Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX (1 SIM Card Slot, 802.11n, GPS, -25~65 degrees C)



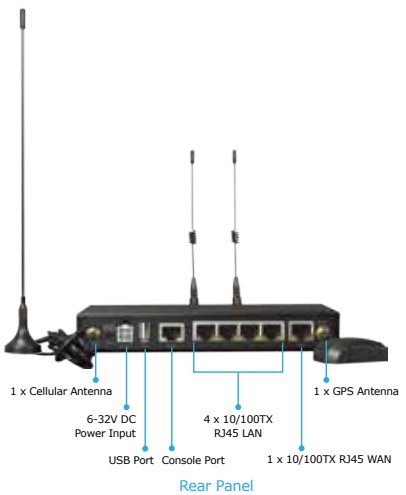
Internet of Vehicles via 4G LTE Cellular Gateway

PLANET VCG-1500WG-LTE is a reliable, secure and high-bandwidth communications vehicle cellular gateway for demanding mobile applications and IoV (Internet of Vehicles) deployments. It features **4G LTE** (Long Term Evolution), **wireless AP**, **five Ethernet** ports (4 LAN and 1 WAN), **GPS**, **VPN** technology and **bandwidth management** bundled in a mountable metal case to establish a public network connection and allows passengers to access Internet.





Front Panel



Rear Panel

Physical Port

- **4 10/100BASE-TX** RJ45 LAN ports, auto-negotiation, auto MDI/MDI-X
- **1 10/100BASE-TX** RJ45 WAN port, auto-negotiation, auto MDI/MDI-X
- **1** 4G LTE 2.3 dBi antenna
- **2** 2.4G WiFi 2dBi antennas
- **1** GPS antenna
- **1** SIM card slot
- **1** console port
- **2** TF card slots to save files for Wi-Fi advertising

Cellular Interface

- Supports multi-band connectivity with FDD LTE/TDD LTE/ WCDMA/GSM/LTE Cat4
- Built-in SIM and broadband backup for network redundancy
- One detachable antenna for 4G LTE connection
- LED indicators for connection status (3G/4G)

Wi-Fi Interfaces

- Complies with IEEE 802.11b/g/n 2.4GHz
- Two detachable antennas for wireless connection
- 64-/128-bit WEP, WPA/WPA2 and WPA-PSK/WPA2-PSK (TKIP/AES encryption)
- LED indicators for status

Case and Installation

- IP30 metal case
- Mounting brackets for vehicles
- Power requirement: 6~32V DC
- Supports 15KV DC Ethernet ESD protection
- -25 to 65 degrees C operating temperature

Advanced Features

- Supports demilitarized zone (DMZ).
- Supports VPN client, including GRE, PPTP, IPSec, L2TP
- Supports NAT port mapping function, such as SNAT, DNAT
- Supports Static Routing to display current routing information of the gateway

High-performance 4G LTE

The VCG-1500WG-LTE is able to reach a download (DL) speed of up to **100Mbps** and an upload (UL) speed of **50Mbps**. The Cellular Gateway also supports multi-band connectivity including LTE FDD, TDD, HSDPA, WCDMA and GSM for a wide range of applications.

Wireless Access Point

With an integrated 802.11n Wireless Access Point, the gateway supports data rate up to 300Mbps and is also compatible with **2.4GHz 802.11b/g/n** equipment. The Wireless Protected Access (WPA-PSK/WPA2-PSK) and Wireless Encryption Protocol (WEP) features enhance the level of transmission security and access control over Wireless LAN.

GPS Included

The VCG-1500WG-LTE is equipped with one convenient feature and that is GPS (global positioning system). It is a positioning system based on a network of satellites that continuously transmit necessary data. More signals transmitted from more satellites can triangulate its location on the ground, meaning any location can be easily tracked anytime.



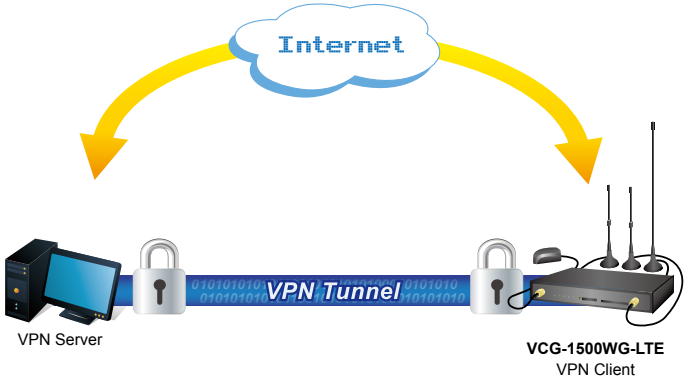
- Supports QoS for bandwidth management
- Supports Dynamic DNS and PLANET DDNS
- Supports WAN connection types: DHCP client, static IP and PPPoE client
- Secures network connection
  - IP filter
  - URL filter
  - MAC filter

Management

- Gateway management interfaces
  - Console/Telnet Command Line interface
  - Web management
- Gateway Maintenance
  - Firmware upload via HTTP, TFTP
  - Restore or Reset button for reset to factory default
  - Dual images
- SNTP (Simple Network Time Protocol)
- System log
- System tool, such as ping and trace
- Configuration backup and restore
- Supports CMS (Central Management System) and Wifidog for remote management and Wi-Fi advertising

Cost-effective VPN Solution

The VCG-1500WG-LTE provides a complete data security and privacy feature for access and exchange of sensitive data. The full VPN capability of the VCG-1500WG-LTE including built-in **PPTP**, **LT2P**, and **IPSec VPN** client functions with DES/3DES/AES encryption and MD5/SHA-1 authentication makes the shared connection more secure and flexible. The IPSec VPN also makes the private tunnel over Internet more secure for enterprises doing business transactions.



***VPN** Encryption for*
Network Security and Data Protection

Dual TF Cards for Wi-Fi Advertising Contents

The VCG-1500WG-LTE provides dual TF cards and the capacity of each card is up to 128GB. The TF cards can store thousands of advertising data and movie files. The administrator is able to upload these files to TF cards via FTP locally. Besides, through CMS (Central Management System), administrator is able to upload and maintain these files remotely. The device will display advertising contents when users access to the Wi-Fi after authentication.

Superior Management Functions

For networking management features, the VCG-1500WG-LTE provides such functions as DMZ, QoS and Wifidog, as well as full secure functions including Network Address Translation (NAT), IP/URL/MAC filtering. The VCG-1500WG-LTE has 4G and WAN connection failover characteristics, which can automatically switch over to the redundant, stable WAN connection to keep users always online without missing any fascinating moments.

User-friendly and Secure Management

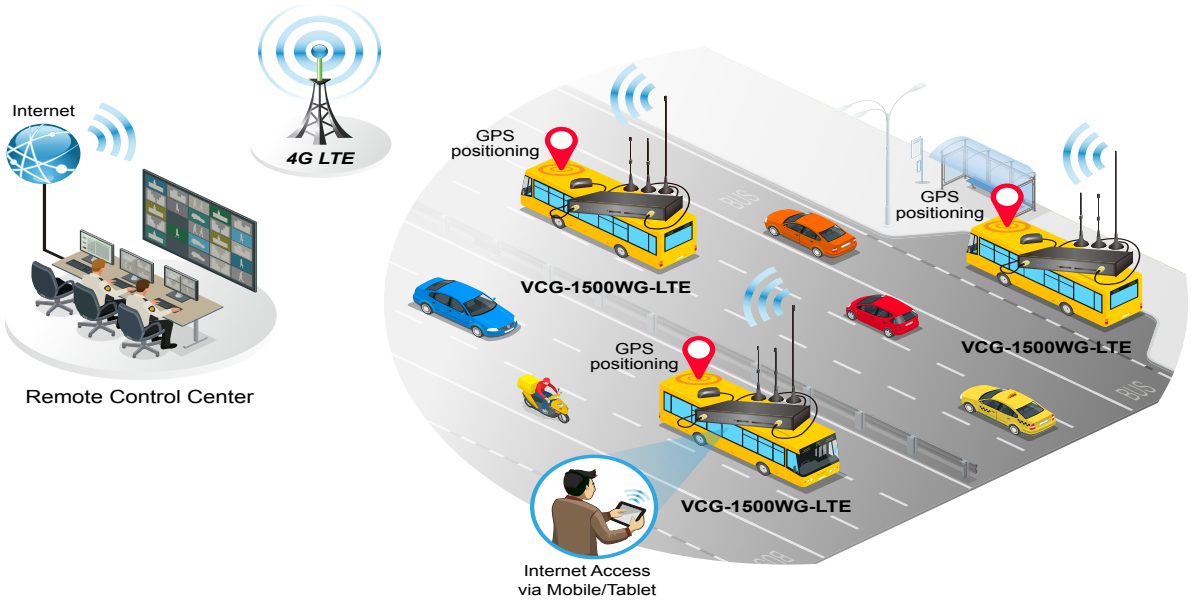
For efficient management, the VCG-1500WG-LTE is equipped with console, web and Wifidog management interfaces. With the built-in web-based management interface, the VCG-1500WG-LTE offers an easy-to-use, platform independent management and configuration facility. The VCG-1500WG-LTE supports Wifidog and it can be managed via CMS (Central Management System) for remote management and Wi-Fi advertising.



Applications

4G LTE Cellular Communication Solution

PLANET VCG-1500WG-LT is a compact and advanced 4G/LTE embedded router running on multiple LTE bands including FDD, TDD, WCDMA, Edge and GSM, delivering 4G/LTE access speeds with peak download rate up to 100Mbps. Featuring superior failover/fallback functionality, the router can automaticallyfall back to the 3G network when it gets a poor and unstable 4G LTE environment. Integrating with an 802.11n (2.4GHz) access point, users can access to the Internet easily. Supporting Wifidog, the VCG-1500WG-LTE can be easily managed by a centralized device management system (CMS) for configuration, monitoring and advertising. It is an ideal Wi-Fi coverage solution for public buses, taxis, long tourist buses and bullet trains.

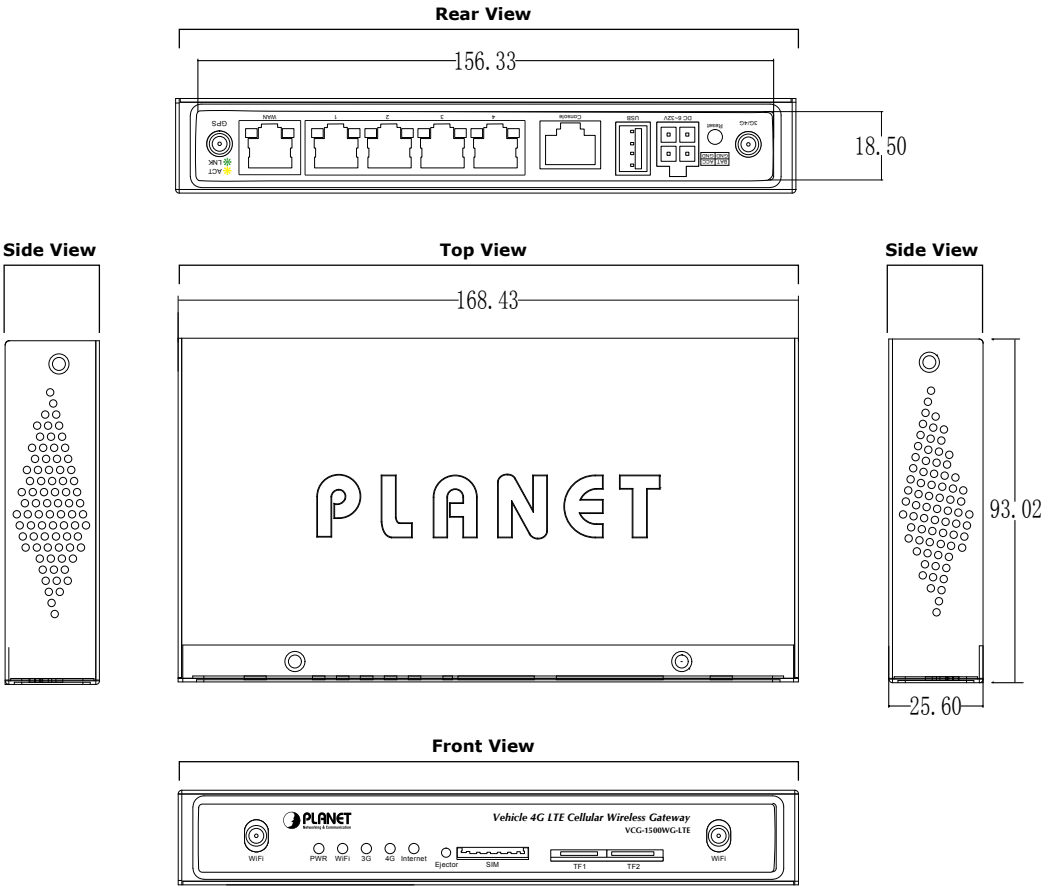


Specifications

Product	VCG-1500WG-LTE
Hardware Specifications	
Copper Ports	4 LAN 10/100BASE-TX RJ45 auto-MDI/MDI-X ports 1 WAN 10/100BASE-TX RJ45 auto-MDI/MDI-X port
Console	1 x RS232-to-RJ45 serial port (115200, 8, N, 1)
SIM Interface	1 x SIM card slot with mini SIM card tray
Cellular Antenna	1 x 2dBi external antenna with SMA connector for LTE
Wi-Fi Antenna	2 x 2dBi external antennas with SMA connectors for 2.4GHz
GPS Antenna	1 x 28dB gain external antenna with SMA connectors for GPS -3m
USB Interface	1 x USB 2.0 for external storage
TF Card Interface	2 x TF cards for storing thousands of advertising data, max. capacity up to 128G for each
Connector	Standard 4-pin vehicle power jack for power input
Reset Button	> 5 sec: Factory default
ESD Protection	15KV DC
Enclosure	IP30 metal case
Installation	Mounting brackets for vehicles
LED Indicators	**System**: PWR (Red) **Ethernet Interfaces (Port1-4 and WAN Port):** LNK (Green) ACT (Orange) **LTE SIM and Signal :** 3G/4G (Blue) Wi-Fi (Blue) Internet (Blue)
Dimensions (W x D x H)	168 x 104 x 25 mm (not including antenna and connector)
Weight	537g (not including antenna)
Power Requirements – DC	6~32V DC, 1.5A
Power Consumption	3 watts/10.23 BTU
Multi Band Supports	
EU Model	■ FDD LTE B1/B3/B5/B7/B8/B20 (2100/1800/850/2600/900/800) ■ TDD LTE B38/B40/B41 (2600/2300/2500) ■ WCDMA B1/B5/B8 (2100/850/900) ■ GSM/EDGE B3/B8 (1800/900)
US Model	■ FDD LTE B2/B4/B5/B13/B17/B25 (1900/AWS/850/700) ■ WCDMA B1/B2/B4/B5/B8 (2100/1900/AWS/850/900) ■ EVDO BC10/BC0/BC1 (1700/800/1900) ■ GSM/GPRS/EDGE (850/900/1800/1900)
LTE Data Rate	20MHz bandwidth: 100Mbps (DL), 50Mbps (UL)
Wireless Specifications	
Standard	IEEE 802.11b/g/n 2.4GHz
Wireless Mode	Access Point
Operating Channels	FCC: 1~11, ETSI: 1~13
Encryption Security	64-/128-bit WEP, WPA, WPA-PSK, WPA2, WPA2-PSK
Data Rate	Up to 300Mbps
Transmission Distance	Up to 150 meters *The estimated transmission distance is based on the theory. The actual distance will vary in different environments.
Advanced Functions	
VPN	GRE, PPTP, IPSec, L2TP
QoS	Bandwidth management
WAN Connection Type	PPPoE, Static, DHCP client
Wifidog	Wi-Fi authentication and advertising
Secure Network	IP filter URL filter MAC filter
Other	Supports demilitarized zone (DMZ) Supports NAT port mapping function, UPnP Supports Dynamic DNS
Management	
Basic Management Interfaces	Console, Telnet, Web browser
Standards Conformance	
Regulatory Compliance	CE, FCC

Standards and Protocols Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3x flow control and back pressure RFC 768 UDP RFC 791 IP RFC 792 ICMP RFC 5321 SMTP RFC 2068 HTTP RFC 1939 POP3 RFC 854 TELNET RFC 959 FTP
Environment	
Operating	Temperature: -25 ~ 65 degrees C Relative Humidity: 95% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative Humidity: 95% (non-condensing)

Dimensions



Dimensions (unit = mm)

Ordering Information

VCG-1500WG-LTE-EU	Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX (1 SIM Card Slot, 802.11n, GPS, -25~65 degrees C, LTE Band B1/B3/B5/B7/B8/B20)
VCG-1500WG-LTE-US	Vehicle 4G LTE Cellular Wireless Gateway with 5-Port 10/100TX (1 SIM Card Slot, 802.11n, GPS, -25~65 degrees C, LTE Band B2/B4/B5/B13/B17/B25)

Related Products

ICG-2420G-LTE	Industrial 4G LTE Cellular Gateway with 4-Port 10/100TX (2 SIM Card Slots, 2 RS232, 1 RS485, DI/DO, GPS, -20~70 degrees C)
ICG-2420-LTE	Industrial 4G LTE Cellular Gateway with 4-Port 10/100TX (2 SIM Card Slots, 2 RS232, 1 RS485, DI/DO, -20~70 degrees C)
CS-950	UTM Content Security Gateway

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