OnCell G2111/G2151I

1-port RS-232 or RS-232/422/485 GSM/GPRS modems

> Quad-band GSM/GPRS 850/900/1800/1900 MHz
> Separate RS-232 and RS-422/485 serial interfaces (G2151I only)
> 2.5 KV RMS isolation for 1 min. for all serial signals (G2151I only)
> Extended operating temperature from -25 to 70°C (G2111-T only)
> LED indicators for GSM/GPRS and data transmission status
> DIN-Rail and wall mounting

: 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 G212111/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: 1 watt GSM 1800/1900, 2 watts EGSM 900/GSM 850

SIM Interface
Number of SIMs: 1
SIM Control: 3 V

Serial Interface
Number of Ports: 1
Serial Standards:
G2111: RS-232 (DB9 female connector)
G2111-T: RS-232 (DB9 female connector)
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, 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:
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% (30°C, non-condensing)

Power Requirements
Input Voltage: 12 to 48 VDC
Power Consumption: 12 to 48 VDC, 100 mA (idle), 625 mA (max.)

Standards and Certifications
Safety: UL 60950-1
EMC: EN 55022 Class A, EN 55024, FCC Part 15 Subpart B Class A
Radio: FCC Part 22H, FCC Part 24E, EN 301 489-1, EN 301 489-7, EN 301 511

Reliability
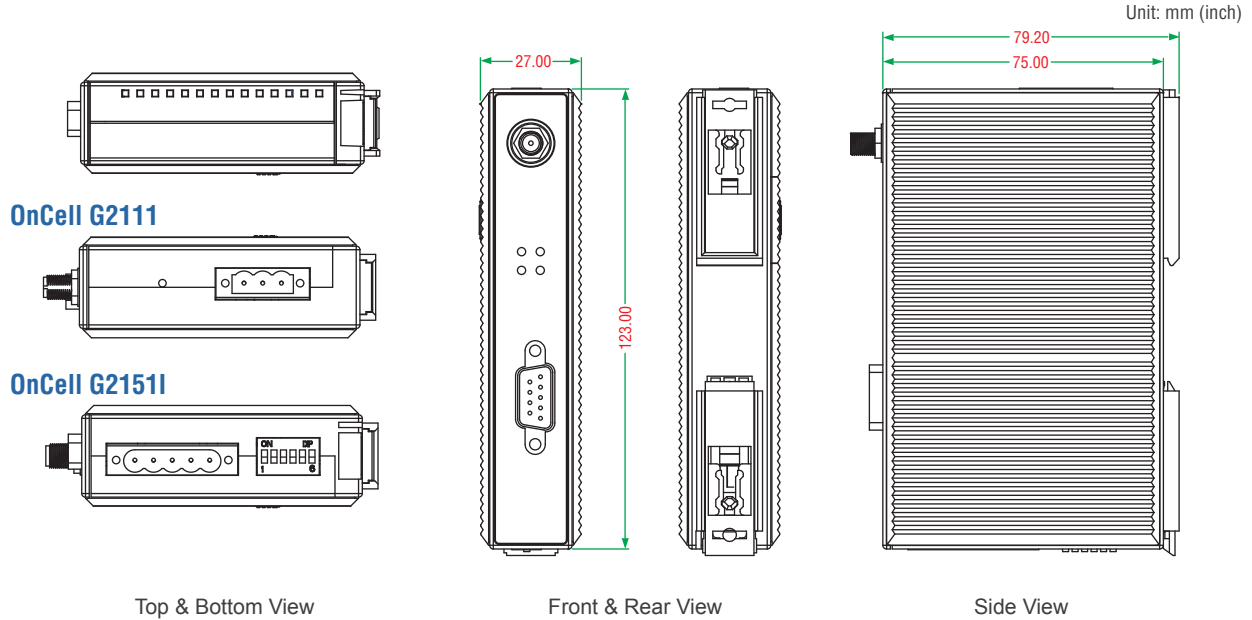**MTBF (mean time between failures):**
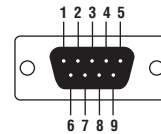OnCell G2111/G2111-T: 925,000 hrs
OnCell G2151I: 864,000 hrs

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

Dimensions

Unit: mm (inch)

OnCell G2111

OnCell G2151I

Top & Bottom View

Front & Rear View

Side View

27.00

123.00

79.20

75.00

DB9 female RS-232 port

1 2 3 4 5

6 7 8 9

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 to GSM/GPRS modem, -20 to 55°C operating temperature
OnCell G2151I: 1-port RS-232/422/485 to GSM/GPRS modem, with 2.5 KV optical isolation, -20 to 55°C operating temperature
OnCell G2111-T: 1-port RS-232 to GSM/GPRS 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 cellular modem
• 0 dBi magnetic mount SMA antenna, 3m
• Terminal block adaptor for power jack connector
• Documentation CD
• Quick installation guide
• Warranty card

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