OnCell G3101/G3201 Series
Quick Installation Guide

Second Edition, April 2014

Overview

There are currently four models in the OnCell G3101/G3201 series of IP-modems: the OnCell G3111, OnCell G3151, OnCell G3211, and OnCell G3251. The main difference between the models is the serial interface type and number of ports. The OnCell G3101/G3201 industrial RS-232, RS-232/422/485 GSM/GPRS IP modems are some of the most affordable, and versatile products available in the cellular networking market today. These modems also provide remote access and TCP/IP support, and can be configured over a network.

Package Checklist

Before Installing the OnCell G3101/G3201 series, verify that the package contains the following items:

Standard Accessories

- Document & Software CD
- Omni 1 dBi rubber SMA antenna
- (model name: ANT-CQB-ASM-01)
- DIN-Rail Kit
- DC Power Supply (screw-on)
- Rubber stand
- Product warranty statement
- Quick Installation Guide

Optional Accessories

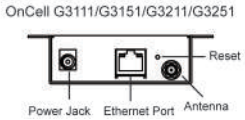
- Quad-band GSM/GPRS antennas for OnCell G3101/G3201 series (impedance = 50 ohms):
  - **ANT-CQB-AHSM-00-3m:** Omni 0dBi/10cm, magnetic SMA quad-band antenna (impedance = 50 ohms), 3 m
  - **ANT-CQB-AHSM-03-3m:** Omni 3dBi/25cm, magnetic SMA quad-band antenna (impedance = 50 ohms), 3 m
  - **ANT-CQB-AHSM-05-3m:** Omni 5dBi/37cm, magnetic SMA quad-band antenna (impedance = 50 ohms), 3 m

Note: Please notify your sales representative if any of the above items are missing or damaged.

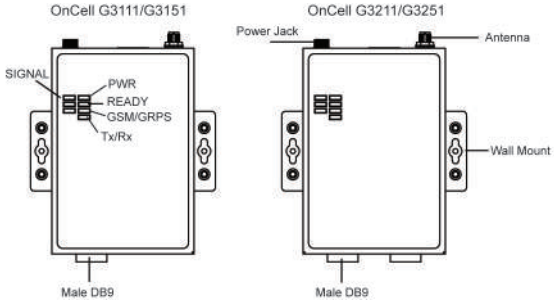
P/N: 1802031010011

Hardware Introduction

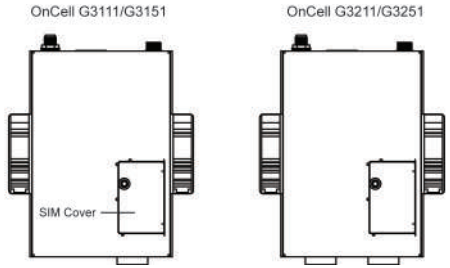
Top View



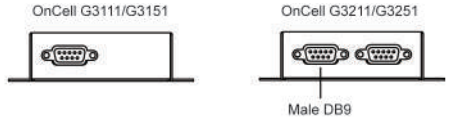
Front Views



Rear Views



Bottom Views



Reset Button—*Press and hold the Reset button for 5 sec to load factory defaults:* Use a pointed object, such as a straightened paper clip or toothpick, to press the reset button. This will cause the Ready LED to blink on and off. The factory defaults will be loaded once the Ready LED stops blinking (after about 5 seconds). At this point, you should release the reset button (the default IP is 192.168.127.254).

LED Indicators

The LED indicators on the front panel of the OnCell G3101/G3201 are described in the following table.

Type	Color	LED Function
PWR	Green	Activation of DC Power.
	Off	Power is off, or power error condition exists.
TX/RX	Green	The serial port is transmitting data
	Amber	The serial port is receiving data.
	Off	No data is being transmitted or received through the serial port.
GSM/GPRS	Green	GSM is connected.
	Amber	GPRS is connected.
	Off	GSM/GPRS is disconnected.
Ready	Green	Steady on: Software Ready. Blinking slowly (1 sec): The OnCell has been located by the OnCell Search Utility.
	Red (Over Green)	Steady on: Booting up, or IP fault. Blinking rapidly (0.5 sec): IP conflict. Blinking slowly (1 sec): Cannot get an IP address from the DHCP server.
	Off	Booting up or there is no error condition.
Signal (3 LEDs)	Green	Number of lit LEDs indicates signal level (at least 2 LEDs must illuminated for data transmission)

Adjustable pull high/low resistor for RS-485 Port

DIP switches on the bottom of the OnCell G3151/G3251 are used to set the pull high/low resistor value for each serial port.

SW	1	2	3	4
	Pull High	Pull Low	Terminator	---
ON	1 KΩ	1 KΩ	120 Ω	---
OFF	150 KΩ	150 KΩ	---	---

NOTE If the pull high/low resistor on your device is already set for RS-485, make sure the default SW for RS-232 is "OFF" when you switch back to RS-232 interface.

Hardware Installation Procedure

STEP 1: Open the SIM cover, and insert the SIM card in the SIM card slot.

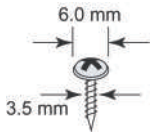
STEP 2: Connect the 12-48 VDC power adaptor to the OnCell G3101/G3201 series and then plug the power adaptor into a DC outlet.

STEP 3: To configure the OnCell, use an Ethernet cable to connect the OnCell directly to your computer's Ethernet interface.

STEP 4: Connect the OnCell G3101/G3201 series's serial port to a serial device.

DIN-Rail Mounting

The OnCell G3101 and G3201 series have built-in "ears" for attaching the IP modem to a wall or the inside of a cabinet. We suggest using two screws per ear to attach the IP modem to a wall or the inside of a cabinet. The heads of the screws should be less than 6.0 mm in diameter, and the shafts should be less than 3.5 mm in diameter, as shown in the figure at the right.



Software Installation Information

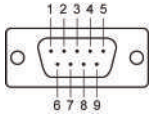
The Document & Software CD contains the User's Manual, OnCell Search Utility, and OnCell Driver Manager. Insert the CD and follow the on-screen instructions. Please refer to the User's Manual for additional details on using the OnCell Search Utility and Driver Manager.

Pin Assignments and Cable Wiring

DB9 Male Port Pinouts

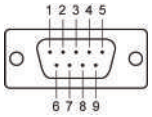
Note that the OnCell G3111 and G3211 only support RS-232. The RS-422/485 pin assignments only apply to the OnCell G3151 and G3251.

DB9 Male **OnCell G3111/G3211 (RS-232)**



Pin	RS-232
1	DCD
2	RxD
3	TxD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	---

DB9 Male **OnCell G3151/G3251 (RS-232/422/485)**



Pin	RS-232	RS-422/485-4w	RS-485-2w
1	DCD	TxD-(A)	---
2	RxD	TxD+(B)	---
3	TxD	RxD+(B)	Data+(B)
4	DTR	RxD-(A)	Data-(A)
5	GND	GND	GND
6	DSR	---	---
7	RTS	---	---
8	CTS	---	---
9	---	---	---

Specifications

Cellular Interface

Standards	GSM/GPRS
Band Options	Quad-band 850/900 and 1800/1900 MHz
GPRS Multi-slot Class	Class 10
GPRS Terminal Device Class	Class B
GPRS Coding Schemes	CS1 to CS4
Tx Power	1 watt GSM 1800/1900, 2 watts EGSM 850/900
SIM Control	3 V

LAN Interface

Number of Ports	1 (For configuration only)
Ethernet	10/100 Mbps, RJ45 connector, Auto MDI/MDIX
Magnetic Isolation Protection	1.5 KV built-in

SIM Interface

Number of SIMs	1
SIM Control	3 V

Serial Interface

Number of Ports	1 or 2
Serial Standards	G3111: 1 RS-232 port G3151: 1 RS-232/422/485 port G3211: 2 RS-232 ports G3251: 2 RS-232/422/485 ports
ESD Protection	15 KV
Power EFT/ Surge Protection	2 KV

Serial Communication Parameters

Parity	None, Even, Odd, Space, Mark
Data Bits	5, 6, 7, 8
Stop Bit(s)	1, 1.5, 2 (when parity = None)
Flow Control	RTS/CTS, XON/XOFF
Baudrate	50 bps to 921.6 Kbps

Serial Signals

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

Management Software

OnCell Central Manager	Centralized management solution for accessing private IPs from the Internet

(For Software download, Please check on www.moxa.com)

Physical Characteristics

Housing	Aluminum, providing IP30 protection
Dimensions	111 x 77 x 26 mm (4.37 x 3.03 x 1.02 in)

Power Requirements

Number of Power Inputs	1 power jack
Input Voltage	12 to 48 VDC
Data Link	335 to 900 mA (peak) @ 12 V

Environmental Limits

Operating Temperature	-30 to 55°C (-22 to 131°F)
Operating Humidity	5 to 95% RH
Storage Temperature	-40 to 75°C (-40 to 167°F)

Regulatory Approvals

EMC	CE Class A , FCC Class A, UL

Warranty

Warranty Period	5 years

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