

Versatile Smart Lighting Solution

Group Control/ Individual Control/ DALI Control/ RS485 Modbus/ Digital & Analogue Inputs

Simplify the management of your entire public lighting infrastructure!

CityCabinet is a state-of-the-art smart lighting solution that offers group-level control, individual street light control, and advanced direct DALI control of any lighting fixture.

Designed to be the central hub for your smart city lighting network, the CityCabinet features a Modbus RS485 interface to connect energy meter, and digital and analogue inputs to connect sensors. Plus, it offers provision to connect 4 incoming and 18 outgoing current transformers, and in-built cellular / ethernet / wifi connectivity options. Since every city is unique, the CityCabinet is fully modular – we build it with the functions that you need.

CityCabinet seamlessly connects with CityManager – a unified platform that simplifies monitoring, management and control of citywide feeder pillars, individual street lights, and all DALI-compatible lighting, including street, flood, landscape and RGBWAF lights.

APPLICATIONS



Residential Areas



Urban Streets



Highways / Motorways



Bicycle Roads



Public Parks



Business /
Industrial Parks



Ports / Sea
Terminals



Train Stations /
Railway Yards



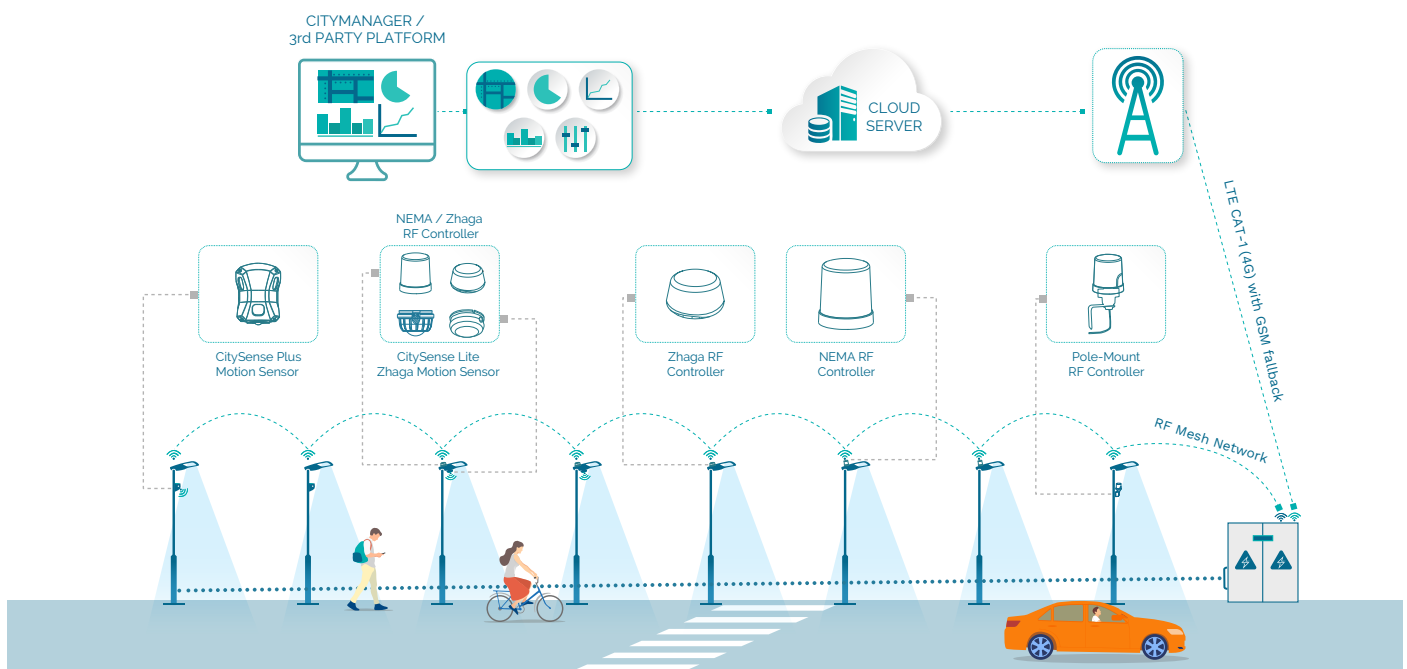
Car Parks



School / University
Campuses

SYSTEM ARCHITECTURE

Integrated Group and Individual Lighting Control



FEATURES



MCU with in-built AI acceleration



Modbus interface (RS485) for Energy meter



4x Relay output / 4x Digital input /
2x Analogue inputs with protection



24V DC auxiliary output to power
external sensors



3x Input Voltage measurement /
22x Current measurement



Single dashboard for group, individual as
well as RGBWAF lighting control



Configuration: local via mobile device /
remote via CityManager LMS



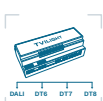
Scheduling via CityManager or
3rd party platform (via Open API)



Dual SIM/ Ethernet/ WiFi support



LTE CAT 1 (4G, GSM/GPRS)



DALI interface, advanced individual
lighting control (DALI Relay, Tunable
White, RGB, RGBW)



Built-in RF Mesh Gateway for individual
control of up to 200 Tvilight RF Mesh
outdoor lighting controllers

BENEFITS



Smart Connectivity & Remote
Management of Electrical Cabinet



Comprehensive Sensor & Safety
Integration



Advanced Energy Monitoring & Control



Future-Proof & Scalable



Industry-Leading Direct Luminaire
Control



Cost-Efficient & Sustainable

SPECIFICATIONS

MCU Section	Dual-Core micro-controller with in-built AI acceleration
Flash Memory	512 MB; Automatic data storage for batch processing of data or in case of lost connectivity
Serial Interface	RS-485 (Modbus RTU)
Input / Output Interfaces (I/O)	<ul style="list-style-type: none"> 4x Relay output (max. switching load: 5A, 230V AC Normally Open) 4x Digital input (30V DC maximum) 1x Analogue input, 0-10V 1x Analogue input, 4-20mA <p>(Note: the relays are latching relays, which hold the current state)</p>
Alarm Output	1x Digital output (24V DC)
Auxiliary Supply	24V DC
Input Power	230V AC (nominal), 85 - 305V AC, 50/60Hz
Phase Voltage Interfaces	3x Phase voltage measurement
Current Interfaces	<p>22x Current measurement. Provision for:</p> <ul style="list-style-type: none"> 4 current transformers (CT) at input lines (grid power supply L1, L2, L3 and N, for typical 100A CT) to detect Earth Leakage 18 clamp CTs at outgoing circuits (C1... C18, for typical 50A CT) <p>(Note: external Energy meter supported over RS485, Modbus)</p>
DALI Interfaces	<p>DALI Master, 96mA bus power (controls up to 48 DALI devices)</p> <p>Supported: DALI DT6 - LED Drivers DALI DT7 - Relays DALI DT8 (Tc, RGBWAF) - Tunable White, RGB, RGBW Drivers</p>
RF Mesh Gateway	In-built RF co-ordinator module to support Tvilight RF Mesh network based OLCs (Outdoor Lighting Controller). Co-ordinator to OLC ratio - 1:200
GNSS	In-built GPS
Real-Time Clock	<p>In-built RTC (Real Time Clock)</p> <p>In-built Astronomical Clock (sunrise / sunset cut-off)</p>
LED Indicators	<p>3x Status LEDs:</p> <p>Power Internet connection Server communication</p>
Ethernet	10/100 Mbps (default/ primary mode of connection)
Cellular Connectivity	<p>LTE CAT 1 (4G, GSM/GPRS)</p> <p>Dual SIM support with MFF2 and Micro SIM card holder</p>
Antenna (SMA)	<ul style="list-style-type: none"> 1x Mini Antenna 2.4 GHz 1x Mini Antenna 4G 1x Mini Antenna GPS 1x Inbuilt Antenna WiFi/Bluetooth
Operation	In-built watchdogs and manual reset button

Device Configuration	In-built Bluetooth (Bluetooth 5 LE) Manual Bluetooth broadcast button
Software Update	Over-the-air
Network Security	128 bit AES encryption between RF Mesh devices. IEEE 802.15.4 standard. Certificate-based secure WebSocket and private VPN connection between CityCabinet and Server, further supported by OAuth 2.0 access control
USB Port	USB 2.0 (250mA, 5V)
Surge Protection	6kV
Operating Temperature	-40°C to +85°C, <95% relative humidity (non-condensing)
Electrical Safety	Galvanic isolation
Fuse	1A, PTC fuse
Inbuilt Sensors	Temperature sensor*, Accelerometer sensor* <i>*Optional</i>
Enclosure	<ul style="list-style-type: none">• Mounting: Standard DIN-Rail 35mm• Protection: IP20• Material: ABS plastic• Electrical protection: Class II
Dimension	158mm (length) x 87mm (height) x 60mm (depth)
Standards	CE, CB, EN61547, EN55015, EN62368-1, EN 301 489-1/17, EN 300 328, RoHS. RF compliant with US (FCC), Canadian (IC), European (ETSI), and Japanese (Telec) standards
Manufacturing	ISO 9001
Wireless Network	2.4 GHz IEEE 802.15.4 self-healing and self-forming wireless network, depending on variant: +9.5 dBm max. transmit power, -96 dBm receiver sensitivity, up to 150 meter open field range or + 22 dBm transmit power, -100 dBm max. receiver sensitivity, up to 1 Km open field range up to 250 kbps RF data rate
Product Compatibility	Plug-and-play compatibility with SkyLite Zhaga RF, SkyLite Nema RF, CitySense Plus Motion Sensor, CitySense Lite Zhaga Sensor

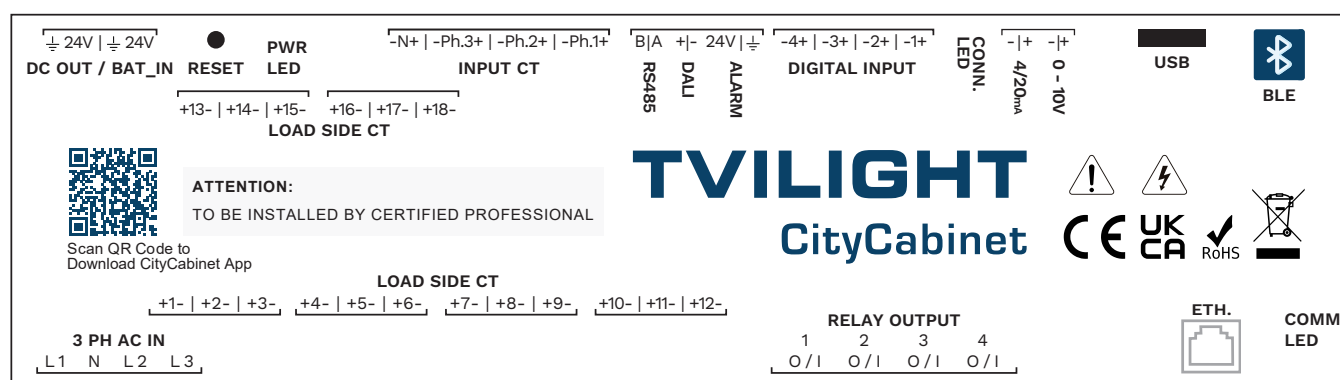
OPTIONAL

Back-up Battery	DIN Rail Battery Module, designed for two 18650 rechargeable batteries, 2500 mAh each (batteries not included)
External Antenna	3-in-1 Combi antenna (4G, GPS, 2.4 GHz) - waterproof anti-vandalism

WARRANTY

Warranty	5 years standard warranty. Twilight Warranty Terms and Twilight T&C applicable.
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CONNECTOR SCHEMATIC



Let's Transform Your City Together

Contact us at info@tvilight.com