

T-Light™ DCU2 PRO

The **Data Communication Unit (DCU)** uses robust and encrypted two-way communications to manage information traffic and commands for both individual lighting units and for groups of lights. Storing all status and energy consumption information of the remote Luminaire Control Units (T-Light LCU), the DCU communicates with the Central Management System (CMS), and transmits all control commands to the luminaires. The DCU provides the monitoring status of each luminaire, including in aggregative energy and active power consumption. It provides detailed parameters and values, such as voltage, current, power and temperature.

For optimal topology, various DCU models can be deployed depending on the specific environment and applications.

The T-Light DCU2 Pro serves as a communication gateway for a cluster of luminaires utilizing an RF Mesh topology. It can control up to 250 LCUs. Multiple networked clusters of luminaires, each controlled by a DCU-Pro, can be combined to form a wider **T-Light Pro** system network.



Key Features

- Manages the light pole network remotely using advanced management software
- Built-in Cellular modem
- Occupancy sensor interface
- Configurable alerts provided by SMS or EMAIL
- Optional - battery Backup for supporting alert submission in case of DCU electricity shutdown
- Can act as smart street light controller - replaces the traditional street light programmable logic controllers with advanced scheduling properties
- Ethernet, WiFi and Cellular communication for remote management
- Supports over the air firmware upgrade
- ModBus interface to Power Meters and I/Os

T-Light™ Smart Lighting System

T-Light™ DCU2 PRO

RF Specification

| | |
|-----------------------------------|-------------------------------|
| Frequency: | 902-928 MHz - US ISM band |
| | 868 - 869.5 MHz - EU ISM band |
| Receiver Sensitivity: | -102 dBm @ 38.4kbps |
| Output Transmit Power: | Up to +27 dBm / 500 mW max |
| Compliance with FCC CFR47 PART 15 | |
| Compliance with ETSI EN 300 220-1 | |
| CE compliant | |

External Interface

| | |
|---------------------------------------|-------------------------|
| Ethernet, USBx2 | External Cellular Modem |
| RS485 (including MODBUS protocol) | 3G / 4G optional |
| Isolated I/Os | External antenna |
| MODBUS interface (Pro) | SIM card |
| WIFI | |
| Bluetooth | |
| GPIO 4 inputs & 4 outputs as standard | |

Electrical Specifications

| | |
|------------------------|----------------|
| External power supply: | 12V @ 60W |
| Operating Temperature: | -40°C to +85°C |

Mechanical Specifications

| | |
|----------------------|-----------------------|
| Physical Dimensions: | 100 x 100 x 60 mm |
| Installations: | DIN Rail EN-50022 |
| | DCU in IP50 enclosure |

Per Customer Request

| | |
|----------------------|-----------------------|
| Installations: | DCU in IP65 enclosure |
| Physical Dimensions: | 260 x 180 x 65 mm |

T-Light DCU2 PRO System Architecture



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