

# The Virtual Access GW1000 Series Router

## Compact 3G/4G LTE & WiFi Router for Automotive & Site-based Applications



### Applications:

- In-vehicle WiFi services
- M2M and site-based connectivity
- Fixed line backup over cellular data network
- Digital signage

### Features:

- 2.4GHz WiFi
- Dual Ethernet
- Built-in GPS receiver option
- Dual SIM

### Overview

The Virtual Access GW1000 Series router is a compact and rugged 3G/4G LTE router with WiFi, designed in a lightweight plastic case with optional carrier, for use in vehicles and a wide range of site-based applications.

The GW1000 enables 3G/4G connectivity in vehicles such as buses, taxis and fleet vehicles for applications such as passenger WiFi internet access, telemetry and employee WiFi access to corporate network services.

The product is equally at home in site locations offering primary WAN or 3G/4G LTE failover to fixed line connections. Its small size is ideal for M2M applications such as remote monitoring and control.

The product line offers a new entry point for 3G/4G LTE data applications and supports the following radio access technologies: LTE, HSPA+, HSPA, UMTS, EDGE, GPRS and GSM.

### WiFi

The GW1000 Series router has integrated WiFi support. It is capable of supporting both Access Point mode and Station mode concurrently if required.

### Dual Ethernet Ports

The GW1000 Series router offers two 10/100 Ethernet interfaces. They can be configured as a single interface with Ethernet switching between them or as separate router interfaces.

### Dual SIM

Dual SIM architecture ensures that a backup 3G/4G LTE network can take over should the primary network fail. The router detects a network problem and fails over to a standby SIM/APN.

### Ignition Sensor

In automotive applications, the ignition sense input can detect when the vehicle's ignition has been enabled. This allows the GW1000 to remain powered on after the vehicle has stopped. The time delay between ignition off and power down is configurable.

### GPS Receiver

The GW1000 Series router includes a GPS receiver that can be used for vehicle positioning. The vehicle's coordinates, direction and speed can be reported to a central application tracking server periodically.

### SMS Management

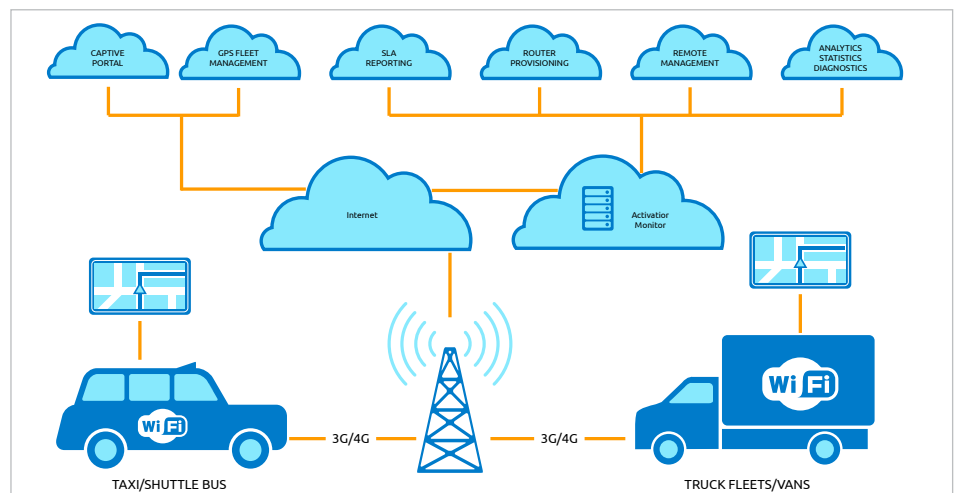
The GW1000 Series router also supports SMS, so if the packet switched side of the network is down, you can send commands to the router to perform diagnostics or even a reload.

### Active Power Conditioning

Vehicle battery voltages often experience transients and there can be substantial voltage dip during engine start up. The GW1000 Series router incorporates an active power conditioner, which is designed to accommodate the voltage dips, surges and transients commonly found in vehicles.

### Centralised Management and Monitoring

The GW1000 Series router benefits from Activator, Virtual Access' centralised configuration management and monitoring system. Activator simplifies and automates deployment, management and support tasks in managed network environments.



## Software Features

### Management

- Automatic configuration using Activator server
- HTTP/HTTPS
- Command Line Interface via Telnet or SSH
- TFTP client download/upload
- SNMP agent
- SMS management support

### Fault Investigation and Reporting

- Event logging
- Syslog support

### Router Features

- IPv4 and IPv6
- DynDNS
- NAT Traversal
- NTP Client
- Packet filtering and firewall
- RIP, OSPF and BGPv4 Dynamic routing protocols
- L2TP and GRE tunnelling
- Virtual Router Redundancy Protocol (VRRP)
- Next Hop Resolution Protocol (NHRP)
- DMVPN

### IPSec

- Manual and automatic key management
- HMAC-MD5-96 and HMAC-SHA-1-96
- AES (256bit), 3DES (168bit) and DES (56bit) with explicit IV

## IKE-related VPN Specification

- Main mode, aggressive mode and quick mode
- Support for ESP and AH
- Authentication using RSA signatures, DSS signatures and pre-shared keys interworking
- Dead Peer Detection (DPD)

## Hardware Features

### WiFi

- 2.4GHz 802.11bgn
- Concurrent Access Point and Station mode
- Internal WiFi antennas

### Antennas

- 2 x 4G/LTE SMA female antenna connectors
- MIMO support in LTE versions
- 1 x GPS SMA female antenna connector with 3v3 Active power feed

### SIM

- 2 SIM card slots
- Lockable SIM cover

### LAN Interfaces

- 2 10/100BASE-T Ethernet ports
- \*The LAN ports can be configured as a single router interface or as separate router interfaces
- Auto detects a regular or crossover cable for easy connection to a switch or hub

## LEDs

- Power indicator
- Ethernet activity
- Active SIM
- WiFi

## Approvals and Certificates

- EN60950 safety approval
- EN55022 and EN55024 EMC
- EN 300 328 V1.9.1

## Power

- 12V DC 0.5A
- Power lead is supplied with 3 connectors for +12V, ignition +12V and 0V
- Optional AC adapter available (100-240V)

## Physical and Environment

- Unit size: 114W 114D 29Hmm
- Unit size with carrier: 120W 120D 32Hmm
- Unit weight: 209g
- Mounting bracket included

## Operating temperature

- Operating temperatures vary, refer to table below.

## GW1000 Mounting Options



Table Top



DIN Rail Mount



Carrier Bracket

## GW1000 Series Models

Model	Ethernet ports	WiFi	3G	CDMA	4G LTE
GW1032	2	✓	✓	•	
GW1042	2	✓	✓	•	✓

• = optional instead of 3G/4G LTE

## RF Band Options

RF Band	2G Bands	3G Bands	4G LTE Bands	GPS	Operating Temp	Order Code
A	850/900/1800/1900	900/2100	-	-	-40°C to 70°C	-RFA
B	850/900/1800/1900	850/900/1900/2100	-	✓	-40°C to 70°C	-RFB
C	850/900/1800/1900	850/900/1900/2100	B1/B2/B3/B5/B7/B8/B20	✓	-30°C to 70°C	-RFC
D	-	-	B3/B7/B20/B31	✓	-20°C to 60°C	-RFD
E	900/1800	900/2100	B1/B3/B7/B8/B20/B38/B40	✓	-30°C to 70°C	-RFE
F	-	CDMA TX 452.500 ~ 457.475 RX 462.000 ~ 467.475	-	-	-20°C to 60°C	-RFF
G	850/900/1800/1900	850/900/2100	B1/B3/B5/B7/B20	✓	-40°C to 70°C	-RFG
H	-	850/1900	B2/B4/B5/B17	✓	-30°C to 70°C	-RFH
J	450	-	-	-	-40°C to 70°C	-RFJ