OnCell G3110/G3150

Industrial quad-band GSM/GPRS/EDGE IP gateways with VPN

- Universal quad-band GSM/GPRS/EDGE-850/900/1800/1900-MHz
- Connect to Ethernet and serial devices over an integrated VPN
- Redundant DC power input
- 2 digital inputs and 1 relay output
- Centralize private IP management software with OnCell Central Manager
- DIN-Rail mounting
- GuaranLink for reliable, consistent connectivity

Overview

The OnCell G3110 and G3150 industrial RS-232 and RS-232/422/485 GSM/GPRS/EDGE IP gateways are designed to transmit data transparently over GSM/GPRS/EDGE cellular networks. The OnCell G3110 and G3150 can transmit data from both serial devices and Ethernet devices to a WAN interface, and come with private IP management software and VPN support for handling the IP address issue in cellular network structures. The products also come with a built-in relay output that can be configured to indicate the priority of events when notifying or warning engineers in the field. Two digital inputs also allow you to connect basic I/O devices, and the OnCell's redundant power inputs assure non-stop operation. The OnCell G3100 series also offers wide temperature models which can withstand extreme temperature conditions.

Specifications

Cellular Interface

Standards: GSM/GPRS/EDGE
Band Options: Quad-band 850/900 and 1800/1900 MHz
EDGE Multi-slot Class: Class 12
GPRS Multi-slot Class: Class 12
GPRS Terminal Device Class: Class B
GPRS Coding Schemes: CS1 to CS4
Tx Power: 1 watt GSM 1800/1900, 2 watts EGSM 850/900

LAN Interface

Number of Ports: 1
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
Serial Standards:
G3110: RS-232 (DB9 male connector)
G3150: RS-232 (DB9 male connector), RS-422/485 (5-pin terminal block connector)
ESD Protection: 15 KV
Power EFT/Surge Protection: 2 KV

Serial Communication Parameters

Data Bits: 5, 6, 7, 8
Stop Bits: 1, 1.5, 2 (when parity = None)
Parity: None, Even, Odd, Space, Mark
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

I/O Interface

Alarm Contact: 1 relay output with current carrying capacity of 1 A @ 24 VDC
Digital Inputs: 2 electrically isolated inputs
• +13 to +30 V for state "1" (On)
• +3 to -30 V for state "0" (Off)

Software

Network Protocols: ICMP, TCP/IP, UDP, DHCP, Telnet, DNS, SNMP, HTTP, SMTP, HTTPS, SNTP, ARP, SSL, IPSec
Router/Firewall: NAT, port forwarding
Authentication: Local user-name and password
Security: Accessible IP list
Operation Modes: Real COM, Secure Real COM, Reverse Real COM, Secure Reverse Real COM, TCP Server, Secure TCP Server, TCP Client, Secure TCP Client, UDP, RFC2217, Ethernet Modem, Virtual Modem, SMS Tunnel
Configuration and Management Options: SNMP MIB-II, SNMP Private MIB, SNMPv1/v2c/v3, DDNS, IP Report, Web/Telnet/Serial-Console/SSH
Utilities: Provided for Windows 2000/XP/2003/Vista/Server 2008, Windows XP/2003/Vista/Server 2008 x64 Edition
Windows Real COM Drivers: Windows 2000/XP/2003/Vista/Server 2008, Windows XP/2003/Vista/Server 2008 x64 Edition
Fixed TTY Drivers: SCO Unix, SCO OpenServer 5, SCO OpenServer 6, UnixWare 7, SVR4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD 5, FreeBSD 6
Linux Real TTY Drivers: Linux kernels 2.2.x, 2.4.x, 2.6.x

Management Software

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

Physical Characteristics

Housing: Aluminum, providing IP30 protection
Weight: 440±5 g
Dimensions: 125.5 x 28.0 x 92.5 mm (4.94 x 1.10 x 3.64 in)

Environmental Limits

Operating Temperature:
Standard Temperature: -30 to 55°C (-22 to 131°F)
Wide Temperature: -30 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,400mA (idle), 900 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, PTCRB (OnCell G3150 only)

Reliability

MTBF (mean time between failures): 339,000 hrs

Warranty

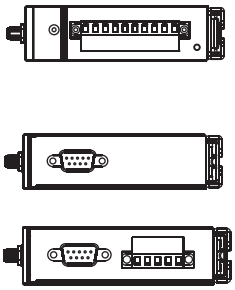
Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions & Pin Assignment

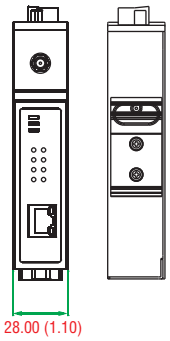
Unit: mm (inch)

OnCell G3110

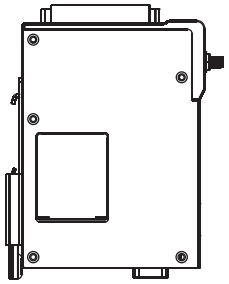
OnCell G3150

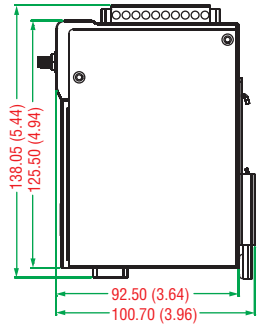


Top & Bottom View



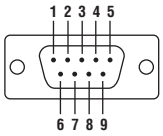
Front & Rear View





Left & Right Side View

DB9 male connector



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	–	–	–

Ordering Information

Available Models

OnCell G3110: 1-port RS-232 to GSM/GPRS/EDGE IP gateway with VPN
OnCell G3150: 1-port RS-232/422/485 to GSM/GPRS/EDGE IP gateway with VPN
OnCell G3110-T: 1-port RS-232 to GSM/GPRS/EDGE IP gateway with VPN, wide temperature model.
OnCell G3150-T: 1-port RS-232/422/485 to GSM/GPRS/EDGE IP gateway with VPN, wide temperature model.
Note: Please visit Moxa's website for a complete list of optional wireless accessories and antennas available for Moxa's wireless products.

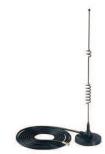
Package Checklist

- OnCell IP gateway
- Rubber SMA antenna
- DIN-Rail kit
- Documentation and software CD
- Quick installation guide
- Warranty card

Cellular Accessories

GSM/GPRS Cellular Antennas



	ANT-CQB-ASM-01	ANT-CQB-AHSM-00-3m	ANT-CQB-AHSM-03-3m	ANT-CQB-AHSM-05-3m
Frequency Range	850/900/1800/1900 MHz	850/900/1800/1900 MHz	850/900/1800/1900 MHz	850/900/1800/1900 MHz
Description	Quad-band GSM/GPRS, omni-directional, 1 dBi, rubber SMA	Quad-band GSM/GPRS, omni-directional, 0 dBi, 10 cm high, magnetic SMA, 3 m	Quad-band GSM/GPRS, omni-directional, 3 dBi, 25 cm high, magnetic SMA, 3 m	Quad-band GSM/GPRS, omni-directional, 5 dBi, 37 cm high, magnetic SMA, 3 m
Antenna Type	Omni-directional	Omni-directional	Omni-directional	Omni-directional
Cable Type	–	RG174/U	RG174/U	RG174/U
Typical Antenna Gain	1 dBi (Max.)	0 dBi	3 dBi	5 dBi
Impedance	50 ohms	50 ohms	50 ohms	50 ohms
Polarization Type	Linear	Linear	Linear	Linear
HPBW/horizontal	360°	360°	360°	360°
V.S.W.R.	–	< 2	< 2	< 2
Connector(s)	SMA (male)	SMA (male)	SMA (male)	SMA (male)
Antenna Length	83 mm	100 mm	250 mm	370 mm
Weight	10 g	58 g	60 g	62 g
Cable Length	–	3 m	3 m	3 m
Related Products	OnCell G2111/G2151I, OnCell G3111/G3151, OnCell G3211/G3251, OnCell G3100 series, OnCell 5000 series	OnCell G2111/G2151I, OnCell G3111/G3151, OnCell G3211/G3251, OnCell G3100 series, OnCell 5000 series, ioLogik W5340/5312	OnCell G2111/G2151I, OnCell G3111/G3151, OnCell G3211/G3251, OnCell G3100 series, OnCell 5000 series	OnCell G2111/G2151I, OnCell G3111/G3151, OnCell G3211/G3251, OnCell G3100 series, OnCell 5000 series

UMTS/HSPA Cellular Antennas

Cellular Cables




	ANT-WCDMA-ASM-1.5	ANT-WCDMA-AHSM-04-2.5m	ANT-WCDMA-ANF-00	CRF-SMA(M)/N(M)-300
Frequency Range	850/900/1800/1900/2100 MHz	850/900/1800/1900/2100 MHz	850/900/1800/1900/2100 MHz	–
Description	Five-band GSM/GPRS/UMTS/ HSDPA/HSPA+, omni-directional, 1.5 dBi, rubber SMA	Five-band GSM/GPRS/UMTS/ HSDPA/HSPA+, omni-directional, 4 dBi, 11 cm high, magnetic SMA, 2.5 m	Five-band GSM/GPRS/UMTS/ HSDPA/HSPA+, omni-directional, 0 dBi, glass fiber, N-type (female)	CFD200 cable, SMA male to N-type (male), 3 m
Antenna Type	Omni-directional	Omni-directional	Omni-directional	–
Cable Type	–	RG174/U	–	CFD200
Typical Antenna Gain	1.5 dBi	4 dBi	0 dBi	–
Impedance	50 ohms	50 ohms	50±5 ohms	–
Polarization Type	Vertical	Vertical	Vertical	–
HPBW/horizontal	360°	360°	360°	–
HPBW/vertical	–	–	40°	–
V.S.W.R.	< 2	< 2	1 : 1.5 Max.	–
Connector(s)	SMA (male)	SMA (male)	N-type Female	SMA male to N-type male
Antenna Length	104 mm	110 mm	420 mm	–
Weight	10 g	60 g	430 g	–
Cable Length	–	2.5 m	–	3 m
Outer Dimension	–	–	–	4.14 mm
Min. Bend Radius	–	–	–	12.7 mm
Attenuation (dB/100m)	–	–	–	32.6@900 MHz 49.3@ 2000 MHz
Related Accessory	–	–	–	Cellular 5-band N-type antenna
Related Products	OnCell G2111/G2151I, OnCell G3111/G3151, OnCell G3211/G3251, OnCell G3100 series, OnCell G3100-HSPA series, OnCell 5000 series, OnCell 5000-HSPA series, ioLogik W5340-HSDPA	OnCell G2111/G2151I, OnCell G3111/G3151, OnCell G3211/G3251, OnCell G3100 series, OnCell G3100-HSPA series, OnCell 5000 series, OnCell 5000-HSPA series, ioLogik W5340-HSDPA	OnCell G2111/G2151I, OnCell G3111/G3151, OnCell G3211/G3251, OnCell G3100 series, OnCell G3100-HSPA series, OnCell 5000 series, OnCell 5000-HSPA series, ioLogik W5340-HSDPA	OnCell G2111/G2151I, OnCell G3111/G3151, OnCell G3211/G3251, OnCell G3100 series, OnCell G3100-HSPA series, OnCell 5000 series, OnCell 5000-HSPA series, ioLogik W5340-HSDPA