

# C4G Series

4G Cellular Router



## Overview

EtherWAN's C4G Series is a high performance ruggedized Dual-SIM 4G router, developed for the world's most demanding mission critical applications, connecting network assets and infrastructures in fixed and mobile (vehicle/train/subway/health) deployments for public, transit (i.e. stop lights), industrial equipment (i.e. video surveillance), field (i.e. oil pipes) and health (i.e. hospitals) deployments.

The C4G Series offers extensible multi-network connectivity from 1 to 4 Ethernet ports: Dual-SIM Cellular (up to CAT12 / 600Mbps), Wi-Fi AC (up to 866Mbps) & Ethernet (1Gbps ports), USB, RS232, RS485 & I/O ports supporting vehicle power connectivity and GNSS (GPS, Galileo, Glonass, Beidou). The C4G Series comes in two enclosure types: a) die cast aluminum enclosure with optional DIN Rail bracket and b) native DIN Rail industrial-grade enclosure. The router supports best-in-class link protection to ensure secure connectivity for all field applications and mobile assets through Dual-SIM and multiple diversity protocols.

EtherWAN — "When Connectivity is Crucial."

## Highlights

### + Designed for Harsh Environments

Designed to withstand extreme temperatures and conditions (ie: shock, vibrations, etc) for reliable and uninterrupted operation  
Support for vehicle operation with built-in battery charge protection

### + High Capacity Router Ultra Low Power

Support for broadband mission critical applications, allowing over 100 clients to work simultaneously  
Standby Mode protects power sources by dropping power consumption to a target of 53 mW when triggered

### + Water and Dust Resistant with Field-Proven Cellular/4G Connectivity

Die cast aluminum housing sealed to meet IP54  
Reliable 4G connectivity in hazardous environmental conditions (ATEX Class 1 Zone 2/Class 1 Division 2)  
Dual-SIM 4G Failover

### + Leading Edge Security with 2 Factor Authentication

Multiple concurrent VPN sessions and 2 Factor Authentication  
Remote authentication (RADIUS, TACACS+) management  
Secure software image CRC control protects against unwanted software corruption (i.e. malware)

# Specifications

## + Main Features

### Functionality

Bridging, Switching, Routing

### Routing

IPv4/IPv6, Static Routing, RIP/RIPNg, NAT, OSPFv3, BGP-4, IPv6 Encapsulations (GRE, 6in4), Port Routing, RAW Connections

### IP Applications

DDNS, DNS Proxy/Spoofing, DHCP/DHCPv6 server, relay, client, Opt. 82, NTP, SNTP

### VPN & VLAN

IPSec, OpenVPN, VPN Failover, VLAN Access

### Serial & I/O

RS232, RS485, PPP/SLIP, PPPoE

### Diversity

Dual-SIM, Static Routing with Primary/Backup route, VPN Failover

### Firewall & Security

ACL (list & ranges & time); Filter based MAC, IP, Port, Protocol, User; Secure HTTP/HTTPS/FTP/Telnet Authentication Proxy; AAA, Radius, TACACS+, LDAP, 802.1x, Certificate Support (X.509), Port Forwarding, BGP Communities, Zone Firewall, 2 Factor Authentication

### Logging, Reporting & Alerts

Sys Log, Event Type, Report Type, Alerts & Monitoring, Triggers Status Screen Report, Data Usage, Diagnostic

### Management

PerleVIEW Management, SNMPv1/v2/v3, SMS Control, Load Balancing, CLI, LDAP, Login Banner, E-mail, Ping, Telnet, FTP

### Ports

1, 2 or 4 Ethernet Giga, USB-C (5Gbps), RS232, RS485, I/O and I/O Vehicle Power Monitoring

### Wireless LAN

802.11 a/b/g/n/ac Dual Band 2.4/5GHz with speeds up to 867Mbps

### Cellular Options

America & EMEA LTE (up to CAT6/300Mbps) and Worldwide LTE-A (up to CAT12/600Mbps) cellular card options

### GNSS

GPS, Galileo, Glonass, Beidou

## + Power

### Power Input

12/24/48VDC Nominal (7 to 36 VDC Range)

### Power Line Protection

Surge: 8kV (EN 61000-4-5 common mode), 2kV (EN 61000-4-5 differential and common modes)

### Vehicle Power

Built-in protection against voltage transient includes: 5 VDC engine cranking and +200 VDC load dump

### Power/Current Consumption

SKU	Typical Use	Idle Mode	Standby Mode
C4G-S-1P3M	0.24A / 2.88W	0.23A / 2.70W	3.9mA / 46.8mW
C4G-S-1P6M	0.28A / 3.30W	0.25A / 2.94W	3.9mA / 46.8mW
C4G-M-4P3M	0.34A / 4.07W	0.32A / 3.86W	3.9mA / 46.8mW
C4G-M-4P3MW	0.39A / 4.70W	0.37A / 4.46W	3.9mA / 46.8mW
C4G-M-4P6M	0.38A / 4.52W	0.35A / 4.14W	3.9mA / 46.8mW
C4G-M-4P6MW	0.42A / 5.09W	0.39A / 4.67W	3.9mA / 46.8mW
C4G-M-4P6FW	0.42A / 5.09W	0.39A / 4.67W	3.9mA / 46.8mW

## **+ Environmental**

### **Operating Temp**

-40 to 70°C/-40 to 158°F (MIL-STD-810G)

### **Operating Humidity**

0% to 95% non-condensing

### **Operating Altitude**

<3000m/10,000ft

### **MTBF (Hours)**

>20 years (Calculation model based on MIL-HDBK-217-FN2@30°C)

### **Ingress Protection Rating**

IP54 for the die cast aluminium enclosure

## **+ Regulatory Approvals**

### **Hazloc**

ATEX Class 1 Zone 2

ANSI/ISA 12.12.01, Class 1 Division 2

Groups A-D

### **Emissions**

FCC 47 Part 15 Class B

ICES-003 Issue 6 Class B (Canada)

EN61000-6-4 (Emissions for industrial environments)

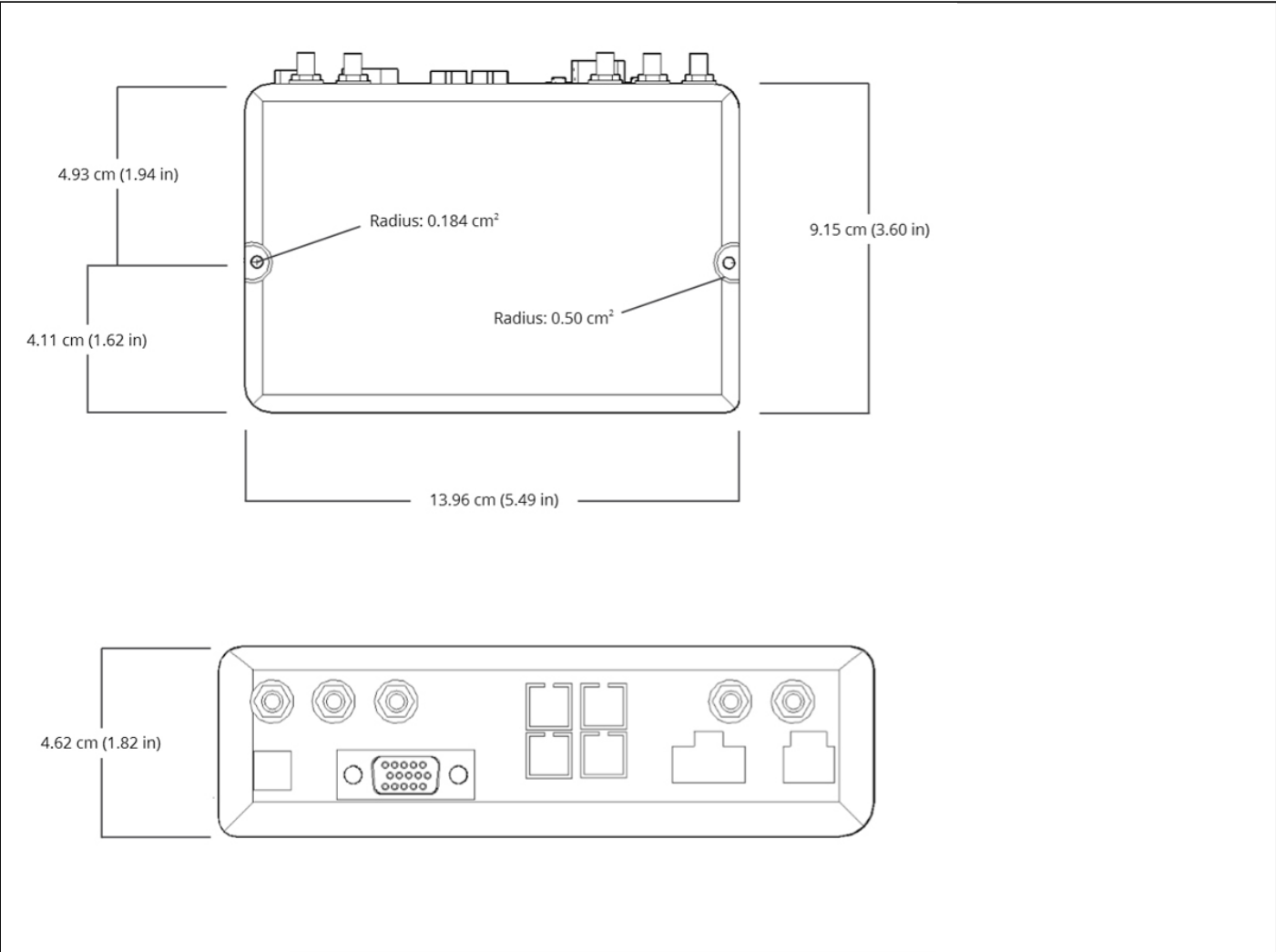
CISPR 32:2015/EN 55032:2015 (Class B)

EN61000-3-2 Limits for Harmonic Current

Emissions

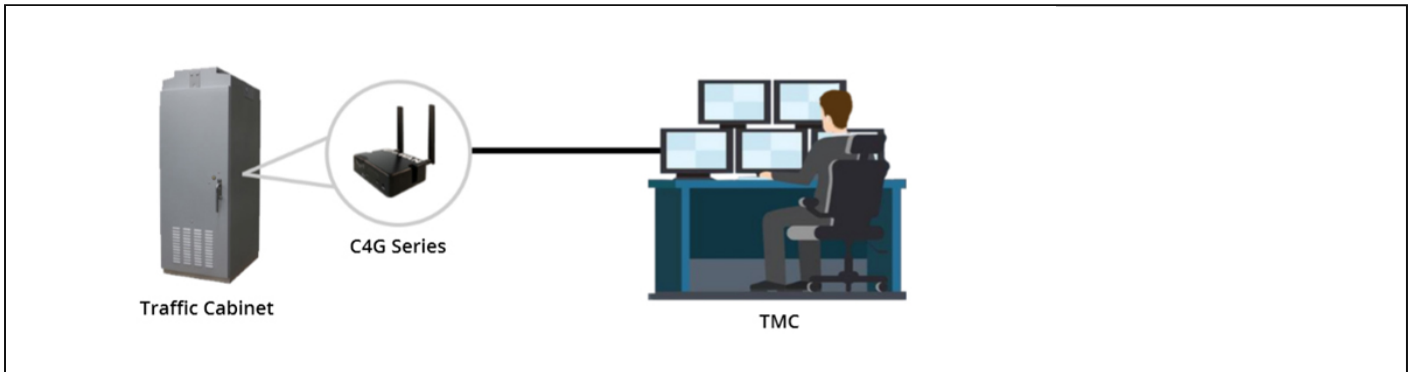
EN61000-3-3 Limits of Voltage Fluctuations and Flicker

# Dimensions

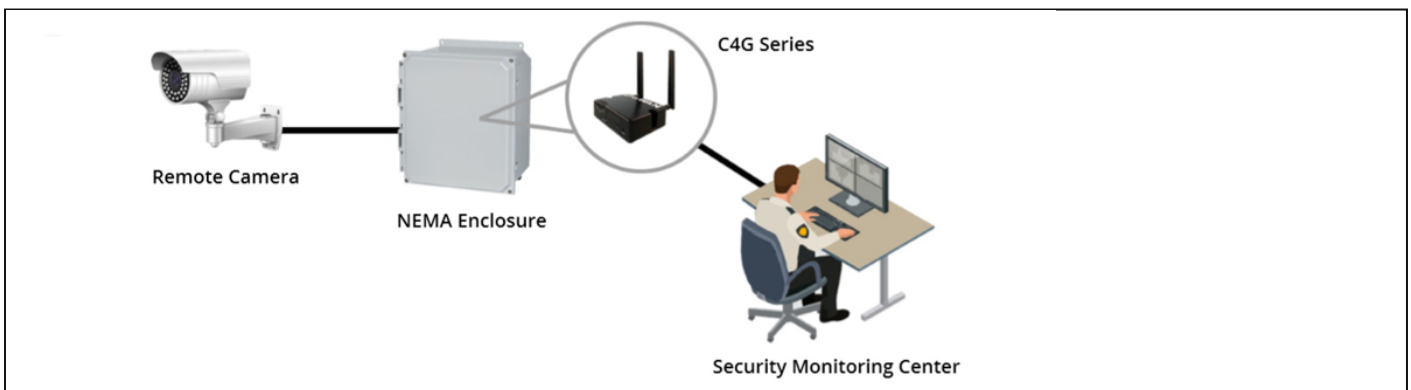


## Application

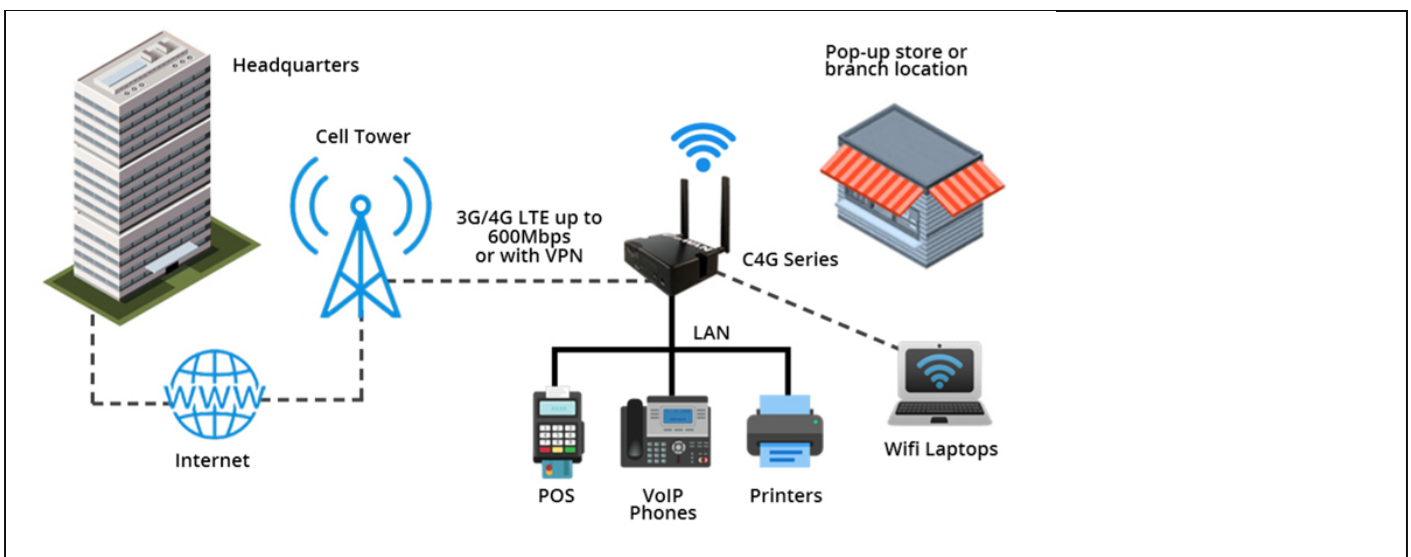
### + ITS (Intelligent Transportation Systems) Application



### + Security Application



### + "Branch-in-a-Box" Application



## Ordering Info

### + Model

<b>C4G-S-1P3M</b>	4G Router with integrated: LTE-A (CAT6 300M/50M), GPS/GNSS, 1 x 10/100/1000 RJ45 Ethernet, USB-C Port, RS232, GPIO, IGN (ignition sense pin), IP54 enclosure. North American power adapter included.
<b>C4G-S-1P6M</b>	4G Router with integrated: LTE-A PRO (CAT12 600M/150M), GPS/GNSS, 1 x 10/100/1000 RJ45 Ethernet, USB-C Port, RS232, GPIO, IGN (ignition sense pin), IP54 enclosure. North American power adapter included.
<b>C4G-M-4P3M</b>	4G Router with integrated: LTE-A (CAT6 300M/50M), GPS/GNSS, 4 x 10/100/1000 RJ45 Ethernet, USB-C Port, RS232, GPIO, IGN (ignition sense pin), 2 x Digital Inputs, Alarm Relay, RS485 half-duplex, IP54 enclosure. North American power adapter included.
<b>C4G-M-4P3MW</b>	4G Router with integrated: LTE-A (CAT6 300M/50M), GPS/GNSS, Wireless LAN (2.4/5GHz), 4 x 10/100/1000 RJ45 Ethernet, USB-C Port, RS232, GPIO, IGN (ignition sense pin), 2 x Digital Inputs, Alarm Relay, RS485 half-duplex, IP54 enclosure. North American power adapter included.
<b>C4G-M-4P6M</b>	4G Router with integrated: LTE-A PRO (CAT12 600M/150M), GNSS, 4 x 10/100/1000 RJ45 Ethernet, USB-C Port, RS232, GPIO, IGN (ignition sense pin), 2 x Digital Inputs, Alarm Relay, RS485 half-duplex, IP54 enclosure. North American power adapter included.
<b>C4G-M-4P6MW</b>	4G Router with integrated: LTE-A PRO (CAT12 600M/150M), GPS/GNSS, Wireless LAN (2.4/5GHz), 4 x 10/100/1000 RJ45 Ethernet, USB-C Port, RS232, GPIO, IGN (ignition sense pin), 2 x Digital Inputs, Alarm Relay, RS485 half-duplex, IP54 enclosure. North American power adapter included.
<b>C4G-M-4P6FW</b>	FirstNet Ready 4G Router with integrated: LTE-A PRO (CAT12 600M with B14 NA support), GPS/GNSS, Wireless LAN (2.4/5GHz), 4 x 10/100/1000 RJ45 Ethernet, USB-C Port, RS232, GPIO, IGN (ignition sense pin), 2 x Digital Inputs, Alarm Relay, 485 half-duplex, IP54 enclosure. North American power adapter included.

### + What's in the Box

**C4G Unit, Power Supply, All appropriate antennas, Quick Install Guide**

### + Accessories

<b>C4G-PSU-US-H</b>	Hardened PSU -40 to 75°C (-40 to 167°F) 12VDC/2A with 4 pin Molex connector, 1.8m/6ft cable and NA wall plug
<b>C4G-GPS1ANT</b>	GPS/GNSS (GPS, Galileo, Glonass, Beidou) Passive Antenna with 5m/16ft cable SMA connector
<b>C4G-WIFI2ANT</b>	2 x Wi-Fi Antenna with RP-SMA direct attach connector
<b>C4G-LTE2ANT</b>	2 x LTE Antenna with SMA direct attach connector
<b>C4G-4PIN-PT</b>	Pigtail cable with 4 pin Molex connector, 3m/10ft for GPIO and power
<b>C4G-8PIN-PT</b>	Pigtail cable with 8 pin Molex connector, 3m/10ft
<b>C4G DIN</b>	Universal DIN Rail Router Mount

<b>LTE2GPS1</b>	Puck GPS/Cellular combination antenna - IP67 rated - Bolt-thru, magnetic, or adhesive mounts. 2 x LTE + 1 x GPS
<b>LTE2W2GPS1</b>	Puck GPS/Cellular combination antenna - IP67 rated - Bolt-thru, magnetic, or adhesive mounts. 2 x LTE + 2 x Dual Band Wi-Fi + 1 x GPS

