



# 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





### 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)

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





\*Specifications are subject to change.

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

© 2014 OPTION. Option and the Option logo are registered trademarks of OPTION. All third-party trademarks are the property of the respective owners.

Option nv - Gaston Geenslaan 14 - 3001 Leuven Belgium - T +32 16 317 411 - F +32 16 207 164 - www.option.com

www.option.com



1. Place sensors on or 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

