

CloudGate

LoRa EXPANSION CARD



CONNECTING LoRa BASED SENSORS to the Cloud

Option's LoRa solution enables the customer to have an end to end LoRa network using one or more CloudGate gateways without the need to connect to an external LoRaWAN server.

Sensor data can be analyzed and reacted to on the CloudGate, forwarded to remote servers and/or exposed using any protocol supported by LuvitRED, for example MODBUS or BACnet.

Option's LoRa solutions can also function as a normal LORAWAN gateway connected to external LoRaWAN servers in simple packet forwarder mode.

CloudGate offers a choice of 3G/4G, LAN or wireless LAN backhaul with automatic failover.

Solution components

The LoRa base station expansion card for CloudGate

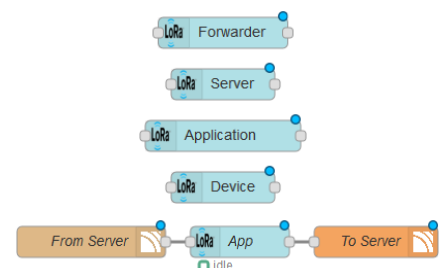
There is an emerging trend of connecting, monitoring and controlling machines and other 'things' in our environment but using wires to do so is often not desirable or even possible. The LoRa expansion card allows the CloudGate gateway to connect to all wireless LoRa devices.



Features	Description
LoRa(WAN) functionality	
Radio protocol	LoRa, LoRaWAN
Baseband processor	Semtech SX1301
Regional variants	902-928MHz, 868MHz, 433MHz (future)
Number of nodes per card	~1000 (assuming 30 seconds airtime per node per day)
Security	128-bit AES encryption (send/receive)
Antenna connector	SMA RP (female)
Optional WLAN functionality	
Radio protocols	802.11 a/b/g/n
Frequency bands and channels	2.4GHz, channels 1-11, 20MHz bandwidth
Speed	Up to 65Mbps
Guest network	Yes (dual SSID)
Wireless mode	Simultaneous client & access point
Number of users per card	10 max
Security	WPA-PSK, WPA2-PSK, mixed WPA/WPA2-PSK
Antenna connector	SMA RP (female)
Operating temperature	-30 to +70 °C
Humidity	5 to 95% RH, non-condensing
Storage temperature	-40 to +85 °C

LoRaWAN nodes in the LuvitRed application on CloudGate

LoRa Forwarder	Packet forwarder node to communicate with a public or private LoRaWAN server
LoRa Server	Node to deploy a private LoRaWAN Server
LoRa App	Manage LoRa devices in bulk
LoRa Device	Manage a single LoRa device



*Specifications are subject to change.

As part of the continual product improvement process, OPTION reserves the right to alter the specifications of this product.

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1. Place sensors on or around "things" you want to monitor



2. Setup CloudGate to communicate with sensors and send data to Cloud platform



3. Analyze data, receive real-time alerts by text/email, wherever you are

