

OnCell G2111/G2151I Series

Industrial quad-band GSM/GPRS modems



Features and Benefits

- Quad-band GSM/GPRS 850/900/1800/1900 MHz
- DIN-rail mounting and wall mounting
- 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)

Certifications



Introduction

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

Cellular Standards	GSM, GPRS
Band Options	Quad-band GSM/GPRS 850 MHz / 900 MHz / 1800 MHz / 1900 MHz
GPRS Multi-Slot Class	10
GPRS Terminal Device Class	Class B
GPRS Coding Schemes	CS1 to CS4
CSD Data Rates	Up to 14400 bps
Cellular Antenna Connectors	1 SMA female
No. of SIMs	1
SIM Control Voltage	3 V

Serial Interface

No. of Ports	1
Serial Standards	All models: RS-232 (DB9 female connector) OnCell G2151I: RS-232/422/485 (5-pin terminal block connector)
ESD Protection	OnCell G2111: 15 kV

Isolation	OnCell G2151I: 2 kV
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-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

Power Parameters

Input Voltage	12 to 48 VDC
Power Connector	Terminal block
Input Current	0.625 A @ 12 VDC, 0.16 A @ 48 VDC

Physical Characteristics

Housing	ABS + Polycarbonate
IP Rating	IP30
Dimensions	27 x 123 x 79 mm (1.06 x 4.84 x 3.11 in)
Weight	155 g (0.34 lb)

Environmental Limits

Operating Temperature	OnCell G2111/G2151I: -20 to 55°C (-4 to 131°F) OnCell G2111I-T: -25 to 70°C (-22 to 158°F)
Storage Temperature (package included)	-40 to 75°C (-40 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	UL 60950-1
EMC	EN 55032/24
EMI	CISPR 32, 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 PFMF
Radio Frequency	FCC Part 22H, FCC Part 24E, EN 301 489-1, EN 301 489-7, EN 301 511

MTBF

Time	OnCell G2111: 925,000 hrs OnCell G2111-T: 925,000 hrs OnCell G2151I: 864,000 hrs
Standards	Telcordia SR332

Warranty

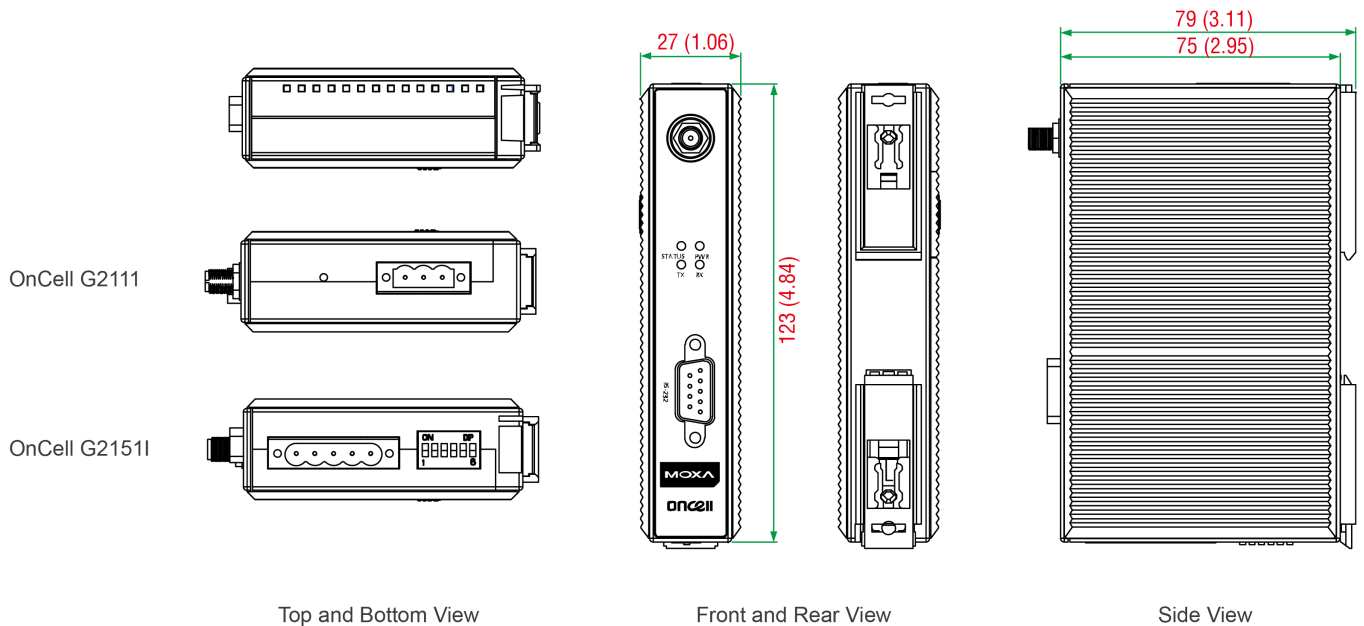
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x OnCell G2111/G2151I Series GSM/GPRS modem ¹
Antenna	1 x GSM/GPRS
Accessory	1 x terminal block for power jack connector
Documentation	1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	Cellular Standard	Band	Operating Temp.	Serial Isolation	Serial Standards
OnCell G2111	GSM/GPRS	850/900/1800/1900 MHz	-20 to 55°C	-	RS-232
OnCell G2111-T	GSM/GPRS	850/900/1800/1900 MHz	-25 to 70°C	-	RS-232
OnCell G2151I	GSM/GPRS	850/900/1800/1900 MHz	-20 to 55°C	✓	RS-232/422/485

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

Accessories (sold separately)

Antennas

ANT-CQB-AHSM-00-3m	GSM/GPRS/EDGE, omni-directional magnetic base antenna, 0 dBi, 3 m cable
ANT-CQB-AHSM-03-3m	GSM/GPRS/EDGE, omni-directional magnetic base antenna, 3 dBi, 3 m cable
ANT-CQB-AHSM-05-3m	GSM/GPRS/EDGE, omni-directional magnetic base antenna, 5 dBi, 3 m cable
ANT-CQB-ASM-01	GSM/GPRS/EDGE, omni-directional rubber duck antenna, 1 dBi
ANT-WCDMA-ANF-00	GSM/GPRS/EDGE/UMTS/HSPA, omni-directional outdoor antenna, 0 dBi
ANT-WCDMA-ASM-1.5	GSM/GPRS/EDGE/UMTS/HSPA, omni-directional rubber duck antenna, 1.5 dBi
ANT-WCDMA-AHSM-04-2.5m	GSM/GPRS/EDGE/UMTS/HSPA, omni-directional magnetic base antenna, 4 dBi
ANT-LTE-ASM-02	GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 2 dBi
ANT-LTE-ANF-04	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional outdoor antenna, 4 dBi, IP66

Antennas

ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 1 dBi
------------------	--

Wireless Antenna Cable

A-CRF-SMSF-R3-100	Cellular magnetic-base SMA connector with 1-meter RF cable
-------------------	--

© Moxa Inc. All rights reserved. Updated Nov 12, 2018.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.