

# OnCell G4308-LTE4 Series

## 8-port industrial LTE Cat. 4 secure cellular routers



### Features and Benefits

- 8-port high-density design for future expansion flexibility
- Cellular router/switch/firewall all-in-one solution
- Dual SIM failover and auto connection recovery for reliable cellular connectivity
- Industrial network protection with firewall and Deep Packet Inspection (DPI)
- Supports Secure Boot for checking system integrity
- Centralized monitoring and remote access with Moxa Remote Connect (MRC)

### Certifications



## Introduction

The OnCell G4308-LTE4 Series is a range of all-in-one industrial cellular routers that integrate an 8-port high-performance switch, firewall, and LTE Cat.4 connectivity, making them ideal for connecting multiple devices at remote sites. By avoiding the need for multiple standalone devices, these cellular routers save cabinet space, reduce wiring and configuration complexity, and lower maintenance costs to simplify deployment and maintenance efforts. Designed to act as a wireless backbone for critical industrial applications, they deliver stable Serial/Ethernet-to-cellular connections and ensure optimal reliability with dual SIM failover and GuaranLink cellular auto-recovery.

The OnCell G4308-LTE4 Series protects organizations against threats on multiple fronts. Built from the ground up with security in mind, Secure Boot ensures firmware integrity while the advanced firewall with OT protocol awareness safeguards the network from internal and external threats. Meanwhile, Deep Packet Inspection (DPI) detects and blocks forged or malicious packets. Combined, these features deliver comprehensive, multi-level security for critical operations.

With MRC Quick Link Ultra, operators gain complete visibility and secure remote control over both the OnCell router and its connected end devices, allowing for faster troubleshooting, minimal downtime, and more reliable industrial operations.

## Specifications

### Cellular Interface

|                             |                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cellular Standards          | LTE CAT 4, HSPA, UMTS                                                                                                                                                                                                                                                                                                                                                       |
| Data Rate                   | 20 MHz bandwidth: 150 Mbps DL, 50 Mbps UL                                                                                                                                                                                                                                                                                                                                   |
| Frequency Bands Supported   | LTE B1 (2100 MHz) / B2 (1900 MHz) / B3 (1800 MHz) / B4 (1700/2100 MHz (AWS)) / B5 (850 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B12 (700 MHz) / B13 (700 MHz) / B14 (700 MHz) / B20 (800 MHz) / B25 (1900 MHz) / B26 (850 MHz) / B28 (700 MHz)<br><br>UMTS/HSPA B1 (2100 MHz) / B2 (1900 MHz) / B4 (1700 MHz(AWS)) / B5 (850 MHz) / B6 (800MHz) / B8 (900 MHz) / B19 (800 MHz) |
| No. of SIMs                 | 2 Push-eject tray type                                                                                                                                                                                                                                                                                                                                                      |
| SIM Format                  | Nano SIM                                                                                                                                                                                                                                                                                                                                                                    |
| Cellular Antenna Connectors | 2 x SMA female                                                                                                                                                                                                                                                                                                                                                              |

### Ethernet Interface

|                                            |                                                                                        |
|--------------------------------------------|----------------------------------------------------------------------------------------|
| 10/100/1000BaseT(X) Ports (RJ45 connector) | 8                                                                                      |
| Standards                                  | IEEE 802.3 for 10BaseT<br>IEEE 802.3u for 100BaseT(X)<br>IEEE 802.3ab for 1000BaseT(X) |

## GNSS Interface

|                         |                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------|
| GNSS Bands              | GPS (1575.42 MHz)<br>GLONASS (1597.52 MHz)<br>Galileo (1575.42 MHz)<br>BeiDou (1561.098 MHz) |
| GNSS Antenna Connectors | 1 x SMA female                                                                               |

## Input/Output Interface

|                         |                                                                  |
|-------------------------|------------------------------------------------------------------|
| Digital Output Channels | 1<br>Relay output with current carrying capacity of 1 A @ 24 VDC |
| Digital Input Channels  | 1                                                                |
| Digital Inputs          | 0 to +3 V for state 0<br>+9 to +36 V for state 1                 |
| Buttons                 | Reset button                                                     |

## USB Interface

|                  |                      |
|------------------|----------------------|
| No. of USB Ports | 1                    |
| USB Connector    | USB Type A           |
| USB Standards    | USB 2.0 <sup>1</sup> |

## Serial Interface

|                  |                                                                   |
|------------------|-------------------------------------------------------------------|
| No. of Ports     | 1                                                                 |
| Connector        | DB9 male                                                          |
| Serial Standards | RS-232/422/485                                                    |
| Data Bits        | 5, 6, 7, 8                                                        |
| Stop Bits        | 1, 1.5, 2                                                         |
| Parity           | None<br>Even<br>Odd                                               |
| Baudrate         | 300 bps to 921.6 kbps                                             |
| Console Port     | RS-232 (TxD, RxD, GND), USB type-C (115200, n, 8, 1) <sup>2</sup> |

## 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                |

## Operation Modes

|           |                                                                                          |
|-----------|------------------------------------------------------------------------------------------|
| Standards | Real COM mode<br>RFC2217 mode<br>TCP Client mode<br>TCP Server mode<br>UDP mode<br>SCATS |
|-----------|------------------------------------------------------------------------------------------|

1. For use with the ABC-02 Series configuration backup and restoration tool.
2. We recommend using the Moxa CBL-USBCF9-GY-150 console cable, which can be purchased separately.

|                                   |                                                                                                                   |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>LED Interface</b>              |                                                                                                                   |
| LED Indicators                    | PWR1, PWR2, STATE, USB, SIM1, SIM2, CELL, LTE, GNSS, SERIAL, VPN                                                  |
| <b>Wireless Software Features</b> |                                                                                                                   |
| Management                        | GuaranLink<br>Send SMS<br>SMS Remote Control<br>Moxa Remote Connect (MRC)                                         |
| <b>Ethernet Software Features</b> |                                                                                                                   |
| Management                        | DHCP Server/Client<br>DNS<br>Syslog<br>MXview One<br>MXconfig<br>MXsecurity<br>Power Management                   |
| Broadcast Forwarding              | IP directed broadcast, broadcast forwarding                                                                       |
| Configuration Options             | Serial Console <sup>3</sup><br>Web Console (HTTP/HTTPS)<br>Command Line Interface (CLI) through Serial/Telnet/SSH |
| Network Protocols                 | LLDP<br>SMTP<br>SNMPv1/v2c/v3<br>TFTP<br>TCP/IP<br>UDP<br>IPv4<br>ARP<br>HTTP/HTTPS<br>Telnet<br>SSH              |
| Filter                            | 802.1Q VLAN<br>Port-based VLAN                                                                                    |
| Unicast Routing                   | OSPF<br>RIPV1/V2<br>Static Route                                                                                  |
| Multicast Routing                 | Static Route                                                                                                      |
| Routing Redundancy                | VRRP                                                                                                              |
| Time Management                   | NTP Server/Client<br>SNTP                                                                                         |
| Tunneling                         | GRE                                                                                                               |
| VPN                               | IPsec<br>OpenVPN                                                                                                  |
| <b>Security Functions</b>         |                                                                                                                   |
| Hardware-based Security           | Secure Boot                                                                                                       |
| Password                          | User-level password protection                                                                                    |
| Authentication                    | Local database<br>RADIUS<br>Access Control List                                                                   |

3. We recommend using the Moxa CBL-USBCF9-GY-150 console cable, which can be purchased separately.

## DoS and DDoS Protection

|            |                                                                                                                                                                          |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technology | ARP-Flood<br>FIN Scan<br>ICMP Flood<br>TCP Sessions Without SYN<br>NMAP-ID Scan<br>NMAP-Xmas Scan<br>Null Scan<br>SYN/FIN Scan<br>SYN/RST Scan<br>SYN-Flood<br>Xmas Scan |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Firewall

|                        |                                                                                                                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Filter                 | DDoS<br>Ethernet protocols<br>ICMP<br>IP address<br>MAC address<br>Ports                                                                                                                                                                      |
| Deep Packet Inspection | Modbus TCP<br>Modbus UDP<br>DNP3<br>IEC 60870-5-104<br>IEC 61850 MMS<br>EtherNet/IP<br>MELSEC<br>Omron FINS<br>OPC UA<br>Siemens S7 Comm.<br>Siemens S7 Comm. Plus<br>Additional protocols will be supported through future firmware updates. |

## NAT

|          |                                                       |
|----------|-------------------------------------------------------|
| Features | 1-to-1<br>N-to-1<br>PAT<br>NAT loopback<br>Double NAT |
|----------|-------------------------------------------------------|

## IPsec VPN

|                        |                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------|
| Authentication         | MD5 and SHA (SHA-256)<br>RSA (key size: 1024-bit, 2048-bit)<br>Pre-shared Key or X.509 v3 certificate |
| Encryption             | DES<br>3DES<br>AES-128<br>AES-192<br>AES-256<br>AES-256 GCM                                           |
| Concurrent VPN Tunnels | Max. 15 IPsec VPN tunnels                                                                             |

## OpenVPN

|            |                                                                 |
|------------|-----------------------------------------------------------------|
| OpenVPN    | OpenVPN (client)                                                |
| Encryption | AES-128/192/256 CBC<br>AES-128/192/256 GCM<br>CHACHA20-POLY1305 |

## Power Parameters

|               |                                       |
|---------------|---------------------------------------|
| Input Current | 1.16 A (max.)                         |
| Input Voltage | 12 to 48 VDC<br>Redundant dual inputs |

|                             |                                                                          |
|-----------------------------|--------------------------------------------------------------------------|
| Power Consumption           | 47 mW at 12 V (idle)<br>11.05 W at 12 V (typ.)<br>14.28 W at 48 V (max.) |
| Power Connector             | Screw-locked terminal block                                              |
| Reverse Polarity Protection | Supported                                                                |

#### Physical Characteristics

|              |                                                        |
|--------------|--------------------------------------------------------|
| Housing      | Metal                                                  |
| Dimensions   | 125 x 58.2 x 100 mm (4.92 x 2.29 x 3.94 in)            |
| Weight       | 707 g (1.56 lb)                                        |
| Installation | DIN-rail mounting<br>Wall mounting (with optional kit) |
| IP Rating    | IP40 <sup>4</sup>                                      |

#### Environmental Limits

|                                        |                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------|
| Operating Temperature                  | Standard models: -10 to 55°C (14 to 131°F)<br>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

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMC                | EN 55032/35<br>EN 61000-6-2/-6-4<br>CISPR 32/35                                                                                                                                                                                                                                                                                                                                                                |
| EMI                | ICES-003, FCC Part 15B Class A                                                                                                                                                                                                                                                                                                                                                                                 |
| EMS                | IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV (level 4) <sup>5</sup><br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m (level 3); 1.8, 2.6, 3.5, 5GHz: 3V/m (level 2)<br>IEC 61000-4-4 EFT: Power: 2 kV; IO: 1 kV (level 3) <sup>5</sup><br>IEC 61000-4-5 Surge: Power: 2 kV, Signal: 2 kV (level 3) <sup>5</sup><br>IEC 61000-4-6 CS: 0.15 MHz to 80 MHz; Signal: 10 V (level 3)<br>IEC 61000-4-8: 30 A/m (level 4) |
| Freefall           | IEC 60068-2-32                                                                                                                                                                                                                                                                                                                                                                                                 |
| Radio Frequency    | FCC ID RI7LE910CXWWX<br>PTCRB<br>EN 303 413                                                                                                                                                                                                                                                                                                                                                                    |
| Radio              | RCM<br>UKCA<br>IC: 5131A-LE910CXWWX<br>NCC: CCAK264G0020T7<br>TELEC: R 003-240163/T D240129003                                                                                                                                                                                                                                                                                                                 |
| Cellular Standards | EN 301 489-1/-19 (GPS)<br>EN 301 489-1/-52 (WCDMA/LTE)<br>EN 301 511<br>EN 301908-1/-2/-13                                                                                                                                                                                                                                                                                                                     |
| Cybersecurity      | EN 18031-1                                                                                                                                                                                                                                                                                                                                                                                                     |
| Safety             | UL 62368-1<br>EN 62368-1                                                                                                                                                                                                                                                                                                                                                                                       |

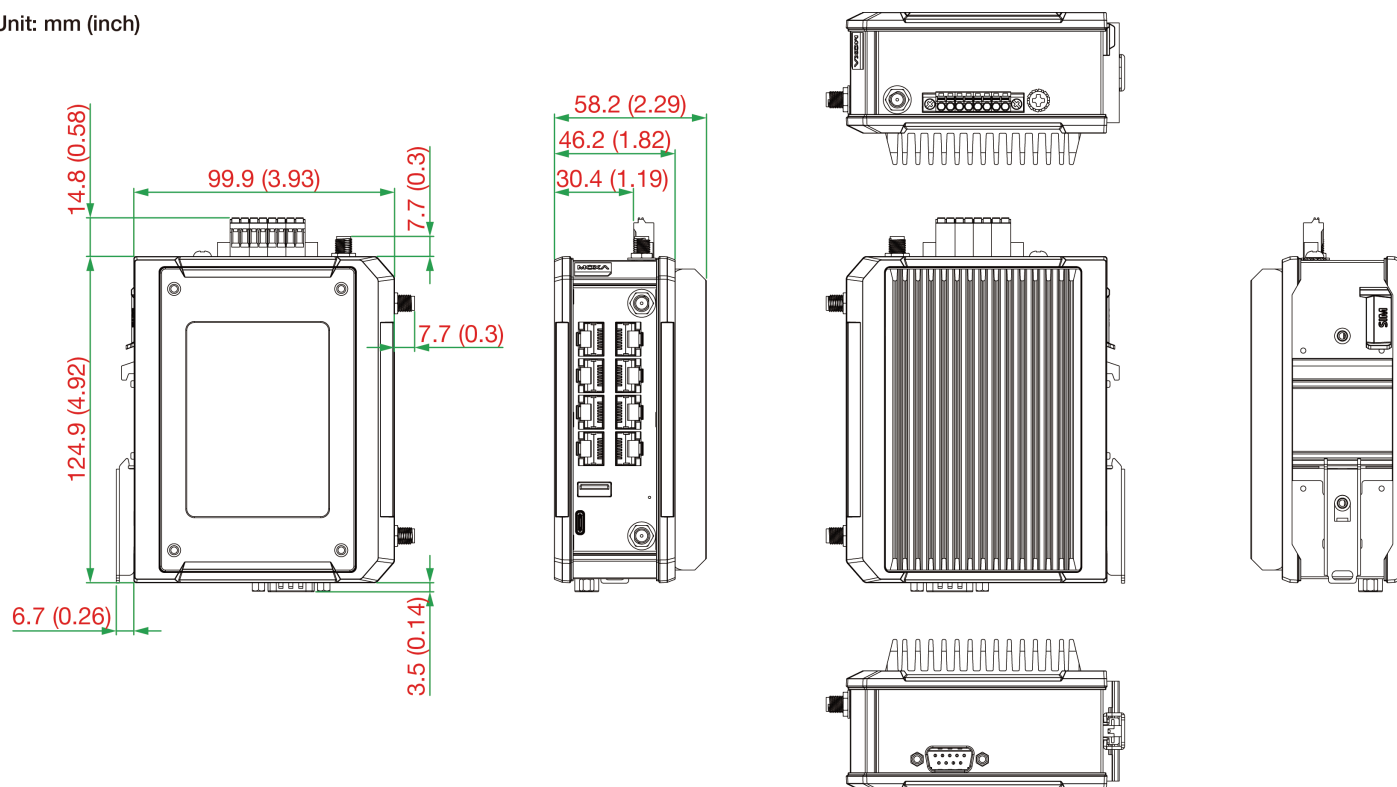
4. With the rubber SIM slot cover closed.

5. This device demonstrates a capacity that exceeds the requirements set by certification standards.

|                         |                                                                      |
|-------------------------|----------------------------------------------------------------------|
| Shock                   | IEC 60068-2-27                                                       |
| Vibration               | IEC 60068-2-6                                                        |
| <b>MTBF</b>             |                                                                      |
| Time                    | 1,533,742 hrs                                                        |
| Standards               | Telcordia Standard SR-332                                            |
| <b>Warranty</b>         |                                                                      |
| Warranty Period         | 5 years                                                              |
| Details                 | See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a> |
| <b>Package Contents</b> |                                                                      |
| Device                  | 1 x OnCell G4308-LTE4 Series secure cellular router                  |
| Documentation           | 1 x quick installation guide<br>1 x warranty card                    |
| Installation Kit        | 1 x DIN-rail kit                                                     |

## Dimensions

Unit: mm (inch)



## Ordering Information

| Model Name             | LTE Band                                                                                                                                                                                                                                | Operating Temp. |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| OnCell G4308-LTE4-GL   | B1 (2100 MHz) / B2 (1900 MHz) / B3 (1800 MHz) / B4 (1700/2100 MHz (AWS)) / B5 (850 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B12 (700 MHz) / B13 (700 MHz) / B14 (700 MHz) / B20 (800 MHz) / B25 (1900 MHz) / B26 (850 MHz) / B28 (700 MHz) | -10 to 55°C     |
| OnCell G4308-LTE4-GL-T | B1 (2100 MHz) / B2 (1900 MHz) / B3 (1800 MHz) / B4 (1700/2100 MHz (AWS)) / B5 (850 MHz) / B7 (2600 MHz) / B8 (900 MHz) / B12 (700 MHz) / B13 (700 MHz) / B14 (700 MHz) / B20 (800 MHz) / B25 (1900 MHz) / B26 (850 MHz) / B28 (700 MHz) | -30 to 70°C     |

## Accessories (sold separately)

### Storage Kits

|              |                                                                                                                                                                     |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ABC-02-USB   | Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, 0 to 60°C operating temperature   |
| ABC-02-USB-T | Configuration backup and restoration tool, firmware upgrade, and log file storage tool for managed Ethernet switches and routers, -40 to 75°C operating temperature |

### Antennas

|                      |                                                                                                                              |
|----------------------|------------------------------------------------------------------------------------------------------------------------------|
| ANT-5G-OSM-04        | 4 dBi LTE/5G NR dipole antenna with SMA (male) connector                                                                     |
| MAT-5G-PA-SM-2-06-3m | 6 dBi MIMO panel antenna with 2 SMA (male) connectors for cellular applications, 3 m cable                                   |
| ANT-GPS-CSM-04-3m    | 20 dBi at 1575 to 1605 MHz, right-hand circular polarization (RHCP), active GPS antenna with SMA (male) connector, 3 m cable |

### Wireless Antenna Cables

|                   |                                                                                                    |
|-------------------|----------------------------------------------------------------------------------------------------|
| A-CRF-SMSF-R3-100 | Wireless antenna cable with SMA (male) to SMA (female) connectors, magnetic base, RG-174 type, 1 m |
| A-CRF-SMSF-L1-300 | Wireless antenna cable with SMA (male) to SMA (female) connectors, magnetic base, LMR195 type, 3 m |
| A-CRF-SMSF-C2-300 | Wireless antenna cable with SMA (male) to SMA (female) connectors, CFD-200 type, 3 m               |
| A-CRF-SMSF-C2-500 | Wireless antenna cable with SMA (male) to SMA (female) connectors, CFD-200 type, 5 m               |

### Mounting Kits

|           |                                                                     |
|-----------|---------------------------------------------------------------------|
| WK-41-01  | Wall-mounting kit with 1 plate (41 x 144 x 7.5 mm)                  |
| WK-160-01 | Wall-mounting kit with 1 plate (160 x 89 x 2.0 mm), 4 screws, black |

### Software

|                          |                                                                                       |
|--------------------------|---------------------------------------------------------------------------------------|
| LIC-MXviewOne-NEW-XN-SR  | MXview One node license with customizable node quantity (minimum 1 node)              |
| LIC-MRCQL-ADD-1Y-XN-SR   | 1-year MRC Quick Link add-on license with customizable node quantity (minimum 1 node) |
| LIC-MXsecurity-NEW-XN-SR | MXsecurity perpetual node license with customizable node quantity (minimum 1 node)    |

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