage various open protocol sensors and actuators. With this comprehensive functionality, AAEON Street Light Control is also an effective smart city solution.



### **Open Integration**



Open device API to enable multiple app providers

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### **Starter Kit**

We offer a starter kit for clients exploring the possibility of pilot projects, setting up demos to engage with potential customers, or just comparing technology options. We understand that in these situations, time is the most important factor, so the Streetlight Starter Kit is designed to ensure you get up and running as quickly as possible. The kits are factory programmed with basic functions and include a Sub-GHz based Gateway and also Street Light and CMS Trial Accounts so that you can build a working demo after powering on the devices.

- A Gateway with Sub-GHz Communication
- A Street Light with a Lighting Controller
- A CMS Trial Account

Please contact your local sales representative for starter kit ordering information. (P/N: EDGE-LI-SK001)





Light



## **Lighting Applications**



### **Successful Trial Site**

AiLight offers system managers a real-time, map-based view of every connected light point via any standard web browser. It also securely and remotely manages all connected light points, tracks their energy consumption, and continuously monitors their status.





### **Product Specification**

#### **Control Node** >



### Gateway



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Note: All specifications are subject to change without notice.

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