INMOTION TECHNOLOGY onBoard™ Mobile Gateway for Transit

RUGGED, RELIABLE MULTI-NETWORK COMMUNICATIONS
NEXT GENERATION MOBILE DATA COMMUNICATIONS
FOR PUBLIC TRANSIT FLEETS

The onBoard Mobile Gateway is a rugged communications platform that enables secure, wireless wide area networking for transit fleet operations. It consolidates access to multiple wide-area and garage-area wireless networks for all systems aboard the vehicle, including CAD/AVL, Video Surveillance, Passenger Counting, and Electronic Fare Collection. It also supports new passenger internet access services planned by many agencies to attract new transit users.

The onBoard Mobile Gateway is a purpose-built communications processor that functions as a multi-radio mobile router and broadband access point. As a standards-based mobile router, the Gateway connects computing devices both in and near the transit vehicle. All LAN-connected devices are able to share wide-area network assets, reducing the proliferation of radio modems and antennas otherwise required. Multiple wireless modems configured within the unit 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 Gateway also switches traffic through external IP-aware private radio modems. The unit is field-upgradable to add or change wireless technologies as network services evolve, permitting future network enhancements with no reconfiguration of other on board computers.

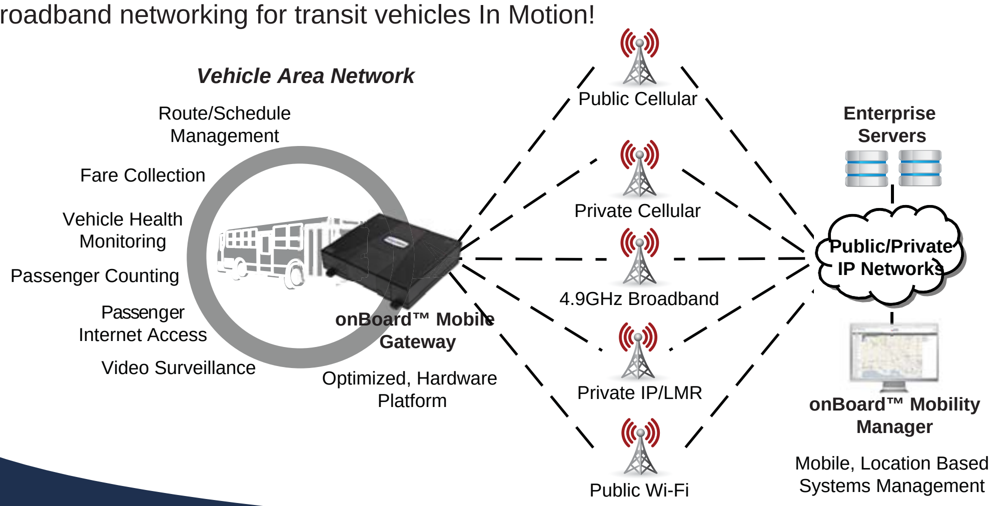
The onBoard Mobile Gateway automatically maintains secure mobile data communications as vehicles roam between wide area wireless networks. Wireless service performance is maximized using active connection management, continuous service quality assessment, and intelligent network selection based on configurable switching policies. Wi-Fi links are protected using the latest security standards and an embedded VPN capability can secure communications across wide area connections.

The Gateway can be remotely managed by the onBoard Mobility Manager, a powerful software application for centralized status monitoring and device management. The unit also incorporates a general purpose microcomputer and GPS receiver enabling other value-added applications for fleet management and maintenance.

Leveraging advanced IP-networking and wireless technologies for more effective mobile communications, the onBoard Mobile Gateway provides secure, reliable and cost effective broadband networking for transit vehicles In Motion!

KEY FEATURES

- Rugged in-vehicle hardware
- Wi-Fi mobile access point
- Wired and wireless Vehicle Area Network
- Automatic roaming between multiple wide-area wireless networks
- Field upgradable wireless modems
- Integrated 4-port Ethernet switch
- Embedded GPS receiver



onBoard™ Mobile Gateway for Transit

RUGGED, RELIABLE MULTI-NETWORK COMMUNICATIONS

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

WAN WIRELESS NETWORKING ACCESSIBLE NETWORKS
- Integrated compatibility with current wireless WAN standards including 1xRTT, EVDO, GPRS, GPRS EDGE, UMTS, HSPA, HSPA+, WiMAX and LTE
- IEEE 802.11 a/b/g/n
- IEEE 802.11-based 4.9GHz
- Satellite (via Ethernet)
- ExpressCard, MiniPCIe, MiniPCI and USB modem formats

ENCRYPTION
- IPSec including LAN to LAN

NETWORK SELECTION
- Multiple WAN connections
- WAN connection policy managed by network priority, availability, GPS location, time-of-day
- Application-based QoS

LAN NETWORKING MULTIPLE CLIENT NETWORKING OPTIONS
- IEEE 802.11 b/g (built-in vehicle AP)
- Ethernet - 4 port switch
- Serial - PPP
- DHCP Server (RFC 2131)
- Bluetooth-DUN (optional external adapter)

WLAN SECURITY AND AUTHENTICATION
- WEP, WPA, WPA2
- Key management WPA-PSK and WPA-EAP
- 802.1x/RADIUS authentication

FIREWALL
- Port forwarding
- Port blocking

PHYSICAL INTERFACES
- Ethernet – RJ45 x 4 ports
- USB – USB 2.0 x 2 (serial or Ethernet)
- Serial – RS232, DB9
- IEEE 802.11 b/g
- Antenna: SMA (1), TNC (2), RP-SMA (5, expandable)
- Configurable rear panels supports custom connector configurations

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

GLOBAL POSITIONING SYSTEM (GPS)
- 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

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

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

DIMENSIONS
- Width: 10.8 in/27.4 cm
- Depth: 9.1 in/23.2 cm
- Height: 2.3 in/5.8 cm
- Weight: 6.5 lbs/2.9 kg

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

MANAGEMENT
- 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 SPECIFICATIONS TEMPERATURE/HUMIDITY
- Operating Temperature: -20ºC - +60ºC Optional: -30ºC - +60ºC
- Storage Temperature: -40ºC - +80ºC
- Operating Humidity: 5-95% relative humidity; non-condensing
- Storage Humidity: 5-95% relative humidity; non-condensing

INGRESS PROTECTION
- IP54

VIBRATION/SHOCK
- In accordance with SAE J1455

EMI/EMC
- FCC Part 15

MOBILE HOTSPOT

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Any Device ▪ Any Application ▪ Any Network