# CLEVER

## LIGHTING INTELLIGENCE

**CREE ⇌ LIGHTING**

powered by Sidora

# **CL**EVER

### LIGHTING INTELLIGENCE

cortesía photo: Sidora

## DESCRIPTION

**CLever** is the remote-control and remote-management Cree Lighting platform Powered by SIdora for **SMART CITIES** that enables more efficient energy management, increasing the intrinsic value of the system managed.

To meet the needs of the market, the remote-control and remote-management **platform system** is "open" and able to gather and integrate data of energetic nature by environmental sensors. Processors are designed to connect with over 250 sensors in the field and allowing to use them, for example, as monitoring and management of utility plants (water, energy and gas), environmental controls (e.g. air quality measurement), noise pollution, charging systems for electric mobility, video surveillance.

With a simple **web interface**, the user may see information and manage in a unified and transparent way, their set of systems, potentially consisting of products supplied by different vendors. The field devices may come from different vendors and still communicate with different protocols.

The SDGi and SAMi **infrastructures** implement cloud computing technologies which adapt autonomously to the conditions of the system and by using distributed and redundant systems, ensure that no data is lost no matter how big the net of the various devices.

## SDGi

The **modular reception** infrastructure SDGi (Sidora Digital Gathering Infrastructure): to communicate with processors and devices.
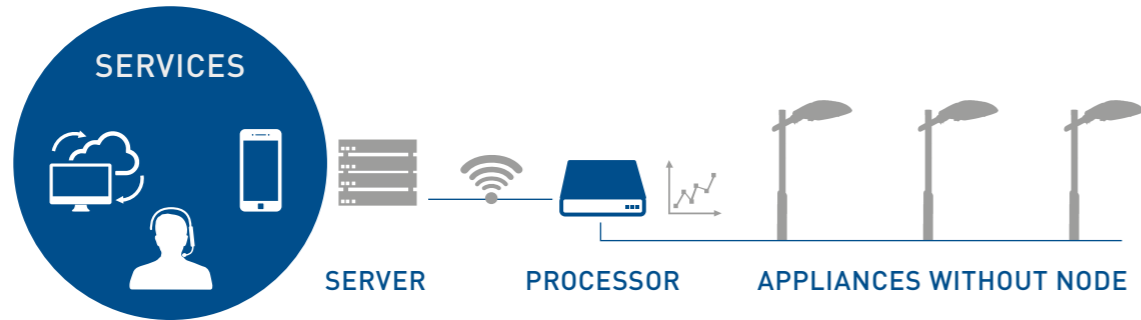
## SAMi

Sidora **Application Management infrastructure** with management applications are implemented, including the monitoring and management dashboard.
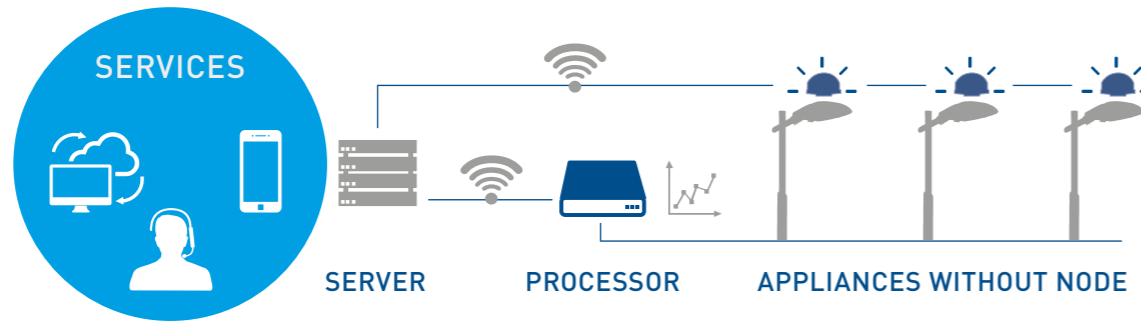
# SYSTEM COMPONENTS

courtesy photo: Sidora

## 1 SEGMENT

The processor measures consumption and communicates with the server via SIM or LAN.

**SERVICES**

SERVER    PROCESSOR    APPLIANCES WITHOUT NODE

## 2 MIXED

The individual devices interchange with the server via SIM. The processor measures consumption and interchange with the server via SIM or LAN.

**SERVICES**

SERVER    PROCESSOR    APPLIANCES WITHOUT NODE

## 3 POINT POINT

The individual devices dialogue with the server via SIM, without the need for processor.

**SERVICES**

SERVER    APPLIANCES WITHOUT NODE
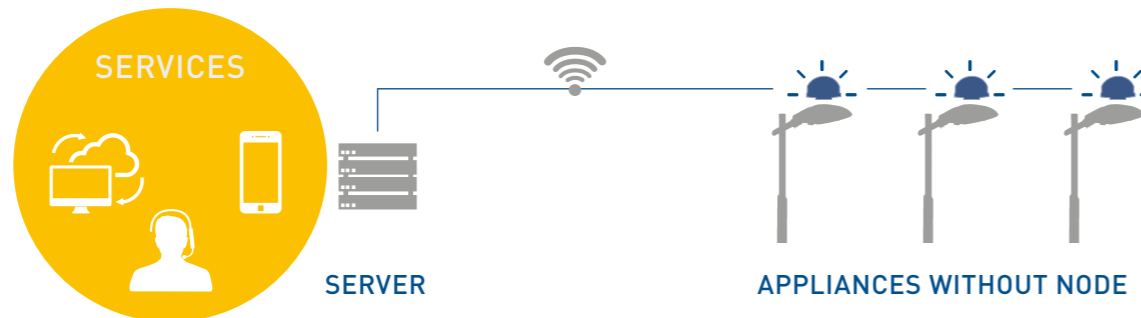
## SCS 2020 **PROCESSOR** - Smart City processor optimized and recommended for PUBLIC LIGHTING

Compact and modular, it allows you to make the best use of the existing space in the electrical panel, without the need for rebuilding. SCS 2020 is the device which allows you to have complete, 24/7 control of the remote-controlled systems.

| SCS 2020 | FUNCTIONALITY |
|---|---|
| Metering | ✔ |
| Service management and sensors | ✔ |

- Integrated gateway with 2 different types of protocols of communication: NBIOT/2G Lan, in order to guarantee the use of the most widespread communication standards
- High-performance ARM Cortex processor
- Integrated three-phase Energy Meter with configurable support for external CTs
- 4 digital inputs with pulse counter and 2 SPDT relay outputs NO with load switching up to 250VAC/5°. For connect sensors and various accessories
- Powered USB interface and RS485 interface (standard industrial) for the connection of external devices or expansions
- Integrated GPS that allows you to have a view graphic design of the location of the managerial staff on the territory from the control system
- Automatic rearmament
- LCD Touch Screen
- PELL compliant

## SMU 1000- Smart City PROCESSOR Used only for SMART BUILDING

Compact and modular, it allows you to make the best use of the existing space in the electrical panel, without the need for rebuilding. SMU1000 is the device evolved dedicated to complex telecontrol and remote management projects in the following areas of different applications (public lighting, Building Management).

| SMU 1000 | FUNCTIONALITY |
|---|---|
| Metering | ✔ |
| Service management and sensors | ✔ |

- The gateway is integrated with 3 different types of protocols of communication: UMTS/GPRS and Lan, in order to guarantee the use of the most widespread communication standards
- High-performance processor with Linux system that guarantees high performance and future expandability with 256MB RAM 512MB storage space
- Integrated three-phase Energy Meter with configurable support for external CTs
- 4 digital inputs with pulse counter and 2 SPDT relay outputs NO with load switching up to 250VAC/5A
- Powered USB interface and RS485 interface (standard industrial) for the connection of external devices or expansions
- Integrated GPS that allows you to have a view graphic design of the location of the managerial staff on the territory from the control system
- Automatic rearmament
- LCD Touch Screen
- PELL compliant
- 2 relay outputs SPDT NO

# SYSTEM COMPONENTS

## CALL CENTER

A service for handling calls from citizens, which manages the tracking of all alerts, and of all the interventions through a sophisticated system of ticketing.

The end user, by a guide entry, can leave the data and description of the fault or, in case of emergencies, speak directly with the municipality, service manned is available 7/7 from Monday to Friday (09 - 17) and with an automatic responder during weekends and holidays.

## Independent devices: the SID7000

Node for point-to-point control. Together with the processor, SID7000 allows you to complete the remote control cycle by monitoring and controlling the single luminaire.

• Zhaga® node with DALI® interface
• The system dialogues with the luminaire by setting the quantity of flow and constantly controlling the correct operation of the lamp itself
• Direct connection to the central dashboard through a low consumption NBIOT/2G module energy
• Operating temperature from -40° to +85°.
• IP66 system suitable for outdoor installations and capable of protecting against water and dust
• IK09 guaranteed for impact
• Each node is independently configurable to regardless of belonging to a specific switchboard
• Unambiguous identification label to facilitate installation

| SID 7000 | FUNCTIONALITY |
|---|---|
| Zhaga Connection | ✔ |

### Features

Reliable and long-lasting

Sharing information

Dimming Profiles and Configuration

Override and controls always available

Ease of installation

Alarms

Quick on-site intervention

Zhaga & DALI compliant

## CONTROL ROOM

Our qualified operators are constantly monitoring and supporting real-time management of the panels' energy performance, as well as overseeing the ticketing system, which favors timely reporting of anomalies to the installation operator. This activity maximizes the value of the implant through a proper load management agreed with the costumer and minimizes ordinary and extraordinary maintenance costs. A plant management service, which is manned by personnel qualified active in working hours with activities such as:

• Technical support management and interventions in the field.

• Real time management of alarms (with resolution, if possible, remotely).

• Configure processor settings remotely.

• Predictive activity based on trend analysis processors for any anomaly.

• Daily, weekly and monthly reporting for analytics and improvement of plant management.
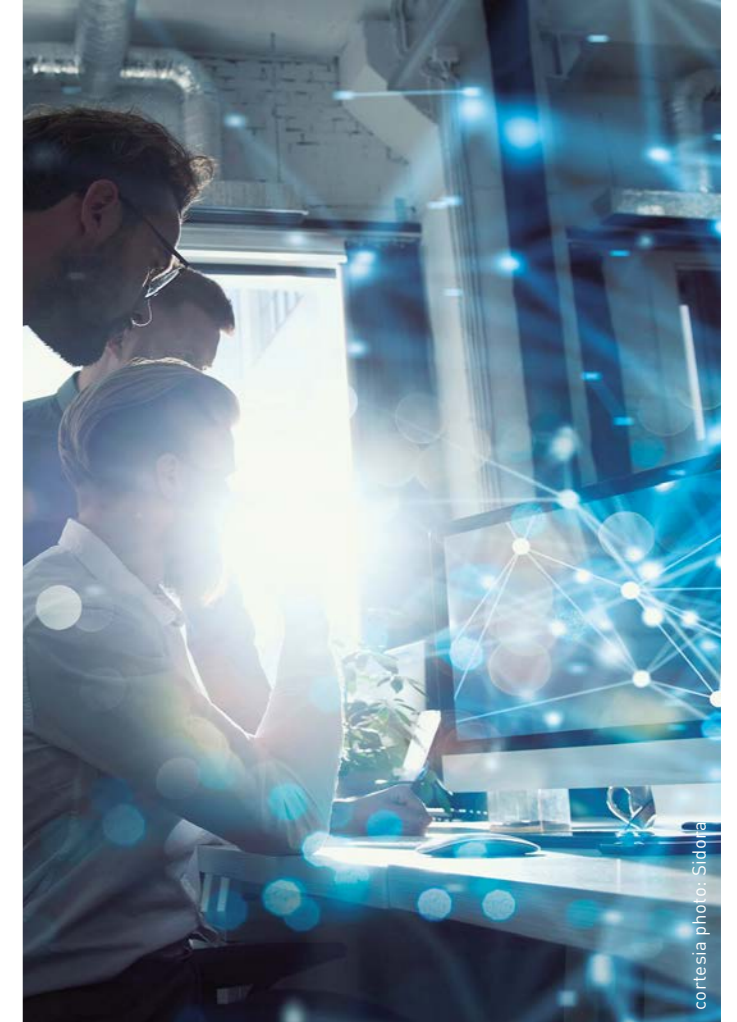
# CREE ⇕ LIGHTING

A COMPANY OF *IDEAL INDUSTRIES, INC.*

**info.europe@cree.com**