

OnCell G3110/G3150

Advanced quad-band GSM/GPRS/EDGE IP gateways



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



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 IP addresses on cellular networks. 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 G3110/G3150 series also offers wide temperature models which can withstand extreme temperature conditions.

Specifications

Cellular Interface

Standards: GSM/GPRS/EDGE
Band Options: Quad-band 850/900/1800/1900 MHz
EDGE Multi-slot Class: Class 12
EDGE Data Rate: 237 kbps DL, 237 kbps UL
EDGE Terminal Device Class: Class B
GPRS Multi-slot Class: Class 12
GPRS Data Rate: 85.6 kbps DL, 43 kbps UL
GPRS Terminal Device Class: Class B
GPRS Coding Schemes: CS1 to CS4

Tx Power:
 GSM1800/1900: 1 W
 EGSM850/900: 2 W

LAN Interface

Number of Ports: 1
Ethernet: 10/100 Mbps, RJ45 connector, auto MDI/MDIX

Interface

Cellular Antenna Connectors: 1, SMA (female)

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"
 • +3 to -30 V for state "0"

Software

Network Protocols: ARP, AT Commands (Virtual Modem), DDNS, DHCP/BOOTP, DNS Relay, HTTP, HTTPS, ICMP, IPsec, SMTP, SNMP, SSH, SSL, TCP/IP, Telnet, UDP
Routing/Firewall: NAT, port forwarding, WAN IP filtering
Cellular Connectivity: GuaranLink
Serial Security: Accessible IP list

Serial Operation Modes: Real COM, Reverse Real COM, TCP Server, TCP Client, UDP, SMS Tunnel, RFC2217, Secure Real COM, Secure Reverse Real COM, Secure TCP Server, Secure TCP Client, Virtual Modem, Ethernet Modem

Windows Real COM Drivers: Windows 2000/XP/2003/Vista/Server 2008, Windows XP/2003/Vista/Server 2008 x64 Edition / Windows 8 / Windows 10

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

Authentication: Local username and password

Management Software

Utilities: Wireless Search Utility

Configuration and Management Options: SNMP v1/v2c/v3, Web/Telnet/Serial Console, SSH, Remote SMS Control, Caller ID, Auto IP Report

Centralized Device Management, Monitoring and Private IP

Solution: OnCell Central Manager

SIM Interface

Number of SIMs: 1

SIM Control: 3 V

Serial Interface

Number of Ports: 1

Serial Standards:

OnCell G3110: RS-232 (DB9 male connector)

OnCell G3150: RS-232 (DB9 male connector), RS-422/485 (5-pin terminal block connector)

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

Physical Characteristics

Housing: Aluminum, providing IP30 protection
Weight: 445 g (0.98 lb)
Dimensions: 28 x 126 x 93 mm (1.1 x 4.94 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% (non-condensing)

Power Requirements

Number of Power Inputs: 2 (terminal block), redundant dual inputs
Input Voltage: 12 to 48 VDC

Input Current: 0.9 A @ 12 VDC; 0.23 A @ 48 VDC
Reverse Polarity Protection: Present

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: 8 kV; Air: 15 kV
 IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m
 IEC 61000-4-4 EFT: Power: 4 kV; Signal: 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, PTCRB (OnCell G3150 only)

MTBF (mean time between failures)

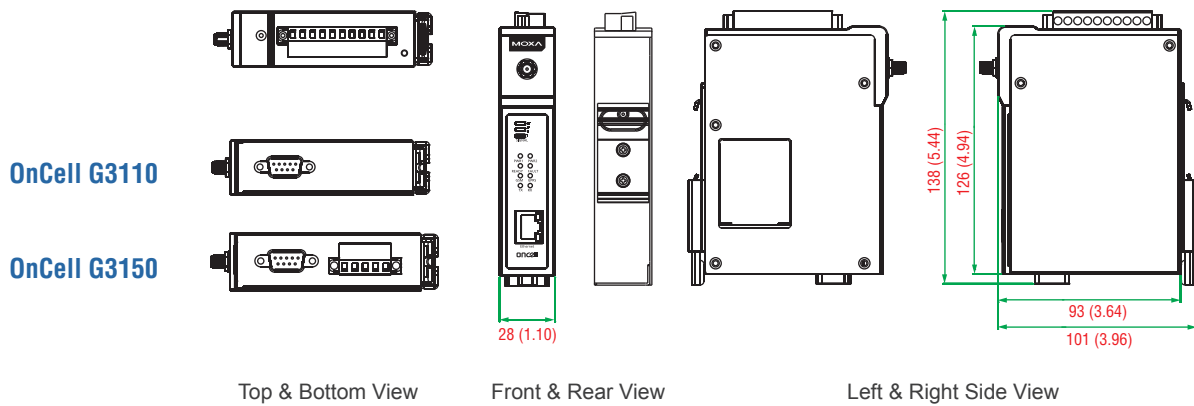
Time: 339,000 hrs
Standard: Telcordia SR332

Warranty

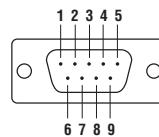
Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions & Pin Assignment

Unit: mm (inch)



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 quad-band industrial GSM/GPRS/EDGE IP gateway, RS-232, -30 to 55°C operating temperature
OnCell G3150: 1-port quad-band industrial GSM/GPRS/EDGE IP gateway, RS-232/422/485, -30 to 55°C operating temperature
OnCell G3110-T: 1-port quad-band industrial GSM/GPRS/EDGE IP gateway, RS-232, -30 to 70°C operating temperature
OnCell G3150-T: 1-port quad-band industrial GSM/GPRS/EDGE IP gateway, RS-232/422/485, -30 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 G31x0 IP gateway
- 1 GSM/GPRS antenna: ANT-CQB-ASM-01
- DIN-rail kit
- Quick installation guide (printed)
- Warranty card

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