SMART CITY LIGHTING

by NEVEREND GROUP

www.neverend.com.tr

SMART CITY STARTS WITH SMART LIGHTING

A smart city integrates digital intelligence and information communication technologies (ICT) into the urban environment, to solve public issues and improve quality of life for residents. Connected devices and sensors provide real-time, transparent information to government officials and citizens, enabling better decision-making. These intelligent tools can save lives, prevent crime, reduce the disease burden, save time, cut down on waste, and even enhance social connectedness.

Many smart city applications face challenges in achieving self-sustaining revenue streams and identifying profitable economic models. However, retrofitting legacy lighting fixtures with LEDs and smart lighting control systems can serve as a cost-effective and sustainable starting point for smart city projects.

ABOUT US

NEVEREND Lighting focuses on delivering efficient, intelligent lighting solutions designed for modern environments. By combining advanced LED technology with smart control systems, we help optimize energy use, reduce operational costs, and support sustainable urban development. Our approach is centered on reliability, scalability, and long-term value for both public and private sector projects.

SMART CITY PLATFORM

City Infrastructure
The complete profile of each infrastructure asset, from manufacture to retirement, is recorded in the database. This includes basic product information, installation and maintenance history, current status, and alarm history. By connecting previously isolated devices into one centralized management system, all information can be tracked and analyzed to make cities smarter, more efficient and sustainable.

Proactive Maintenance
Alarms on city infrastructure like power abnormalities, device malfunctions, communication lost, and theft can be sent as notifications and alerts to computers and mobile devices. This enables decision-makers and city workers to pre-plan inspections and address failures proactively. With ticket handling, prioritized management, optimized routes for inspection and maintenance vehicles, labor and truck roll costs can be reduced while improving efficiency.

Data Collecting
The data collected from smart devices attached in existing and new infrastructures transmits to central platform via wired and wireless communications such as Zigbee, LoRaWAN, NB-IoT, RF-Mesh, GSM and LTE. The real-time data will be visualized and displayed in a central command center to provide valuable information for decision making, quick response on events, and prevention for potential risks.

Remote Control
Smart devices can be remotely controlled in real-time or operated on a preset schedule. Tasks based on time, calendar, and sensor data can be executed for individual devices or in groups. In addition to street light control, the system also supports audio, video and text tasks for LED displays and broadcasting speakers.

SMART SOLUTIONS

lte-cat.1 Solution

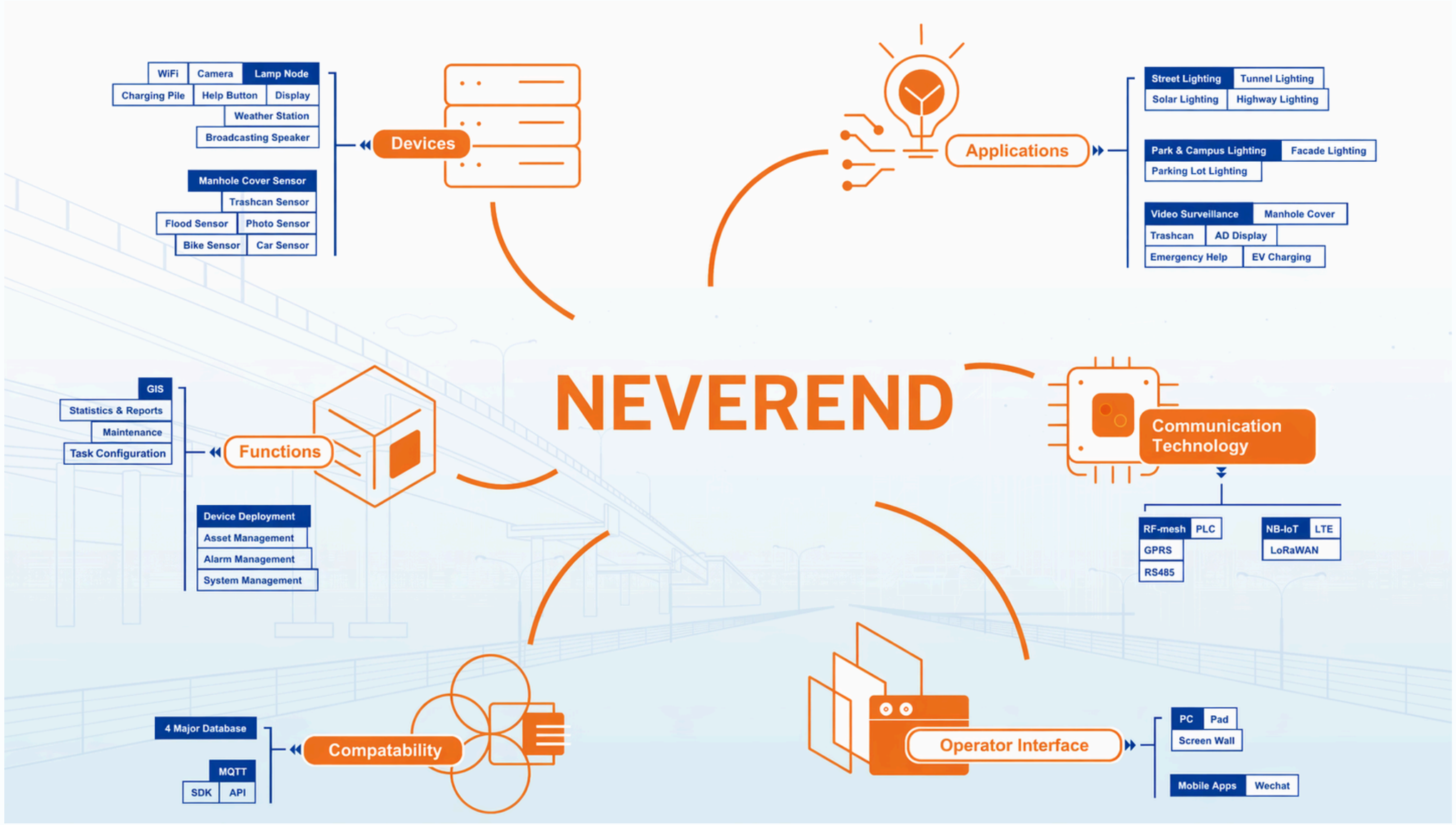
NB-IoT Solution

LoRaWAN Solution

Power Cabinet Control

Solar Solution

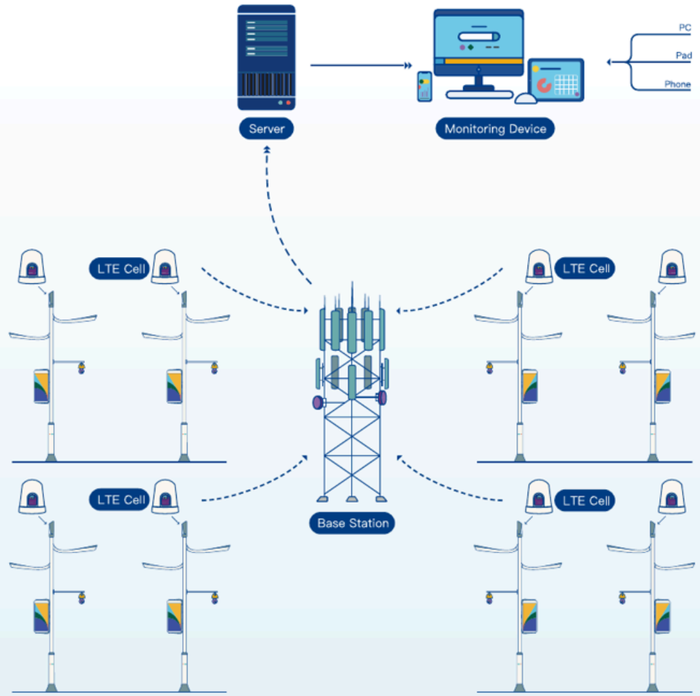
Tunnel Solution


NEVEREND
Devices
WiFi
Camera
Lamp Node
Charging Pile
Help Button
Display
Weather Station
Broadcasting Speaker
Manhole Cover Sensor
Trashcan Sensor
Flood Sensor
Photo Sensor
Bike Sensor
Car Sensor
Applications
Street Lighting
Tunnel Lighting
Solar Lighting
Highway Lighting
Park & Campus Lighting
Facade Lighting
Parking Lot Lighting
Video Surveillance
Manhole Cover
Trashcan
AD Display
Emergency Help
EV Charging
Functions
GIS
Statistics & Reports
Maintenance
Task Configuration
Device Deployment
Asset Management
Alarm Management
System Management
Communication Technology
RF-mesh
PLC
GPRS
RS485
NB-IoT
LTE
LoRaWAN
Compatability
4 Major Database
MQTT
SDK
API
Operator Interface
PC
Pad
Screen Wall
Mobile Apps
Wechat

LTE-CAT.1 Solution

Application

Any place that can receive LTE(Cat.1/Cat.4) signal.



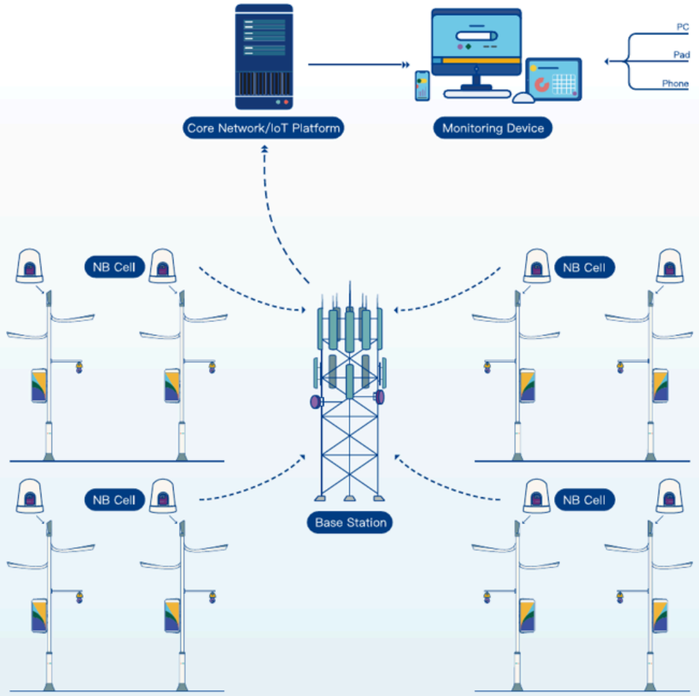
Main Features

- LTE(Cat.1/Cat.4) wireless communication.
- No limit on the number of lamp controllers and transmission distance.
- Supports two dimming modes: 0-10V and DALI.
- It uses base station provided by local network operator, no need to install gateways.
- Remote real time control and scheduled lighting by group or individual lamp.
- Alarm on the lamp failure.
- Pole tilt, GPS options

NB-IoT Solution

Application

Any place that can receive NB-IoT signal.



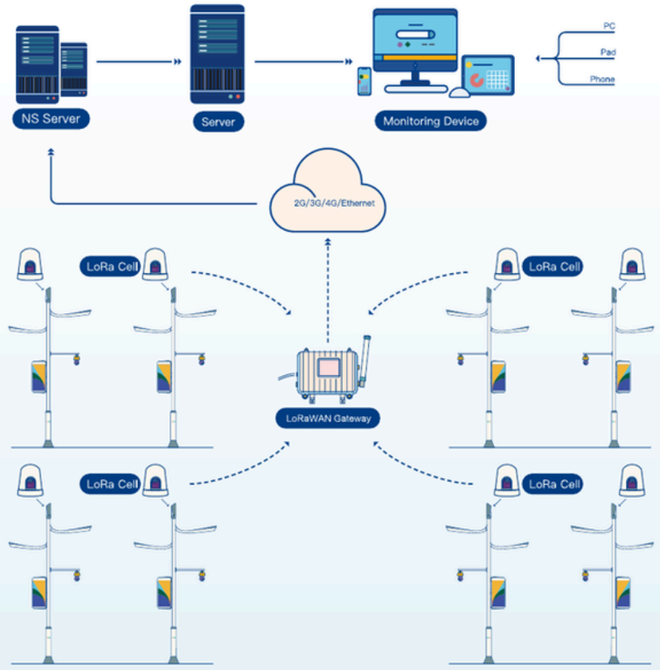
Main Features

- NB-IoT wireless communication.
- No limit on the number of lamp controllers and transmission distance.
- Supports two dimming modes: 0-10V and DALI.
- It uses base station provided by local network operator, no need to install gateways.
- Remote real time control and scheduled lighting by group or individual lamp.
- Alarm on the lamp failure.
- Pole tilt, GPS options

LoRaWAN Solution

Application

Remote lighting control of street lights, parking lot, gas station, park, island and etc.



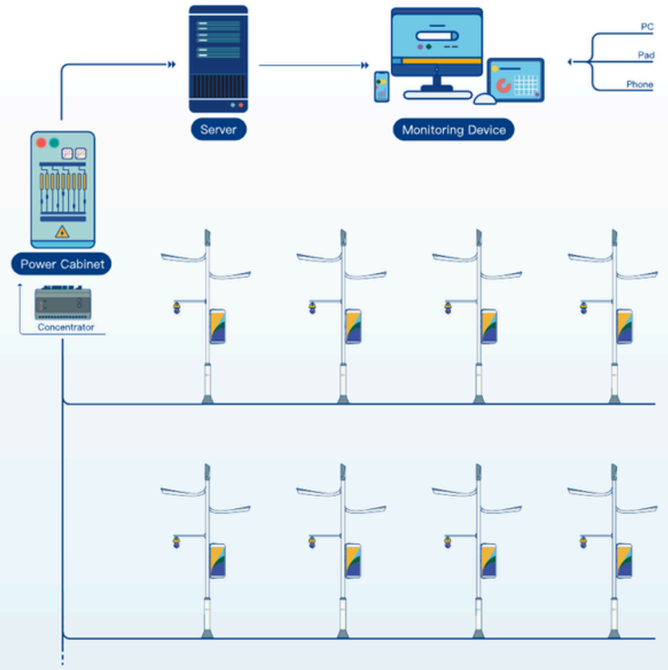
Main Features

- Long range low power radio frequency communication, supports standard LoRaWAN specification.
- Up to 2,000 lamp controllers can be managed by a gateway with maximum transmission distance of 1500m.
- Supports two dimming modes: 0–10V and DALI.
- LoRaWAN Gateway and network server for device management are needed.
- Remote scheduled lighting by group or individual lamp and data collecting.
- Alarm on the lamp failure.
- Pole tilt, GPS options.

Power Cabinet Control

Application

Remote lighting control of street, tunnel, parking lot and tech park with cabinet.



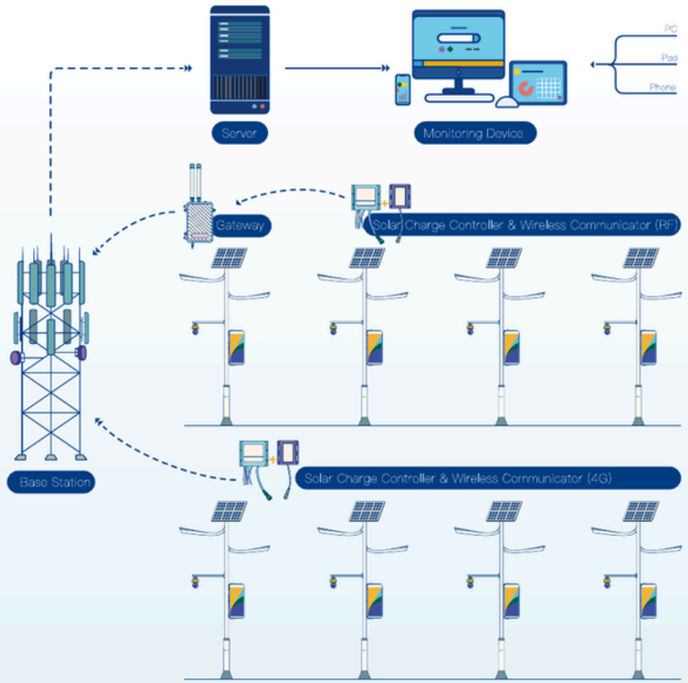
Main Features

- Remote real time control and scheduled lighting on the circuit based on time and sunrise/sunset.
- Alarm on the power supply status of the cabinet and automatic notification.
- Energy monitoring and billing report on cabinet level.

Solar Solution

Application

Remote lighting control of Solar lights, remote areas with unstable network and power supply.



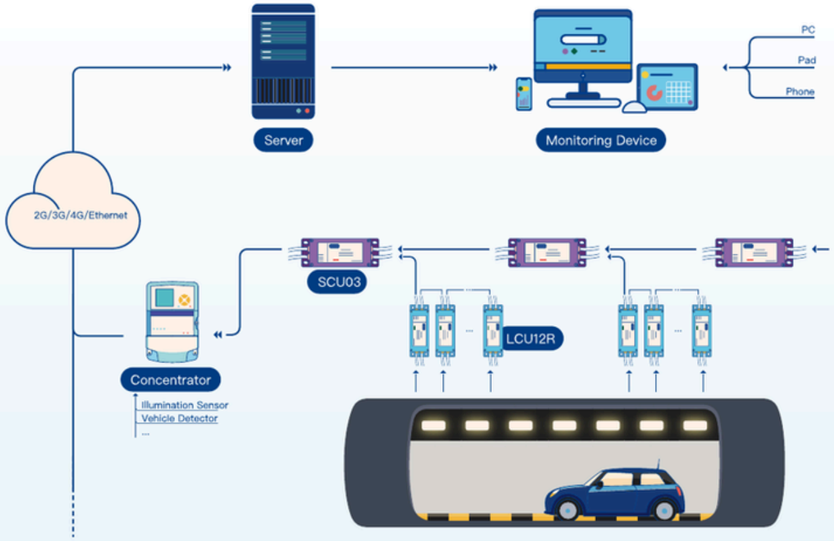
Main Features

- RF-mesh and LTE communication available.
- The IoT communicator works with solar charging controller to control the solar lamps and monitor on the status of solar battery, panel and lamp.
- Lighting time and dimming plan from central management platform
- Alarm on the lamp, battery and panel failure.

Tunnel Solution

Application

Remote lighting control of tunnel, sports stadium and indoor lighting.



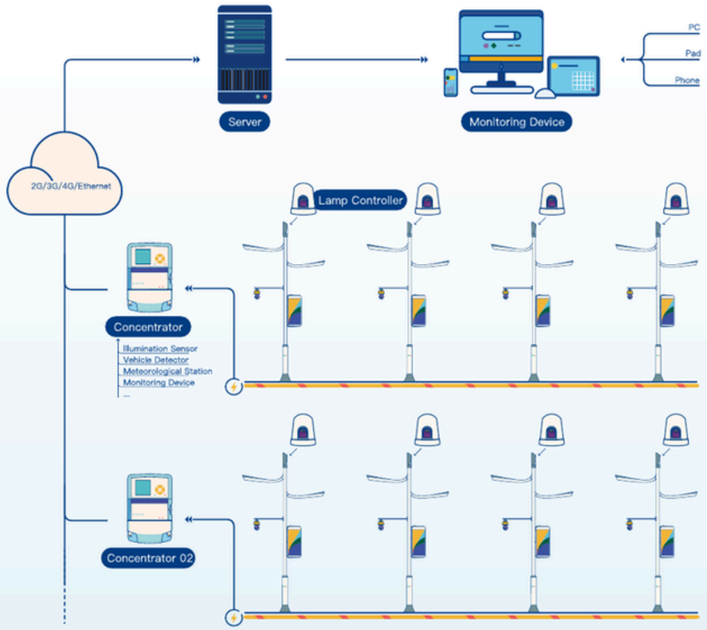
Main Features

- RS485 communication, the total distance after increasing the transmission distance through the signal controller is up to 3km.
- A signal controller can support 50-80 lamp controllers, up to 5000 lamp controllers can be managed by a concentrator.
- The lamp controller can control lighting fixtures such as HPS and LED lamp with power up to 400W.
- Supports two dimming modes: PWM and 0-10V.
- With a data transmission rate of 256Kbps, it is suitable for applications that require high communication speeds and have many interference factors, such as real-time tunnel dimming.
- Remote real time control and scheduled lighting by group or individual lamp, remote control on the power circuit.
- Alarm on the power supply of the cabinet and lamp parameters.

PLC Solution

Application

Remote lighting control of street lights, façade lighting, tunnel, parking lot with power cabinet.



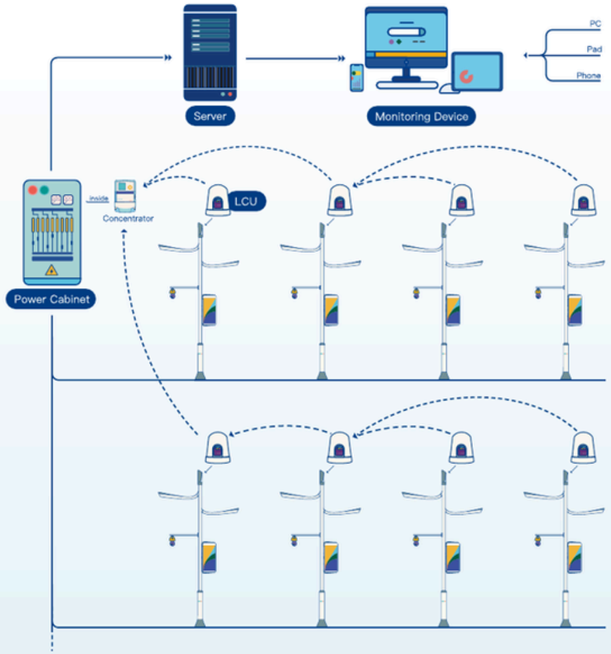
Main Features

- Power line communication, point-to-point transmission distance is up to 500m, the total distance after automatic relay by the lamp controllers is no more than 2km.
- Up to 500 lamp controllers can be managed by a concentrator.
- The lamp controller can control lighting fixtures such as sodium lamp, LED lamp and ceramic metal halide lamp with power up to 400W.
- Supports two dimming modes: PWM and 0-10V , reverse mode can be configured.
- PLC solution uses the original power cable for signal transmission, no need to install signal lines.
- Remote real time control and scheduled lighting by group or individual lamp, remote control on the power circuit.
- Alarm on the power supply of the cabinet and lamp parameters.

RF-Mesh Solution

Application

Remote lighting control of street lights, parking lot, gas station, park, island and etc.



Main Features

- Long range low power radio frequency communication with one time relay.
- Up to 1000 lamp controllers can be managed by a concentrator with maximum transmission distance of 4000m after relay by a lamp controller.
- Supports two dimming modes: 0-10V and DALI.
- Private wireless network by RF-Mesh concentrator, the network server is not needed compared to LoRaWAN.
- Remote real time control and monitor on the lamps, scheduled lighting by group or individual lamp.
- Alarm on the lamp failure.
- Pole tilt, GPS options

CONTACT

www.neverend.com.tr

project@neverendlighting.com

DESIGN OFFICE DSO, ICON TOWER, 701, DUBAI, UAE

WAREHOUSE IND. AREA 11, STREET 6, WAREHOUSE #2, SHARJAH, UAE

BULGARIA NEVEREND EOOD UL. "VASIL LEVSKI" 258, N1,4003 NORTHERN INDUSTRIAL ZONE, PLOVDIV, BULGARIA

TURKIYE NEVEREND ELEKTRIK YENIKARAMAN, TURAN MEHMET CD. NO:48, 16170 OSMANGAZI/BURSA, TURKIYE

NEVEREND - 6TH FLOOR, BUILDING 2, NO. 13 DONGMU ROAD, JIANGHAI DISTRICT, JIANGMEN CITY, GUANGDONG PROVINCE, **CHINA**