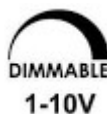


Street LED Light NBloT CAT M1 Controller

SL102

Smart Street Light Controller Cellular NBloT /CAT M1 to DALI /1-10V, NEMA Socket

The SL102 is a LED dimmer controller for the smart lighting control application with LTE CAT M1 and NBloT v2 IoT networks. The controller communicates with the Cloud server by MQTT and supports 2 types of LED dimmer control 1-10V or DALI protocol. The configuration can be easily done by Cloud OTA platform or local Windows Utility by Micro-USB connection. The SL102 controller is compact size for street light installation with AC power supply and can withstand -40°C~65°C outdoor environments by IP66 enclosure.



ThingsMaster OTA



Features & Benefits

4G LTE / IoT Communication

- LTE NB, Cat.M1
- B1,B3,B4,B5,B8,B12,B13,B18,B19,B20,B25,B26,B27, B28,B66,B71,B85
- E-SIM / Nano SIM Socket (Default E-SIM)

DALI, 1-10V Dimming Control

- 1-10V , DALI Dimming protocol
- 1-10V Output Pull-High Resistor Adjustable
- Auto Switch Dimmer Main Power with Relay Control

Energy Measuring & Monitoring

- Voltage_{RMS}, Current_{RMS}
- Voltage_{Active}, Current_{Active}
- Reactive Power, Apparent Power

Wide Range Voltage – AC100~277V

- Build-In AC Power for System Operating
- 1KW Relay On/Off Driven Capability (AC 220V)

Communication & Control

- MQTT /MQTTs Cloud Protocol
- Https FOTA
- Status Timing Publish
- Power On Auto Full Dimming Output
- NB Disconnect with schedule Dimming Control *

Multi-Level Security

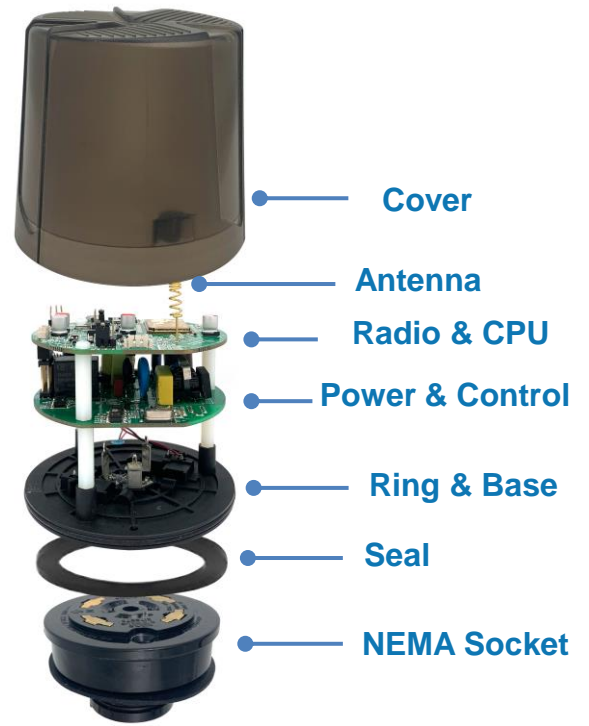
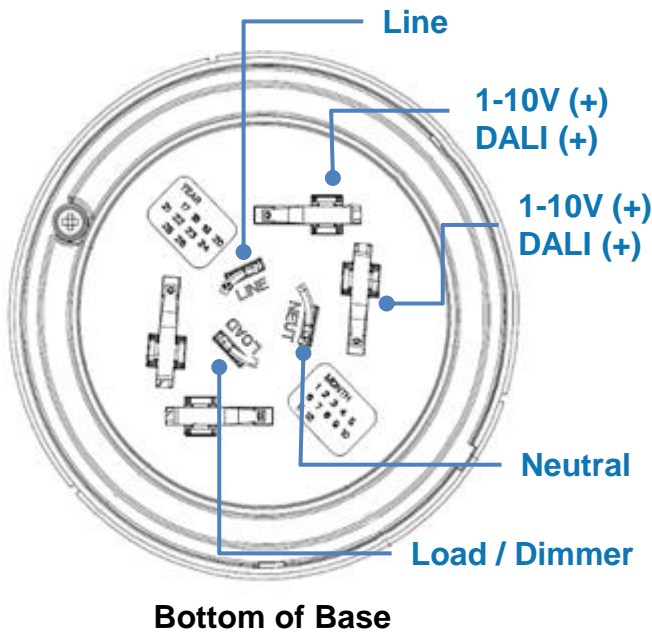
- User and Administrator multi-level Authentication
- AES 128, MD5 Data Encryption

Full-Time Protection

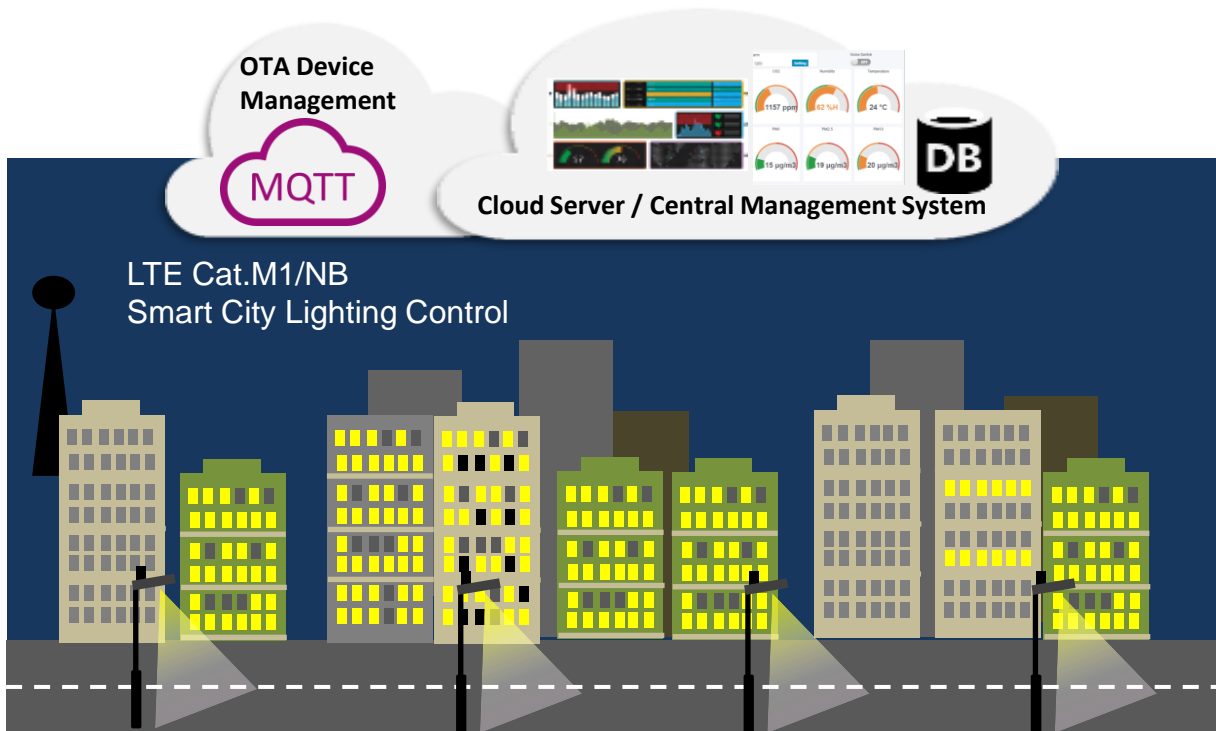
- IP 66 Water-Proof & Dust-Proof
- ANSI C136.41 Vibration
- ASTM B117 Salt-Fog Resistance
- -40~65°C Operating Temperature / 10~90 % Humidity
- Anti U/V, Anti Corrosion for Acid-Rain

Windows® Configuration Tools

- Friendly Interface with Auto-Detection of Connected Model
- Configuration through micro-USB Interface
- Production with pre-defined profile for field easy installation



✓ Smart City Lighting Control - LTE M1/NB NBIoT with CMS



Technology	
Standard	3GPP Release 14 NB-IoT
Cellular Properties	
Data Throughput	Cat. M1: 300Kbps (DL)/ 1.1Mbps(UL) Cat. NB1: 27Kbps(DL)/ 63Kbps(UL) Cat. NB2: 124Kbps(DL)/ 158Kbps(UL)
Band Information	Cat-M1: B1,B3,B4,B5,B8,B12,B13,B18,B19,B20,B25,B26,B27,----,B66,B85 Cat-NB1/2:B1,B3,B4,B5,B8,B12,B13,B18,B19,B20,B25,B26, ---,B28,B66,B71 Category=Cat.
Radio RX Sensitivity	Cat.M1: -103dBm (Typ.) / -99.2dBm (Min.) Cat.NB2: -113dBm (Typ.)/ -108.2dBm (Min.)
Radio TX Power	Cat.M1: Class 5 (+20dBm \pm 2dB) for all supported LTE Cat M1 bands Cat.NB2: Class 5 (+20dBm \pm 2dB) for all supported LTE Cat NB1/2 bands
System Management	
System Management	1 x Micro USB 2.0 internal port for System Configuration
Software Utility	Windows [®] Based Utility for the factory configuration with secure login function
System Security	Encrypted system parameters
Interface (Internal)	
SIM Socket	1x Nano-SIM Socket (Default) / Chip SIM ^(Note2)
USB	1x Micro USB for configuration & firmware upgrade (Engineer Maintenance)
Antenna	1x 2dBi internal Spring Antenna
Power Rating & Management	
Power Input	Standard 7-Pin NEMA Socket Power Input Rating: AC110V/ 220V (AC 86V~285V)
Power Consumption	Operating: 3.84W @AC220V (System Publish data, Dimmer Power Relay On) Sleep: 1W @AC220V (Sleep Mode)
LED Dimmer Loading	1KW relay output driven capability for LED Dimmer
Energy Management	V(rms), I (rms), Active Power (w), Reactive Power (w), Apparent Power (w), Pre-defined Frequency
LED Dimming Control	
SL102-10V	Output 1-10V Voltage for LED Dimmer control with adjustable O.C. output.
SL102-DALI ^{Note-1}	1-8V DALI Dimmer Control Protocol
Cloud Communication	
Data Communication	Communicate with IoT /Cloud server by MQTT protocol, publish system status and subscribe update control message
Scheduling Reporting	Pre-defined IoT/Cloud Server connection with authentication
Cloud Security	AES-128
Mechanical / Enclosure	
Installation	ANSI C136.41, ANSI C136.10 Dimming Receptacle
Dimension (mm)	Ø 96 x 90 (H)

Protection Degree	IP-66
Pollution Degree	2
Material	PC, U/V resistant, UL94V0 plastic
Weight	300g
Environmental	
Operating	-40°C~70°C, 0% ~ 90%, Non-Condensing
Storage	-40°C~80°C, 0% ~ 90%, Non-Condensing
Reliability & Warranty	
MTBF	> 200,000 Hours Operating
Warranty	1 Year
Regular Standard	
Radio Equipment Directive ^(Note-3)	RED 2014/53/EU EMC: EN 301489-1 V2.2.3 (2019-11)/ EN 301489-3 V2.1.1 (2019-03) Radio: EN 300 220-1 v3.1.1 (2017-02)/ EN 300 220-2 v3.2.1 (2018-06) Health: EN 50663:2017 / EN 62479:2010 Safety: EN62368-1: 2014+ A11:2017
EMC ^(Note-3)	Compliance with EN 55032:2015/A11:2020, EN 55035:2017 IEC 61000-4-2 ESD IEC 61000-4-3 RS IEC 61000-4-4 EFT IEC 61000-4-5 Surge IEC 61000-4-6 CS IEC 61000-4-8 Pulse Magnetic Field

Note:

1. DALI: By Request
2. ChipSIM: Special Request
3. Radio & EMC: Depends on the Customer Request

 **Ordering Information**

Model	Description
SL102-10V	Smart Lighting Controller, LTE Cat M1/NB, 0-10VDC, AC 86~285V, NEMA Socket
SL102-DALI	Smart Lighting Controller, LTE Cat M1/NB, DALI, AC 86~285V, NEMA Socket