

PLANet system

Public Lighting Active Network

System overview

The PLANet system actively controls, monitors and meters large populations of street lights.

Using the PLANet solution, street lights can be managed with maximum energy and operating efficiency.

The PLANet approach is a cost effective solution that makes adoption on all lights economically viable.

Active Network

Telensa's PLANet system turns street lighting into an *active* network – a network in which switching can be controlled, faults reported, electrical properties interrogated and energy accurately measured.

With a full range of devices the system can be applied to all types of lighting fixtures, new and old.

The PLANet system is therefore the complete, modern telemanagement tool for today's street lighting industry.

Energy Management

The principal requirement for street lighting today is to manage energy effectively.

With flexible switching and dimming control and accurate energy measurement, the PLANet solution is an ideal platform for effective management of energy consumption across a whole lighting population.

The system is an approved Elexon Central Management System (CMS), so savings in energy consumption can be fully realised financially.



A TELECELL unit

Operating Efficiency

The PLANet system enables improvements in efficiency in all areas of operations and maintenance, so the lifetime cost of ownership of street lighting assets is minimised. Monitoring enables shorter response and repair times, giving a higher level of efficiency and service to the public.

Cost Effective Solution

The PLANet package is cost effective in helping to protect against rising and increasingly uncertain costs in street lighting provision. The savings enabled by implementing the PLANet solution present a strong business case for widespread adoption.

Main Features of the PLANet System

Comprehensive control and monitoring

- provides extremely flexible switching and dimming control
- allows for special events, days of the week variation and override switching
- enables switching at any daylight Lux level
- includes extensive monitoring of lamp/ballast electrical parameters and mains supply

Broad range of lighting equipment compatibilities

- works with lamp types including SOX, SON, CDM/O, Cosmopolis, PLL, LED
- operates independently of ballast manufacturer
- supports ballast types such as magnetic or electronic HID ballasts and LED drivers
- enables dimming with 0-10v or DALI ballasts and to any 0-100% permissible power
- suits retrofit or new build deployments
- comprises four TELECELL unit variants for external or internal luminaire fitting

Advanced wireless technology platform

- uses long range radio infrastructure: 2-3km urban and 5-8km rural range
- accommodates up to 10,000 TELECELL units per base station
- provides resilient connectivity through multi base station capability
- operates with fewer base stations resulting in a manageable deployment

Commercial and operational

- realises financial savings from energy reduction by being an Elexon approved CMS
- assists daily operations with powerful graphical user interface
- integrates into asset management systems via web services (XML) or CSV interfaces
- includes a range of commercial options such as hosted/managed service provision

Telensa

Telensa Ltd
Plextek Building, London Road
Great Chesterford
Essex CB10 1NY, UK

Tel: +44 (0)1799 533200
enquiries@telensa.com
www.telensa.com

© Telensa Ltd 2012

PLANet system

Public Lighting Active Network

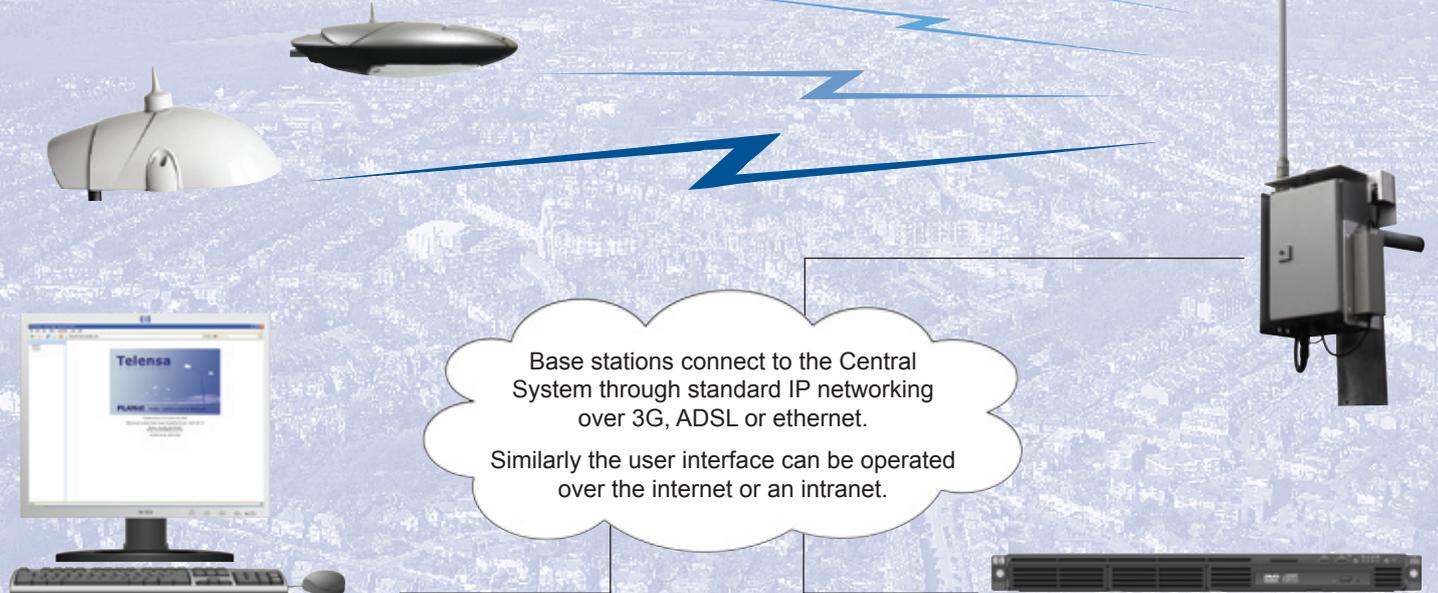
How the PLANet system works

TELECELL Units

TELECELL devices are installed on (or in) each luminaire. Different variants are available for different fixture types and suit retro-fit or new build circumstances. TELECELL units automatically connect to the system via the best available base station.

Base Station

A base station consists of a radio box, an antenna and a light meter. It is installed either at the top of a column or alternatively on a building rooftop. It provides radio coverage over several kilometers.



User Interface

The PLANet system is operated using a web based user interface with a standard browser; it is accessible securely over the internet or an intranet. Control and monitoring is programmed for lights arranged in groups. Readings taken from lights can be arranged in reports or exported to spreadsheets for further analysis.

Central System Server

The central system server is situated in the customer's server room or alternatively it can be hosted by Telensa. The server manages connections with TELECELL units via base stations; it administers the system database and is a web server that hosts the user interface.

About Telensa

Telensa was established in 2005, as part of Plextek Ltd, to develop the PLANet system based on Plextek's technology. Plextek is one of Europe's largest, independent electronic design consultancies. Established for twenty years and based near Cambridge, Plextek employs one hundred staff.

Telensa is supported by a Carbon Trust Applied Research grant, to develop commercially viable low carbon technology with the potential to cut UK carbon emissions.

Technology

Telensa's PLANet system uses advanced Ultra Narrowband (UNB) wireless technology. This has been developed over the past ten years and is proven in applications such as stolen vehicle recovery and automatic meter reading; several million UNB based units are in operation around the world.

The PLANet system's wireless technology differentiates Telensa's system from others on the market: its capabilities are ideally suited to the needs of a street lighting system:

- base station range: 2-3km urban and 5-8km rural
- capacity: 10,000 units per base station and 150,000 units per system
- fully bi-directional allowing for full control and monitoring

- uses licence exempt spectrum complying with both European and North American radio regulations
- long range suitable for urban, suburban and rural deployment
- smaller number of base stations simplifies deployment
- both unicast to individual TELECELL units and broadcast to all TELECELL devices
- base stations connect directly to TELECELL units with additional relay mode from one TELECELL device to another

Telensa focuses on addressing the needs of the street lighting industry, particularly in terms of functionality, reliability and cost-effectiveness.

Supported by



Telensa