

## WLAN Expansion Card (CG2131)

The WLAN Expansion Card (CG2131) features client & access point mode. It is a rear expansion card and is compatible with all devices from CloudGate family which have the rear expansion slot. It is built around a certified chipset RS9116N-DB00-CC0 from Redpine Signals (CE, FCC and ISED).



Features	Description
Number of users	up to 8 clients (32 from CloudGate firmware 2.92.x onwards)
Wireless protocols	802.11 a/b/g/n
Frequency Bands	2.4 GHz & 5 GHz
Channels	2.4 GHz: 1-11; 5GHz: 20 MHz: 36, 40, 44, 48, 149, 153, 157, 161 40 MHz: 38, 42, 46, 151, 155, 159, 165
Speed	802.11a/g: 54 Mbps; 802.11b: 11Mbps; 802.11n: MCS0 to MCS7
Wireless mode	Client & access point
Channel bandwidth	20 MHz & 40MHz
Security	WPA-PSK, WPA2-PSK
Antenna connector	RP-female
Operating temp.	-30°C to +70°C
Humidity (operational)	5 to 95% RH, non-condensing
Storage temp.	-40°C to +85°C
	CE, FCC/ISED

### RF Specifications:

### Note: 5 GHz WLAN operation

In order to reduce the potential for harmful interference to co-channel mobile satellite systems, the operation in the 5150 - 5250 MHz band (channels 36 to 48) is restricted to indoor usage only. Outdoor usage in these channels is allowed in the US.

### RF EXPOSURE WARNING

A minimum distance of 20 cm must be maintained between the user's body and the device antenna.

### Industry Canada radiation exposure statement

This equipment complies with Industry Canada's RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p) is not more than necessary for successful communication.

This radio transmitter, IC 8407A-M7DB6, has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

2.4 GHz band: 2.37 dBi (50 ohm)

5 GHz band: 2.93 dBi (50 ohm)

## WLAN antenna interface

### Connector

- The WLAN antenna connector is an RP-female connector. it is labelled "WLAN Main" on the front plate of the expansion card.



- The RF connector on the WLAN antenna should be an RP-SMA male connector



## WLAN Antenna

The antenna parameters are as follows:

Frequency range

- 2.4 GHz
- 5 GHz

The integrator should only choose the frequencies he would like to use.

#### Performance

- Radiation pattern: Omni-directional
- Efficiency over all used frequencies: > 50%
- Maximum VSWR: < 2.5:1 with 50 ohm reference impedance

#### Polarization

- Linear

#### RF EXPOSURE WARNING

To comply with regulatory requirements, please check the maximum allowed antenna gain for your external antenna! The maximum gain is specified for each product in the certification information section of the WLAN Expansion Card.

The following antenna is recommended for both bands, 2.4 GHz and 5 GHz:



2J 2JW1102-RPSMAM

#### Electrical Safety Note

The equipment is supplied by an external ES1 and PS2 circuit: Meaning that the voltage <60 Vdc and power <100 W.