

RUGGED, RELIABLE MULTI-NETWORK COMMUNICATIONS

The onBoard Mobile Gateway (oMG) is a multi-network, rugged communications platform designed to deliver secure, wireless wide area networking for vehicles. The oMG extends the enterprise network and management to the fleet, ensuring reliable, secure corporate network access for mobile users in the field. The oMG functions as a multi-radio mobile router and broadband access point.

FLEXIBILITY: ADD/REPLACE RADIOS TO CHANGE NETWORKS

The oMG includes a built-in 802.11 b/g Wi-Fi access point that creates a mobile hotspot in and around the vehicle allowing multiple devices to connect, reducing the proliferation of radio modems, antennas and wireless accounts otherwise needed. The oMG allows devices to connect via Bluetooth, as well as through Wi-Fi, USB, Serial and Ethernet.

SECURITY: SECURE SWITCHING BETWEEN WI-FI AND CELLULAR NETWORKS

The oMG can be configured with multiple wireless modems that provide access to a combination of cellular data, 802.11b/g/n Wi-Fi, 4.9 GHz broadband, carrier WiMAX, LTE, and other broadband network services. The oMG's network policy engine enables intelligent switching between networks, based on a variety of operational factors. A patent-pending Cognitive Wireless System automatically senses, assesses and selects the best available network. Wi-Fi links are protected using the latest security standards and an embedded mobile VPN capability (onBoard Connection Manager - oCM) can secure communications for all connected devices and applications across wide area connections.

MANAGEABILITY: MANAGE, MONITOR AND ADMINISTER YOUR FLEET REMOTELY

The oMG includes a built-in GPS receiver and microcomputer, enabling value-added applications such as vehicle tracking, RFID asset tracking, vehicle telemetry, and remote device access. Remote management of the oMG is provided by the onBoard Mobility Manager (oMM), a powerful software suite that provides status monitoring, device management, and application interfaces. A dashboard provides an up-to-date view of the entire fleet, and a comprehensive reporting suite presents data on-demand, or via pre-scheduled reports.



KEY FEATURES

Creates patented mobile hotspot in and around vehicle

Connects devices using Wi-Fi, Bluetooth, Serial, Ethernet or USB

Supports multi-network

Automatically senses and selects best network

Compatible with all wireless broadband networks

Optimized remote monitoring, management and configuration

Integrated security for all connections and devices

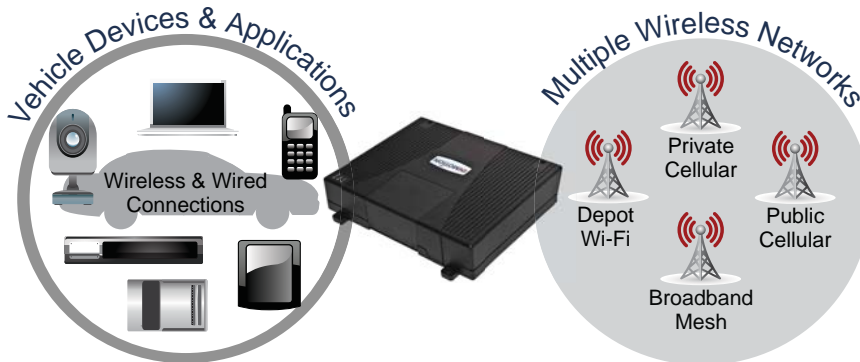
Advanced integrated GPS with multi-cast and WAAS

Network cards are field upgradeable

Supports 3rd party applications

VEHICLE AREA NETWORK

WIDE AREA NETWORKS



onBoard™ Mobile Gateway

RUGGED, RELIABLE MULTI-NETWORK COMMUNICATIONS



BENEFITS

SINGLE PLATFORM FOR ALL COMMUNICATIONS

- Reduces operating and capital costs for infrastructure
- Simplifies management and maintenance of field IT equipment
- Reduces communications costs by consolidating traffic over single/preferred network connections
- Enables organizations to leverage Wi-Fi infrastructure of organization or municipality
- Provides a core platform for upcoming applications and devices

CREATES A MOBILE HOTSPOT

- Connects all wired and wireless devices in and around the vehicle
- Enables quick and easy deployment of new applications
- Reduces distraction of mobile crews enabling them to focus on day to day responsibilities

FUTURE-PROOF

- Supports all IP devices in the vehicle
- Supports current and future wireless wide area networks
- Field upgradeable

REDUNDANCY

- Selects "best available" network using up to 6 modem card slots and seamlessly switches traffic
- Maintains user sessions preventing false connection status

SECURE, RELIABLE

- Acts as a VPN client to secure all connected devices and applications and supports VPN pass-through
- Eliminates the need for VPN software clients for individual devices and applications
- Sends logs and other data to management system

REMOTE MANAGEMENT

- Remote mass configuration
- Over-the-Air (OTA) updates
- Remote troubleshooting
- Log data stored locally and transmitted to the onBoard Mobility Manager server

HOST APPLICATIONS

In Motion Technology applications include:

- GPS vehicle tracking
- Active RFID tags for asset tracking
- Vehicle diagnostic telemetry (OBD II)
- Remote reach-through using Virtual Network Computing (VNC)
- Garmin fleet management interface for navigation

RUGGEDIZED

- Built for in-vehicle use

MOBILE HOTSPOT

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onBoard™ Mobile Gateway

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SPECIFICATIONS

VEHICLE AREA NETWORK (VAN)

Support for all on-board devices - wired and wireless

- IEEE 802.11 b/g (built-in vehicle AP)
- Ethernet: RJ45 x 4 ports
- Ethernet USB
- Serial: PPP, RS232, DB9
- DHCP Server (RFC 2131)
- USB: USB 2.0 x 2 (Serial or Ethernet)
- Bluetooth: DUN (optional external adapter)
- Antenna: SMA (2), TNC (2), RP-SMA (4)
- Rear panel supports custom connector configurations

Compatibility

- Operates with Wi-Fi certified client devices
- Supports all major client operating systems

WIDE AREA NETWORK (WAN)

Wireless Networking

- 6 modem card slots accepts ExpressCard, MiniPCIe, MiniPCI and USB formats
- Integrated compatibility with wireless WAN standards: 1xRTT, EVDO, GPRS, EDGE, UMTS, HSPA, HSPA+, WiMAX, LTE
- IEEE 802.11 a/b/g/n
- IEEE 802.11-based 4.9GHz
- Satellite (via Ethernet)
- Future compatibility with new wireless WAN standards using standard ExpressCard, USB or MiniPCI or MiniPCIe form factors

Transmit voice, video and data through the oMG

QOS

- Applications priority queuing

SECURITY

Secures all data transmitted to and from vehicle without the need for VPN client software on every device

WLAN Security and Authentication

- WEP, WPA, WPA2
- Key management WPA-PSK and WPA-EAP

Firewall

- Port forwarding
- Port blocking

Encryption

- IPSec including LAN to LAN

Authentication and Accounting

- 802.1x/RADIUS authentication

Network Selection

- Multiple WAN connections
- WAN connection policy managed by network priority, availability, GPS location, time-of-day

Protocols Supported

- Transparent support for HTTP, HTTPS, SMTP, POP, IMAP, FTP
- PPP (RFC 2516)

GPS

Track vehicle locations on maps, provides location awareness and mapping to reporting suite

- Embedded 12 channel GPS receiver
- WAAS and Double Precision LLA
- NMEA and TAIP messaging
- Local and remote forwarding via TCP or UDP
- Available to all IP devices on LAN

PHYSICAL

Compact, purpose built for mobile applications

- Weight: 6.5 lbs/2.9 kgs
- Dimensions: Length: 10.8 in/27.4 cm; Width: 8.8 in/22.3 cm; Height: 2.4 in/6.0 cm

POWER

Runs on standard vehicle power or shore power
Power Supply

- Compatible with 12/24 VDC systems; support for under and over-voltage conditions
- Internal DC to DC converter with reverse polarity
- Locking power connector
- AC adapter (optional)

Power Management System

- Auto power-up on ignition sense
- Managed power-down including programmable shut-off delay
- Input voltage monitoring with auto-shutdown at low voltage
- Out-of-range temperature detection and shutdown protection

MANAGEMENT

Manage mobile network, vehicle and network health

- Operational support services for fault, configuration, accounting, performance and security
- Network coverage reporting
- Location-based reporting
- Historical logging
- Remote software updates
- Secure VNC reach-through
- Email alerts for configurable thresholds

ENVIRONMENTAL

Purpose-built for mobile environment

Temperature/Humidity

- Operating Temperature: -20°C to +60°C
- Optional: -30°C to +60°C
- Storage Temperature: -40°C to +80°C
- Operating Humidity: 5-95% relative humidity; non-condensing
- Storage Humidity: 5-95% relative humidity; non-condensing

Platform

- AMD Geode LX processor
- Linux operating system
- 1 GB onboard solid state storage

Ingress Protection

- IP54

Vibration/Shock

- In accordance with SAE J1455

EMI/EMC

- FCC Part 15



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