

OnCell G3150A-LTE Series

Rugged LTE serial/Ethernet-to-cellular gateways



Features and Benefits

- Dual cellular operator backup with dual-SIM
- GuaranLink for reliable cellular connectivity
- Rugged hardware design well suited for hazardous locations (ATEX Zone 2/ IECEx)
- VPN secure connection capability with IPsec, GRE, and OpenVPN protocols
- Industrial design with dual power inputs and built-in DI/DO support
- Power isolation design for better device protection against harmful electrical interference

Certifications



Introduction

The OnCell G3150A-LTE is a reliable, secure, LTE gateway with state-of-the-art global LTE coverage. This LTE cellular gateway provides a more reliable connection to your serial and Ethernet networks for cellular applications.

To enhance industrial reliability, the OnCell G3150A-LTE features isolated power inputs, which together with high-level EMS and wide-temperature support give the OnCell G3150A-LTE the highest level of device stability for any rugged environment. In addition, with dual-SIM, GuaranLink, and dual power inputs, the OnCell G3150A-LTE supports network redundancy to ensure uninterrupted connectivity.

The OnCell G3150A-LTE also comes with a 3-in-1 serial port for serial-over-LTE cellular network communication. Use the OnCell G3150A-LTE to collect data and exchange data with serial devices.

High-Speed Remote Gateway with VPN and Network Security

- Multi-band support
- Secure and reliable VPN support with NAT/OpenVPN/GRE/IPsec functionality
- Cybersecurity features based on IEC 62443

Industrial Isolation and Redundancy Design

- Dual power inputs for power redundancy
- Dual-SIM support for cellular connection redundancy
- Power isolation for power source insulation protection
- 4-tier GuaranLink for reliable cellular connectivity
- -30 to 70°C wide operating temperature

Specifications

Cellular Interface

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|--------------------|--|
| Cellular Standards | GSM, GPRS, EDGE, UMTS, HSPA, LTE CAT-3 |
| Band Options (EU) | LTE Band 1 (2100 MHz) / LTE Band 3 (1800 MHz) / LTE Band 7 (2600 MHz) / LTE Band 8 (900 MHz) / LTE Band 20 (800 MHz) UMTS/HSPA 2100 MHz / 1900 MHz / 850 MHz / 800 MHz / 900 MHz |
| Band Options (US) | LTE Band 2 (1900 MHz) / LTE Band 4 (AWS MHz) / LTE Band 5 (850 MHz) / LTE Band 13 (700 MHz) / LTE Band 17 (700 MHz) / LTE Band 25 (1900 MHz) UMTS/HSPA 2100 MHz / 1900 MHz / AWS / 850 MHz / 900 MHz Universal quad-band GSM/GPRS/EDGE 850 MHz / 900 MHz / 1800 MHz / 1900 MHz |
| LTE Data Rate | 20 MHz bandwidth: 100 Mbps DL, 50 Mbps UL 10 MHz bandwidth: 50 Mbps DL, 25 Mbps UL |
| HSPA Data Rates | 42 Mbps DL, 5.76 Mbps UL |

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| EDGE Data Rates | 237 kbps DL, 237 kbps UL |
| GPRS Data Rates | 85.6 kbps DL, 42.8 kbps UL |
| No. of SIMs | 2 |
| Cellular Antenna Connectors | 2 SMA female |
| Ethernet Interface | |
| 10/100BaseT(X) Ports (RJ45 connector) | 1 |
| GPS Interface | |
| GPS Antenna Connector | 1 SMA female, GPS (1575.42 MHz), GLONASS (1602 MHz) |
| Input/Output Interface | |
| Alarm Contact Channels | 1, Resistive load: 1 A @ 24 VDC |
| Digital Inputs | +13 to +30 V for state 1 3 to -30 V for state 0 |
| Buttons | Reset button |
| Ethernet Software Features | |
| Management | ARP, DDNS, DHCP server, SMTP, SNMPv1/v2c/v3, Syslog, Telnet, TCP/IP, UDP, Web Console, Serial Console, Telnet Console, Remote SMS Control, Wireless Search Utility, OnCell Central Manager, GuaranLink |
| Security | HTTPS |
| Routing | NAT, Port forwarding |
| Firewall | Filter: MAC, IP protocol, port-based, Access IP list |
| Time Management | SNTP Client |
| IPsec VPN | |
| Authentication | PSK/X.509/RSA |
| Encryption | DES, 3DES, AES, MD5, SHA-1, DH2, DH5 |
| Concurrent VPN Tunnels | 5 |
| OpenVPN | |
| Encryption | Blowfish CBC, DES CBC, DES-EDE3 CBC, AES-128/192/256 CBC |
| OpenVPN | OpenVPN (client and server), Tunnel mode (routing) and TAP mode (bridge) |
| Concurrent VPN Tunnels | 5 |
| Serial Interface | |
| No. of Ports | 1 |
| Serial Standards | RS-232/422/485 |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Baudrate | 75 bps to 921.6 kbps |

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| Console Port | RS-232 (RJ45) |
| Connector | DB9 male |
| Serial Signals | |
| RS-232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |
| RS-422 | Tx+, Tx-, Rx+, Rx-, GND |
| RS-485-2w | Data+, Data-, GND |
| RS-485-4w | Tx+, Tx-, Rx+, Rx-, GND |
| Physical Characteristics | |
| Housing | Metal |
| IP Rating | IP30 |
| Dimensions | 126 x 30 x 107.5 mm (4.96 x 1.18 x 4.23 in) |
| Weight | 492 g (1.08 lb) |
| Installation | DIN-rail mounting, Wall mounting (with optional kit) |
| Environmental Limits | |
| Operating Temperature | Standard Models: 0 to 55°C (32 to 131°F) Wide Temp. Models: -30 to 70°C (-22 to 158°F) |
| Storage Temperature (package included) | -40 to 85°C (-40 to 185°F) |
| Ambient Relative Humidity | 5 to 95% (non-condensing) |
| Standards and Certifications | |
| Safety | UL 60950-1 |
| Hazardous Locations | ATEX, IECEx |
| EMC | EN 61000-6-2/-6-4 |
| EMI | CISPR 22, 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: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V; 150 kHz to 80 MHz IEC 61000-4-8: 30 A/m |
| Freefall | IEC 60068-2-32 |
| Vibration | IEC 60068-2-6 |
| Shock | IEC 60068-2-27 |
| Radio Frequency | FCC ID N7NMC7355, EN 301 489-1, EN 301 489-7, EN 301 511 |
| Power Parameters | |
| Power Connector | Terminal block |
| Input Voltage | Redundant dual inputs, 12 to 48 VDC |
| Input Current | 0.7 A @ 12 VDC, 0.2 A @ 48 VDC |
| Reverse Polarity Protection | Supported |

MTBF

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|-----------|-----------------|
| Time | 528,596 hrs |
| Standards | Telcordia SR332 |

Warranty

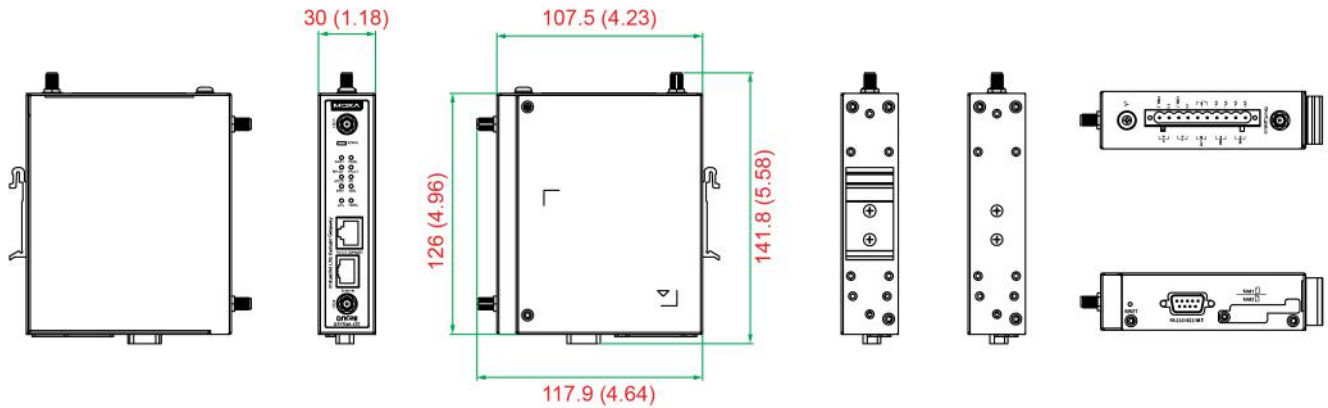
| | |
|-----------------|--|
| Warranty Period | 5 years |
| Details | See www.moxa.com/warranty |

Package Contents

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|------------------|--|
| Device | 1 x OnCell G3150A-LTE Series LTE cellular gateway ¹ |
| Installation Kit | 1 x DIN-rail kit |
| Antenna | 2 x LTE |
| Documentation | 1 x quick installation guide 1 x warranty card |

Dimensions

Unit: mm (inch)



Left Side View

Front View

Right Side View

Rear View

Top and Bottom View

Ordering Information

| Model Name | Cellular Standard | LTE Band | Operating Temp. |
|------------------------|-------------------|--------------------------------|-----------------|
| OnCell G3150A-LTE-US | 4G LTE | US Band (B2/B4/B5/B13/B17/B25) | 0 to 55°C |
| OnCell G3150A-LTE-US-T | 4G LTE | US Band (B2/B4/B5/B13/B17/B25) | -30 to 70°C |
| OnCell G3150A-LTE-EU | 4G LTE | EU Band (B1/B3/B7/B8/B20) | 0 to 55°C |
| OnCell G3150A-LTE-EU-T | 4G LTE | EU Band (B1/B3/B7/B8/B20) | -30 to 70°C |

Accessories (sold separately)

Antennas

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|-------------------|---|
| ANT-LTEUS-ASM-01 | GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 1 dBi |
| ANT-LTE-ASM-02 | GPRS/EDGE/UMTS/HSPA/LTE, omni-directional rubber duck antenna, 2 dBi |
| ANT-LTE-ASM-04 BK | LTE Stick antenna that covers 704-960/1710-2620 MHz providing omnidirectional radiation with a gain of 4.5 dBi. |

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

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| ANT-LTE-ASM-05 BK | LTE stick antenna that covers 704-960/1710-2620 MHz with a gain of 5 dBi. |
| ANT-LTE-ANF-04 | GSM/GPRS/EDGE/UMTS/HSPA/LTE, omni-directional outdoor antenna, 4 dBi, IP66 |
| ANT-LTE-OSM-03-3m BK | Multi-band antenna that covers 700-2700 MHz. Specially designed for 2G, 3G, and 4G applications. Magnetic mounting is available. |
| ANT-LTE-OSM-06-3m BK MIMO | Multi-band antenna that covers 700-2700/2400-2500/5150-5850 MHz frequencies. Screw-fastened mounting and full IP67 waterproofing are available. |
| ANT-GPS-CSM-03-3m | Passive GPS antenna, 3 dBi, 1572 MHz |
| ANT-GPS-CSM-04-0.2m BK | ANT-GPS-CSM-04-0.2m BK |
| ANT-GPS-OSM-05-3M BK | Active GPS antenna, 26 dBi, 1572 MHz, L1 band antenna for GPS |

Wireless Antenna Cables

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|---------------------|--|
| A-CRF-SMSF-R3-100 | Cellular magnetic-base SMA connector with 1-meter RF cable |
| CRF-SMA(M)/N(M)-300 | N-type (male) to SMA (male) CFD200 cable, 3 m |

Wall-Mounting Kits

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| WK-36-02 | Wall-mounting kit, 2 plates, 6 screws, 36 x 67 x 2 mm |
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