

# GW-1800-DC09WMLR/4G SPECIFICATION

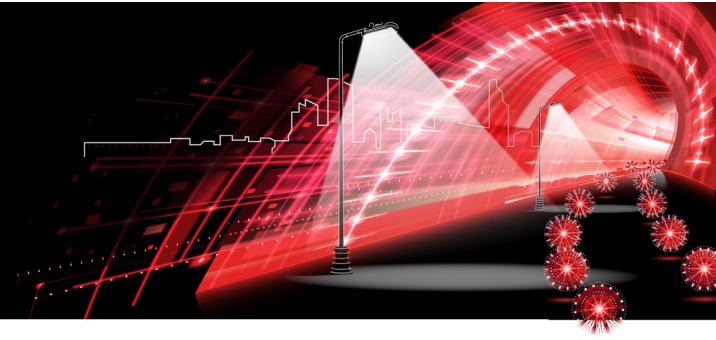
## 1. Product introduction

GW-1800-DC09WMLR/4G data concentrator utilizes the latest developments in LoRa technologies to configure and collect data from GATEWAY's intelligent LoRa lighting controllers and transmits data to and from the GATEWAY cloud-based central server. Data concentrators provide extensive fault monitoring to report on day ON/OFF of circuit breakers, cabinet opening, over/under voltage, abnormal power consumption, low power factors, communication failures, leakage current. All faults are sent to GATEWAY's cloud-based Central Management System for alarm routing, visualization, and fault correction. Alerts can be sent directly to relevant users via emails or text messages (SMS) or WeChat immediately when they occur. Alerts are time stamped and contains key parameters associated with the fault/alarm.

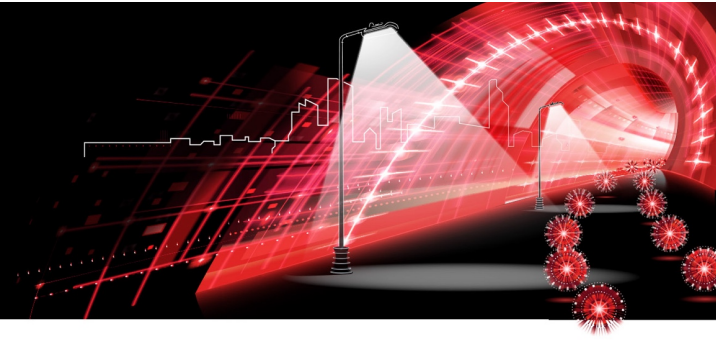


## 2. Main Technical Features

- **LoRa Technologies:** GATEWAY's LoRa Gateway utilizes the latest developments in LoRa technologies to configure and collect data from GATEWAY's intelligent wireless lighting controllers and transmits data to and from the GATEWAY cloud-based central server.
- **Local Intelligence:** GATEWAY's LoRa Gateway uses an extremely powerful 32-bit microcontroller that enables local complex logic and intelligence for faster response times and better performance.
- **Local Data Storage:** GATEWAY's LoRa Gateway can store large amounts of data in the event of a communication link failure. This data is transferred to the cloud and GATEWAY's cloud-based Central Management System once the link is available, thus ensuring data integrity.

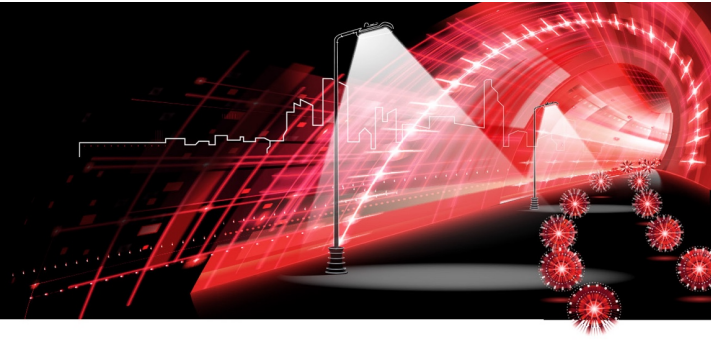


- **Multiple Connectivity Options:** GATEWAY's LoRa Gateway offers several wired and wireless options to connect to the cloud including Ethernet, GPRS (Cellular) support.
- **Simple Remote Configuration:** GATEWAY's LoRa Gateway can be remotely configured from an easy-to-use web interface. Configurations include input and output mapping, polling rates and GPS coordinates.
- **Multiple Protocol Support:** GATEWAY's Gateway provides support for several industry standard protocols that enable easy integration with other systems and networks.
- **Fault Monitoring:** GATEWAY's Gateway provide extensive fault monitoring to report on day ON/OFF of circuit breakers, cabinet opening, over/under voltage, abnormal power consumption, low power factors, communication failures, leakage current. All faults are sent to GATEWAY's cloud-based Central Management System for alarm routing, visualization, and fault correction. Alerts can be sent directly to relevant users via emails or text messages (SMS) or WeChat immediately when they occur. Alerts are time stamped and contain key parameters associated with the fault/alarm.
- **Simple Installation:** GATEWAY's LoRa Gateway can be pole or rooftop mounted for easy installation.
- **Easy Update:** GATEWAY's LoRa Gateway can be updated by local interface or by remote air
- **Designed lifetime:** 10+ years.



### 3. Technical Specification

<b>Processor</b>	32-bit ARM COTEX-M3 based running at 100 MHz
<b>Real Time Clock</b>	Battery-backed RTC
<b>Radio</b>	Europe EU 868MHz / India 865MHz / Asia Pacific AS 923MHz / Australia and New Zealand AU
<b>Characteristics</b>	<p>923MHz / US 915MHz</p> <p>RF Data Rate: 25 kbps</p> <p>Receiver Sensitivity: -118 dBm</p> <p>Network Protocol: Lora (Private Protocol); LoRaWAN™ Class C or Class A(Ready)</p> <p>Data Protection: encrypted communication based on security keys</p> <p>Network Type: LoRa (low power, long range radio frequency)</p>
<b>4G</b>	Multi-band
<b>Characteristics</b>	<p>US/Canada:</p> <p>4G: 700(B17)/850(B5)/AWS1700(B4), 1900(B2)</p> <p>3G: 850(B5)/1900(B2)</p> <p>2G: 850/1900</p> <p>US-Verizon: 4G: 700(B13)/AWS1700(B4)</p> <p>Europe:</p> <p>4G: 800(B20)/1800(B3)/2600(B7)</p> <p>3G: 850(B5)/900(B8), 2100(B1)</p> <p>2G: 900/1800</p> <p>Mobile Originate, Mobile Terminated and Cell Broadcast PDU or Text Mode</p> <p>Performance: LTE 3GPP Release 9 (Category 3; 100 Mbps peak downlink/50 Mbps peak uplink) with HSPA+ 42/GPRS fallback</p>
<b>GPS</b>	Yes
<b>Storage Memory</b>	Flash Storage (2 GB SLC or 4 GB MLC)
<b>Security</b>	AES128/256-bit encryption and key rotation per session
<b>Power</b>	Universal AC input 86 V-305 V, 50/60 Hz



<b>Power Backup</b>	2-8 Hours for graceful shutdown
<b>Ports</b>	Ethernet: 10/100 Base-T IPv4 and IPv6 compatible
<b>Installation</b>	Wall Mount or DIN Mount
<b>Operating Conditions</b>	-40°C to +70°C / -40°F to +158°F, 20% to 90% Rh non-condensing
<b>IP Rating</b>	IP65
<b>Surge Protection</b>	Standard: 445 Joule CATB (6kV/3kA)
<b>Markings</b>	CE
<b>Regulatory</b>	IEC1000-4-2/3/4-1995 Electromagnetic compatibility IEC60529-2013 Degrees of protection provided by enclosures (IP code)