

# OnCell G2111/G2151I

## Industrial quad-band GSM/GPRS modems



- > Quad-band GSM/GPRS 850/900/1800/1900 MHz
- > DIN-rail housing and wall-mounting housing
- > 2.5 kV RMS isolation for 1 min. for all serial signals (G2151I only)
- > LED indicators for GSM/GPRS and data transmission status
- > Extended operating temperature from -25 to 70°C (G2111-T only)



### Overview

The OnCell G2111/G2151I 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 G2111/G2151I series 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 G2151I, each with 2.5 kV RMS isolation protection for one minute. The two serial interfaces on the OnCell G2151I 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 G2111-T has an extended operating temperature (-25 to 70°C) design that makes it suitable for heavy industrial use.

### Specifications

#### Cellular Interface

**Standards:** GSM/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:**

GSM 1800/1900: 1 W

EGSM 900/GSM 850: 2 W

#### Interface

**Cellular Antenna Connectors:** 1, SMA (female)

#### SIM Interface

**Number of SIMs:** 1

**SIM Control:** 3 V

#### Serial Interface

**Number of Ports:** 1

**Serial Standards:**

OnCell G2111: RS-232 (DB9 female connector)

OnCell G2111-T: RS-232 (DB9 female connector)

OnCell G2151I: RS-232 (DB9 female connector), RS-422/485 (5-pin terminal block connector)

**ESD Protection:** 15 kV (G2111 only)

**Optical Isolation:** 2.5 kV (G2151I only)

#### Serial Communication Parameters

**Data Bits:** 8

**Stop Bits:** 1

**Parity:** None

**Flow Control:** RTS/CTS

**Baudrate:** 300 bps to 230.4 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, providing IP30 protection

**Weight:** 155 g (0.34 lb)

**Dimensions:** 27 x 123 x 79 mm (1.06 x 4.84 x 3.11 in)

#### Environmental Limits

**Operating Temperature:**

OnCell G2111/G2151I: -20 to 55°C (-4 to 131°F)

OnCell G2111-T: -25 to 70°C (-22 to 158°F)

**Storage Temperature:** -40 to 75°C (-40 to 167°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

#### Power Requirements

**Number of Power Inputs:** 1 (terminal block)

**Input Voltage:** 12 to 48 VDC

**Input Current:** 0.625 A @ 12 VDC; 0.16 A @ 48 VDC

### Standards and Certifications

**Safety:** UL 60950-1  
**EMC:** EN 55022/24  
**EMI:** CISPR 22, FCC Part 15B Class A  
**EMS:**  
 IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV  
 IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m  
 IEC 61000-4-4 EFT: Power: 0.5 kV  
 IEC 61000-4-5 Surge: Power: 1 kV  
 IEC 61000-4-6 CS: 3 V  
 IEC 61000-4-8  
**Radio:** FCC Part 22H, FCC Part 24E, EN 301 489-1, EN 301 489-7, EN 301 511

### MTBF (mean time between failures)

**Time:**  
 OnCell G2111/G2111-T: 925,000 hrs  
 OnCell G2151: 864,000 hrs  
**Standard:** Telcordia SR332

### Warranty

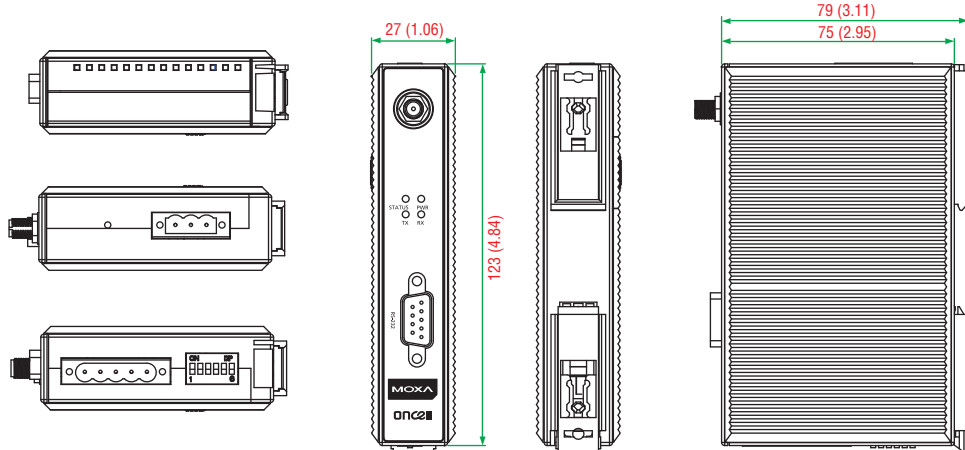
**Warranty Period:** 5 years  
**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

### Dimensions

Unit: mm (inch)

OnCell G2111

OnCell G21511

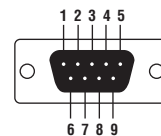


Top & Bottom View

Front & Rear View

Side View

### 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 G2111:** 1-port RS-232 GSM/GPRS IP modem, -20 to 55°C operating temperature  
**OnCell G21511:** 1-port RS-232/422/485 GSM/GPRS IP modem, isolation, -20 to 55°C operating temperature  
**OnCell G2111-T:** 1-port RS-232 GSM/GPRS IP modem, -25 to 70°C operating temperature  
 Note: Please visit Moxa's website for a complete list of optional wireless accessories and antennas available for Moxa's wireless products.

### Package Checklist

- OnCell G21x1 cellular modem
- 1 GSM/GPRS antenna: ANT-CQB-AHSM-00-3m
- Terminal block adapter for power jack connector
- Documentation CD
- Quick installation guide (printed)
- Warranty card

Note: An activated SIM card (not included) must be provided by a third party Cellular Service Provider.