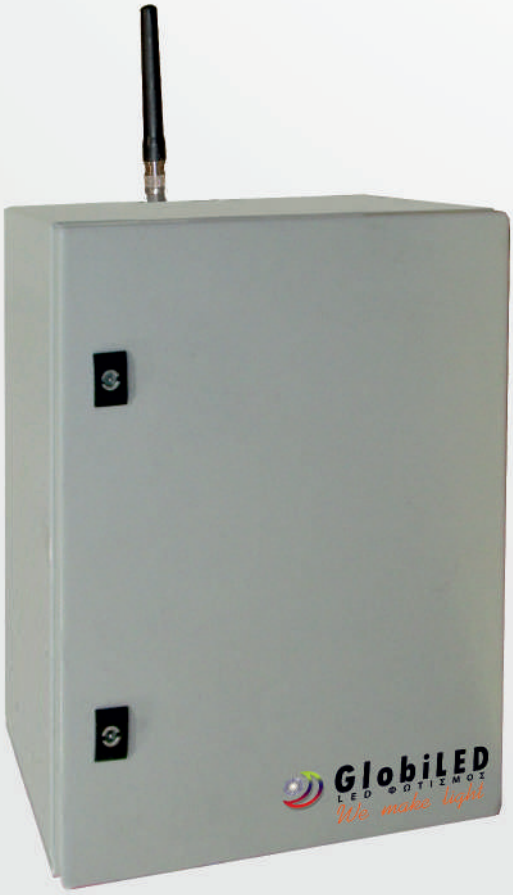
GlobiLED
LED ΦΩΤΙΣΜΟΣ
We make light

Wireless Management Node

GlobiNode2



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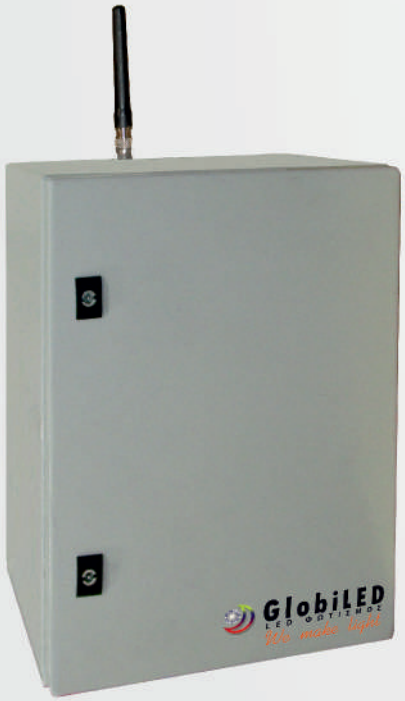
The IoT Wireless Management Node of GlobiLED



GlobiNode2 is the 2nd generation IoT Wireless Management Node of GlobiLED. GlobiNode2 is designed in order to meet the ever increasing demands of Telemanagement of Street Lights (LED or conventional luminaires) and Power Metering applications, in the emerging environment of Smart Cities. As an outdoor equipment, GlobiNode2 serves as the connection gateway between the Light Management Software (LMS) and groups of Street Lights. The communication of GlobiNode2 with the LMS is established via a 4G or 3G wireless interface.

GlobiNode2 has an integrated power meter enabling the centralized and real-time monitoring of the power network electrical and power/energy parameters, in three (3) phases/power lines (L1, L2, L3), as follows:

- ✓ Measurement of the electrical parameters: Voltage (V), Current (I), Power Factor (PF), Frequency (F), V_{rms}, I_{rms}.
- ✓ Measurement of the power network energy and power parameters: Active (A) energy (Wh) and power (P), Reactive (Q) energy (VARh) and power (VAR), Apparent (S) and power (VA). Measurement of operating hours.
- ✓ The energy parameters are stored in the local database of GlobiNode2. This database is synchronized with the Cloud database of the LMS, in order to provide detailed energy saving reports, fault detection & alarms.
- ✓ GlobiNode2 operates autonomously (using its Real Time Clock), without the need for direct, real-time 3G/4G connection with the LMS

GlobiNode2 Can control the power lines (L1, L2, L3), according to the following modes of operation:

- **Mode 1:** Manual On mode (100% (the power lines are switched on by the user of the LMS,via a remote command).
- **Mode 2:** Manual Off mode (0% (the power lines are switched off by the user of the LMS, via a remote command).
- **Mode 3:** On/Off according to a desired daily time-schedule. The schedule is comprised of up to 10 time-points and at each time-point the power lines switch on or off automatically. The 10 time-points and the mode of operation at each time point (on or off) are remotely programmable by the user of the LMS and stored in the local database of GlobiNode2 for autonomous operation. This mode can be set once by the user of the LMS, via a remote command, and then GlobiNode2 operates autonomously according to this mode (based on its Real Time Clock (RTC)), unless a different mode is set remotely by the user of the LMS.
- **Mode 4:** On/Off according to the sunrise-sunset algorithm (i.e. the power lines switch on/off automatically at the sunrise/sunset time, respectively, on a daily basis). This mode can be set once by the user of the LMS, via a remote command, and then GlobiNode2 operates autonomously according to this mode (based on its Real Time Clock (RTC)and the location information), unless a different mode of operation is selected remotely by the user of the LMS.
- **Mode 5:** On/Off according to ambient light measurements and comparison to a (remotely) programmable threshold (option).
- **Mode 6:** Emergency flashing, real-time set groups of LED Street Lights in flashing mode, in order to indicate danger or alarm

KEY FEATURES

Cellular Wireless Interface

- ✓ 4G LTE (with fall-back to HSPA+) or 3G HSPA+ (with fall-back to GSM/GPRS/ EDGE)
- ✓ Supported protocols and applications:

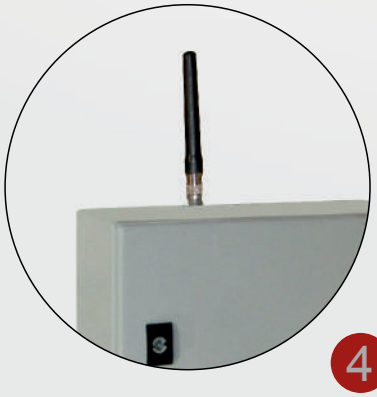
  - Network: TCP/IP, UDP/IP, DNS
  - Routing: NAT, Host Port Routing, DHCP, PPPoE, VLAN, VRRP
  - Application: SMS, Telnet/SSH, SMTP, SNMP, SNTP

GNSS (option)

Global Positioning System (GPS). Supports TAIP, NMEA and RAP navigation messages and shares the same (dual) antenna with the 4G/3G interface

Wireless Interface for M2M applications (optional)

- ✓ ZigBee technology (IEEE 802.15.4), capable for wireless mesh network topologies
- ✓ Frequency band: 2.405-2.480Ghz (16 channels)
- ✓ Maximum transmit-receive data rate: 250Kbps
- ✓ Maximum transmit power: +20dBm
- ✓ Integrated chip antenna or optional external antenna (with U.FL connector)
- ✓ Estimated Line-Of-Sight range with chip antenna: 1000-1500 meters
- ✓ Estimated Line-Of-Sight range with external antenna: 3000-4000 meters



Other Interface (option)

- 10/100 Base-T RJ45 Ethernet
- USB

Enviromental

- Operating temperature: -30°C ~ +70°C
- Storage temperature: -40°C ~ +85°C

Protection

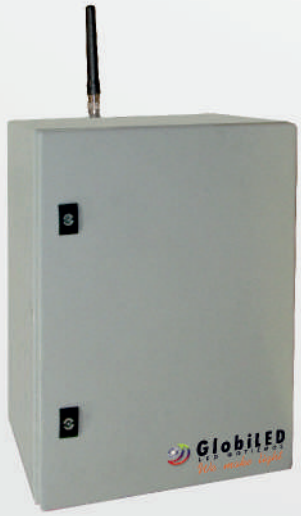
- Protection against ingress of water and dust: IP65
- Insulation Class: Class I
- Surge Protection: ≥1kV L-N and ≥2kV L,N - G

Input characteristics

- Input voltage range: 184~ 276 VAC
- Input frequency: 50 or 60Hz
- Power consumption: 11 W

Certificates

(RED)Directive 2014/53/EU
LVD Directive 2014/35/EU
EMC Directive 2014/30/EU
RoHS Directive 2011/65/EU
WEEE Directive 2012/19/EU
EN 61010-1
EN 60950-1 & EN 62311
EN60529
EN 55024
EN 55022
EN 61000-3-2
EN 61000-3-3
ETSI EN 301 489-1
ETSI EN 301 489-3
ETSI EN 301 489-7
EN 61000-6-1
EN 61000-6-3
EN 301 511
EN 301 908-1
EN 301 908-2
EN 300 328



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We make light

www.globiled.com

Λεωφ.Βουλιαγμένης 287, Άγιος Δημήτριος / Τηλ: 210 9411933 / Fax: 210 9411018 / e-mail: info@globiled.com