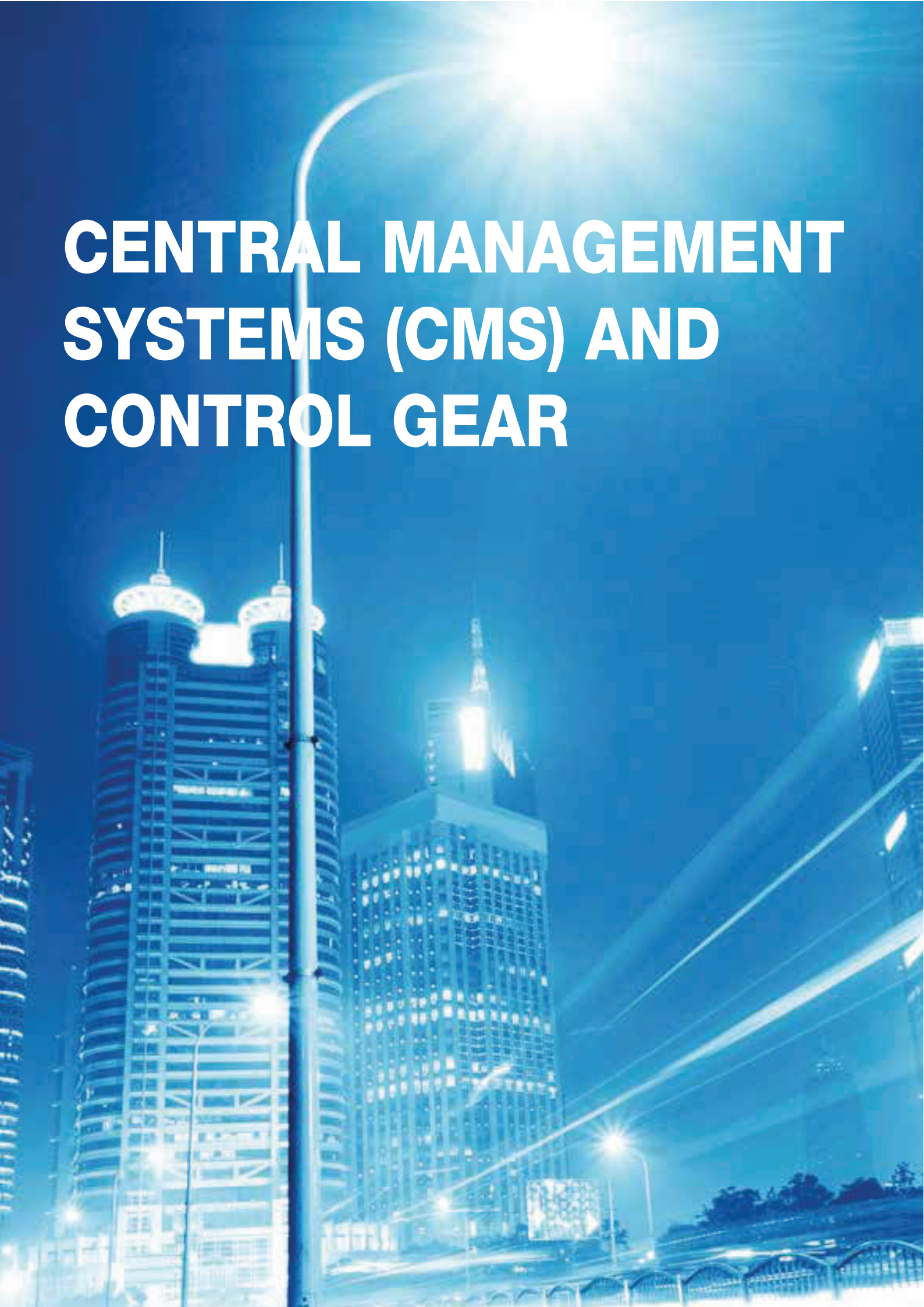


CENTRAL MANAGEMENT SYSTEMS (CMS) AND CONTROL GEAR

Vizion

A new era in street lighting, the Vizion Central Management System (CMS) provides a complete street lighting management solution. Vizion CMS is a ‘quick to install’ system that gives you complete control of your street lighting network. It allows you to switch, vary light output and monitor from your computer or web enabled device. Vizion provides an extremely accurate control, monitoring and reporting system covering fault identification, energy use, billing, lamp status, performance data and predictive maintenance. Vizion CMS offers a flexible future for street lighting control.

Vizion

Making up the Vizion system are:

- ZEBC Series Smart Electronic Ballast
- Collector Two-Way Interactive Manager
- Choice of Nodes (Ballast Node Integrating Link/NEMA Nodes)

Operated through an internet browser that allows web access to the Host, these elements provide you with a complete Vizion Management System that can help you achieve significant energy and cost savings.

The ZEBC Smart Electronic Ballast can also be used as a stand-alone unit that can be incorporated later into a full Vizion Management System. As a stand-alone unit it delivers exceptional technical performance.

The Hand Held Tester can be used to check performance of a Vizion enabled streetlight. The tester will run through an automated set of tests including performing a lamp strike. This empowers the installer or maintenance engineer to check each unit individually.

Through the utilisation of our Pidion Installation Device it is possible to install a Node and pair it automatically at the point of installation with the designated Collector.
The whole process takes less than 60 seconds from the scanning of the Node with the in built scanner, through to the associating it with the Collector.

Ballast Node
The Ballast Node has been designed to integrate exclusively with the Vizion 'ZEBC' Smart Electronic ballast to facilitate the variable lighting solution. The Ballast Node fits through a 20mm hole when mounted through the canopy of the luminaire.
Nema Node
A Nema Node is located on top or within each street light. The NemaNode, which replaces the existing PECU is a communication module which sends and receives information about the status of the street light to/from the 'Collector'.
ZEBC Ballast
The new ZEBC Ballast is suitable for both Metal Halide and High Pressure Sodium lamps.The ZEBC is designed for use as either a stand-alone unit or for integration into the Vizion system.
Collector
The collector is a two way transmitting module that sits within a localised network of nodes. Each collector has a maximum capacity of up to 250 nodes within a 3km radius. In practice, working numbers may be less due to localised conditions. The collector scans the local network for faults and modifies control regimes according to the type of activationand time profile selected.

mayflower
COMPLETE LIGHTING CONTROL

The Mayflower Complete Lighting Control Central Management System (CMS) allows individual street lights to be monitored, switched and light output to be dynamically controlled.

The system is easily installed and commissioned. The design of the system is such that on-site installation is 'plug and play'.

The Mayflower Nodes installed on the street lights communicate with the Sub Master, which in turn communicates with the Back Office System.

This communication provides the user with up-to-date on-site performance data, which is necessary for the effective control of the lighting system.

The Mayflower Complete Lighting Control CMS has Elexon certification and can be used as a pseudo-meter with lighting, signs and bollards.

Antenna - Stub/Puck

2.4GHz Mayflower Antennas providing a tamper resistant solution to enable Mayflower Internal Node to communicate with the Sub Master. Available in two options for fitting in 10mm (Stub) and 20mm (Puck)

External Node - DALI/1- 10V

The Mayflower External Node is installed on to a luminaire to control the ON/OFF and Dimming function of the lamp. It is installed utilising the Mayflower S6000 Socket. Node Communicates to Sub Master using ZigBee. Node consumption is less than 0.6W. Ability to measure load up to 1kW with accuracy of ±1%. Product available in two version 1-10V and DALI. DALI Node has ability to send luminaire driver/ballast specific DALI commands.

Internal Node - DALI/1- 10V

An Internal Mayflower Node is installed within a luminaire to control the ON/OFF and Dimming function of the lamp. It has been designed to fit within the lantern body for situations where it is not practical or aesthetically pleasing to fit an External Node e.g. bollards, signs, heritage lanterns. Internal Node requires antenna connected to allow transmission of energy data using ZigBee protocol to Sub Master unit. Internal Node is similar in functionality to External Nodes, with power consumption >1W. Product available in DALI or 1-10V

NEMA Socket - S6000

The S6000 is a patented socket designed around lighting industry's standard – BS5972. The S6000 Socket allows the installation of Mayflower External Nodes or Sub Masters to luminaries.

Sub Master

The Mayflower Sub Master acts as the wireless gateway between the nodes and the Back office System. "Plug & Play", It fits on S600 Socket similar to External Node. It communicates with Back office System using SSL, Private APN and VPN. Up to 500 Mayflower Nodes connects with single sub master using wireless mesh "Open-Protocol" called ZigBee. MKII Sub Master has GPS and ability to use Wi-Fi as backhaul. It uses "ANYNET/multi carrier" embedded SIM cards to transmit energy data using 3G.

PHILIPS

CityTouch

Philips CityTouch gives you the power to make the lighting in your city dynamic, intelligent and totally flexible.
The only non-stop lighting management solution for an entire city, CityTouch makes planning, controlling and managing lighting infrastructures simplicity itself. An energy efficient solution bringing every part of the city to life.
CityTouch offers you the ultimate flexibility. The standard, integrated service is designed to work with lamps, luminaires and controls from multiple brands and suppliers, not just Philips. What's more, because it includes asset management and workflow support, CityTouch takes lighting automation to an unprecedented new level. An end-to-end secure service that provides best-in-class payback times for your investment enabled by maintenance and energy savings.

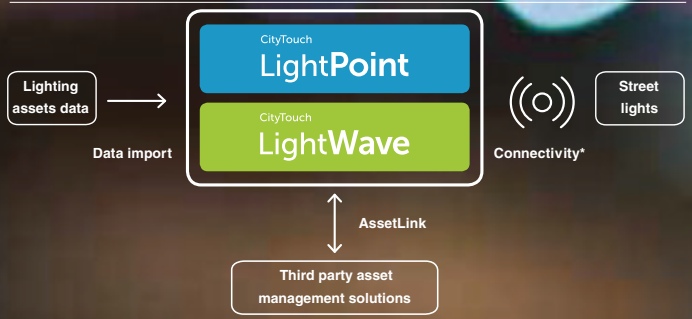
CityTouch LightPoint

- Simple. Transparent. Efficient.
- Entire city lighting at your fingertips
- Easy-to-use asset management, designed for lighting
- Optimum transparency through clear map-based data visualization
- Reports and analyses that support decision-making with robust data

CityTouch LightWave

- Dynamic. Automatic. Flexible.
- Remote control of each individual light point
- Calendar-based planning of light levels and dimming schedules
- Auto-notification of faults and outages
- Configurable fault types with different levels of severity
- Accurate energy metering down to the level of each individual light point

CityTouch Eco System



AmpLight

AmpLight is an intelligent streetlight management and control system. It optimizes street light usage to lower energy consumption (e.g. by decreasing the lighting level at off-peak traffic hours) and to reduce maintenance cost - all without compromising on quality and safety. AmpLight can be easily integrated into existing installations without the need for new cabling. With installations worldwide, AmpLight has been proven to work in extreme climates and temperatures (from -40 to +60°C).

AmpLight Basic

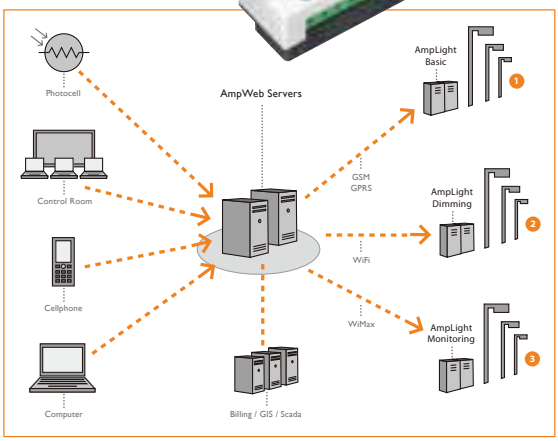
This configuration provides basic on/off functionalities via the CPU and a switch module. The CPU runs on Linux and communicates with the server via wired or wireless technologies. The CPU is remotely updated with new configurations and software and uses multiple communication carriers to provide stabile and reliable communication. With optimizing the on/off settings of the streetlights, it results in savings of 8-10%.

AmpLight Dimming

Adding a dimming module allows the client to decrease the light level and thereby reduce electricity consumption. The light is dimmed from the control cabinet, allowing the client to make individual dimming settings for each sector of the city. To combine with Philips dimmable driver or step-dim ballast, dimming will typically provide up to 35% energy savings.

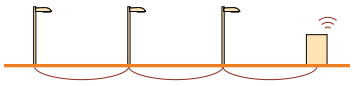
AmpLight Monitoring

With an additional module, the control cabinet is fully monitored and will immediately report power failures or cable breakages to the central server or via SMS to the supervisor.



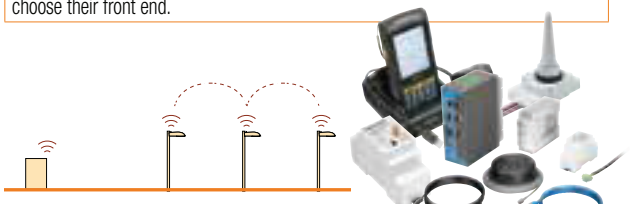
Starsense

Starsense is a revolutionary telemanagement system for monitoring, controlling, metering and diagnosing outdoor lighting. Wireless is based on two-way wireless communication using the latest in mesh network technology, while Starsense Powerline is based on the LonWorks® protocol over power line.



Starsense Powerline

Starsense Powerline is based on the LonWorks® protocol over power line.This is an open protocol, which works in outdoor lighting telemanagement solutions and has been widely adopted in the market.This allows the customer to choose between different solutions from a variety of vendors.
Starsense Powerline implements the most advanced repeating technology, enabling other light points to repeat commands when necessary, thereby ensuring that all commands reach their destination, even in adverse communication conditions.
Starsense Powerline provides different ways to interface with other asset management systems or 3rd party applications, giving customers the freedom to choose their front end.



Starsense Wireless

The Starsense Wireless system consists of luminaire-based Outdoor. Luminaire Controllers (OLCs) suitable for any dimmable driver supporting 1-10V or DALI, a Segment Controller (SC) and an optional modem (only needed when the segment controller cannot be directly connected to a local network).
The OLCs communicate with the SC in a mesh network, which means that every OLC in the network can receive and transmit messages.
The system can be easily commissioned using the specially designed Outdoor Configuration Assistant tool.

The Dynadimmer & Chronosense

Public outdoor lighting has an important function in making outdoor activities after sunset possible in a safe and comfortable way. For a long time controlling outdoor lighting was limited to switching it on or off and saving energy was only possible by switching off selected light points. But that is now history with the introduction of Philips' stand-alone outdoor controls. A flexible solution to save energy in a safe way…

Dynadimmer

The flexible stand-alone dimming solution which lowers energy use and reduces carbon footprint.

Dynadimmer SELV

The Dynadimmer SELV is suitable for Safety Extra Low Voltage luminaires, perfect for LED-based lighting solutions.

Chronosense
For electro-magnetic multi-wattage ballasts

The Chronosense is a stand-alone control unit that has a 1-step dim control output and can be used in combination with one multi-wattage ballast or an additional dim ballast.

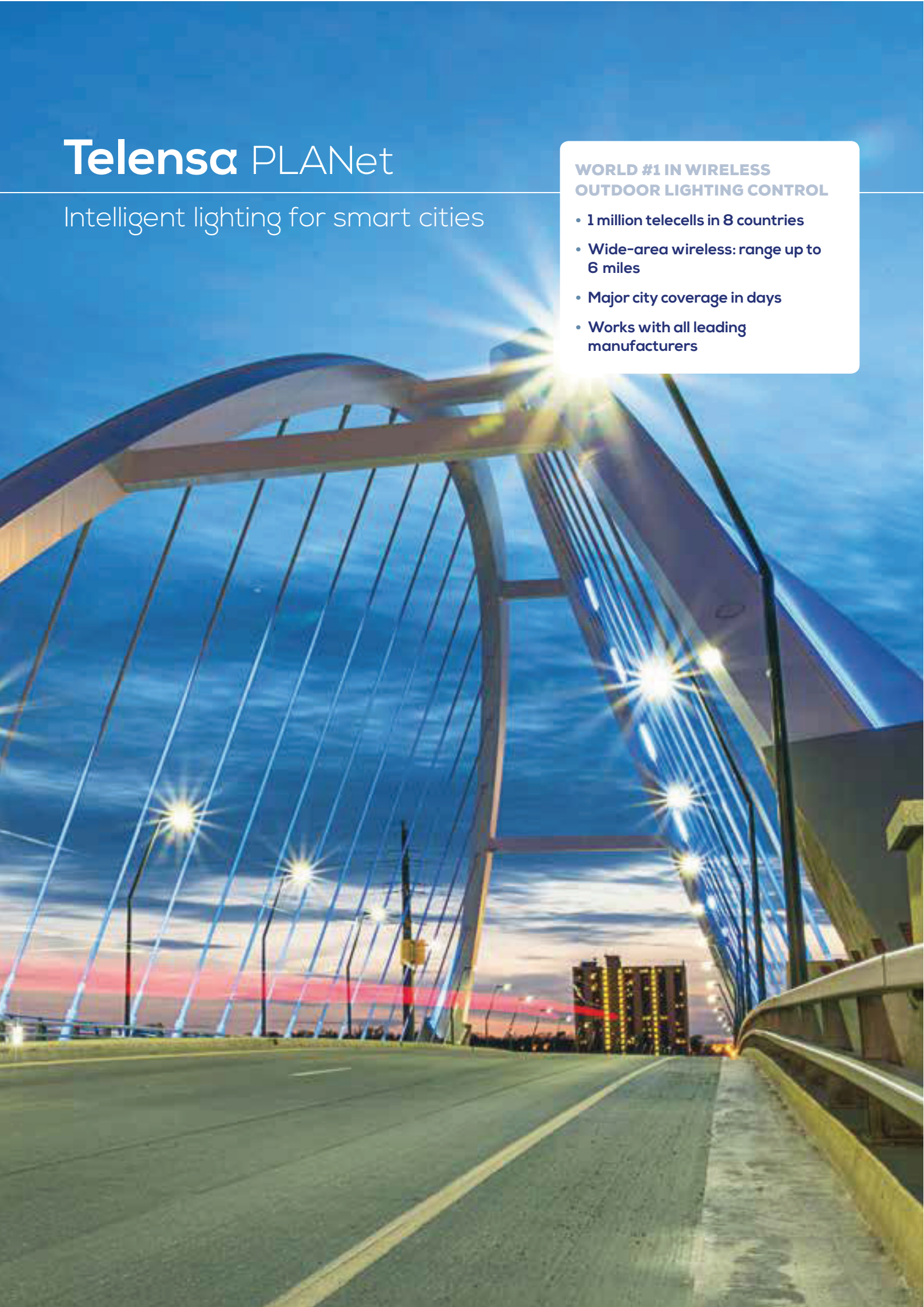
Wyndham Close, Brackla Industrial Estate, Bridgend, CF31 2AN
T: 01656 645414F: 01656 669231 Email: sales@beilighting.com

Telensa PLANet

Intelligent lighting for smart cities

WORLD #1 IN WIRELESS OUTDOOR LIGHTING CONTROL

- 1 million telecells in 8 countries
- Wide-area wireless: range up to 6 miles
- Major city coverage in days
- Works with all leading manufacturers



Key features

Comprehensive control and monitoring

- Complete flexibility in switching and dimming
- Special events, days of week and override functions
- Enables switching at any daylight Lux level
- Extensive monitoring of electrical parameters and mains supply

Simple, scalable radio system

- Low Power Wide Area (LPWA) radio system – range up to 6 miles
- Fast – full network deployed in days
- Scalable – 5,000 telecells per base station
- Resilient – telecells covered by multiple base stations and operate independently of network

Perfect for new build LED or retrofit deployments

- Telecell variants for any type of luminaire, including heritage
- Works with lamp types including LED, SOX, SON, CDM/O, Cosmopolis, PLL
- Operates independently of luminaire, driver or ballast manufacturer
- Supports LED drivers and magnetic or electronic HID ballasts
- Supports 0-10v or DALI dimming

Commercial and operational benefits

- Scales to millions of telecells
- Powerful map-based user interface
- Pays for itself in energy and maintenance savings
- Elexon-approved for energy reduction savings
- Integration with asset management systems including Mayrise, Confirm and Symology


NEMA

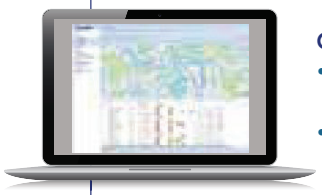

Conduit


2-part internal

Telecell
- **Discreet:** photocell sized with no visible antenna
- **Flexible:** luminaire independent NEMA and variants
- **Accurate:** energy metering and GPS
- **Resilient:** network independent

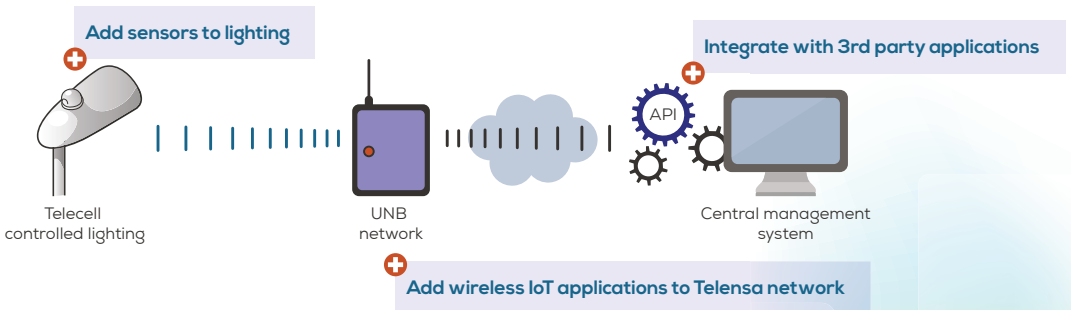

Base station

Base station
- **Capacity:** 5,000 telecells
- **Long range:** up to 6 miles
- **Compact:** laptop sized case
- **Simple** deployment


Central system

Central system
- **Map-based** wide area control
- **Flexible** secure hosting options

Foundation for adding smart city sensor applications



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