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O O **OPTION**
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LoRa™

CloudGate

LORAWAN EXPANSION CARD

CONNECTING LoRaWAN SENSORS
to the Cloud

Option LoRaWAN enables the customer to have an end to end LoRa network using one or more CloudGates 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 LoRaWAN 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.

CloudGate
MONNIT EXPANSION CARD

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OPTION

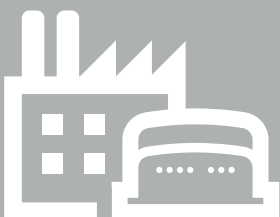| Features	Description
LoRaWAN functionality	
• Radio protocol	• LoRaWAN
• Baseband processor	• Semtech SX1301
• Regional variants	• 902-928MHz, 868MHz, 433MHz (future)
• Number of nodes per card	• ~1000 (assuming 30 seconds airtime per node per day)
• Security	• 128-bit AES encryption (send/receive)
• 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

The LoRaWAN 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 LoRaWAN expansion card allows the CloudGate gateway to connect to all LoRaWAN wireless sensors.

LoRaWAN nodes in the LuvitRed application on CloudGate

• **LoRa Forwarder**: LoRaWAN packet forwarder node to communicate with LoRaWAN server

• **LoRa Server**: LoRaWAN server node to communicate with LoRaWAN gateways

• **LoRa App**: Manage LoRaWAN sensors in a LoRaWAN application

• **LoRa Device**: LoRaWAN sensor node in the LoRaWAN application (see on the right)

LuvitRED

www.option.com

DataSheet_v1.1

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