

OnCell G2100 Series

Industrial quad-band GSM/GPRS modems



- > Quad-band GSM/GPRS 850/900/1800/1900 MHz
- > Separate RS-232 and RS-422/485 serial interfaces (G2150I only)
- > 2.5 KV RMS isolation for 1 min. for all serial signals (G2150I only)
- > Extended operating temperature from -30 to 75°C (G2110-T only)
- > Vertical IP30 housing with SIM card protection
- > LED indicators for GSM/GPRS, data transmission, and signal level
- > DIN-Rail and wall mounting
- > SMS Tunnel Mode provided



Overview

The OnCell G2100 Series of industrial quad-band GSM/GPRS modems are designed to transmit data and short messages (SMS) over GSM/GPRS mobile networks. The modems can be used to increase the efficiency of maintenance and communication, but do not require extensive training. In addition, the modems can be mounted on a DIN-rail or wall. The OnCell G2100 modems accept a 12 to 48 VDC power input, making them suitable for use with a variety of field power sources. The serial ports feature 15 KV ESD line protection to

protect the products from harmful electrical discharge, and separate RS-232 and RS-422/485 interfaces are built into the OnCell G2150I, each with 2.5 KV RMS isolation protection for one minute. The two serial interfaces on the OnCell G2150I make it ideal for attaching all kinds of devices, such as stand-alone controllers, PC COM ports, and multi-dropped electric meters. In addition, the OnCell G2110-T has an extended operating temperature (-40 to 75°C) design that makes it suitable for heavy industrial use.

Specifications

Cellular Interface

Standards: GSM and GPRS
Band Options: Quad-band 850/900/1800/1900 MHz
GPRS Multi-slot Class: Class 10
GPRS Terminal Device Class: Class B
GPRS Coding Schemes: CS1 to CS4
CSD Data Transmission Rate: Up to 14,400 bps
Tx Power: 1 watt GSM1800/1900, 2 watts EGSM 900/GSM 850

SIM Interface

Number of SIMs: 1
SIM Control: 3 V

Serial Interface

Number of Ports: 1
Serial Standards:
 G2110: RS-232 (DB9 female connector)
 G2150I: RS-232 (DB9 female connector), RS-422/485 (5-pin terminal block connector)

ESD Protection: 15 KV (G2110 only)
Optical Isolation: 2.5 KV (G2150I only)

Serial Communication Parameters

Data Bits: 7, 8
Stop Bits: 1, 2
Parity: None, Even, Odd, Space, Mark
Flow Control: RTS/CTS
Baudrate: 300 bps to 115.2 Kbps

Serial Signals

RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
RS-422: Tx+, Tx-, Rx+, Rx-, GND
RS-485-4w: Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w: Data+, Data-, GND

Physical Characteristics

Housing: ABS + PC, IP30 protected
Weight: 150 ± 5 g
Dimensions: 27 x 123 x 79 mm (1.06 x 4.84 x 3.11 in)

Environmental Limits

Operating Temperature:
 G2110/2150I: 0 to 55°C (32 to 131°F)
 G2110-T: -30 to 75°C (-22 to 167°F)
Operating Humidity: 5 to 95% RH
Storage Temperature: -40 to 75°C (-40 to 167°F)

Power Requirements

Input Voltage: 12 to 48 VDC
Power Consumption:
 Idle: 50 mA @ 12 V
 Data Link: 300 to 900 mA (peak) @ 12 V

Regulatory Approvals

RF: FCC Part 22H, FCC Part 24E, EN301 489-1, EN301 489-7, EN301 511
EMC: CE (EN55022 Class A, EN55024), FCC Part 15 Subpart B Class A

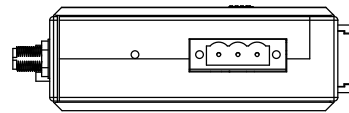
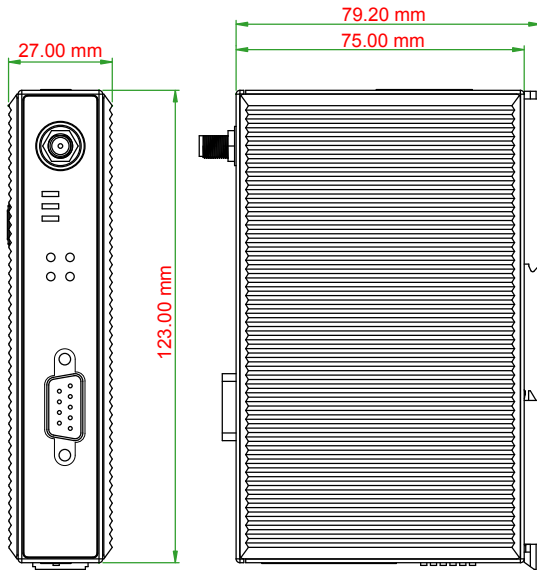
Reliability

MTBF:
G2110/G2110-T: 925627 hours
G2150I: 864965 hours

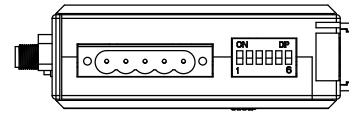
Warranty

Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions

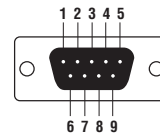


OnCell G2110



OnCell G2150I

DB9 female RS-232 port



PIN	RS-232
1	DCD
2	TxD
3	RxD
4	DSR
5	GND
6	DTR
7	CTS
8	RTS

Ordering Information

Available Models

- OnCell G2110:** 1-port RS-232 to GSM/GPRS modem
- OnCell G2110-T:** 1-port RS-232 to GSM/GPRS modem, wide temperature (-30 to 75°C)
- OnCell G2150I:** 1-port RS-232/422/485 to GSM/GPRS modem, with 2.5 KV optical isolation

Optional Accessories (can be purchased separately)

DC Power Supply: See Appendix A

Quad-band Antennas (impedance = 50 ohms)

- ANT-CQB-AHSM-00-3m:** Omni 0dBi/10cm, magnetic SMA antenna, 3 m
- ANT-CQB-AHSM-03-3m:** Omni 3dBi/25cm, magnetic SMA antenna, 3 m
- ANT-CQB-AHSM-05-3m:** Omni 5dBi/37cm, magnetic SMA antenna, 3 m

Package Checklist

- OnCell cellular modem
- Omni 0 dBi, magnetic SMA, 3 meter antenna
- Power jack to terminal block cable
- 3-pin terminal block (screw type)
- Document and Software CD
- Quick Installation Guide (printed)
- Warranty Card