



**Billion M500**     
LTE Industrial / in-Vehicle Multi-Carrier Router



## CASE STUDY

# Billion to Provide Free Passenger Wi-Fi Access to Public Transportation

Customer  
Bus Operator

Challenge  
In-Vehicle Wi-Fi

Solution  
Billion M500 In-Vehicle  
Networking Solution \*  
400 pc

Market  
Smart Bus, Smart City

## Executive Summary

An information & communication system integrator was approached by bus operator with the need of providing free Wi-Fi Hot Spot for bus passengers. By implementing Billion Industrial/In-Vehicle Router – M500, bus operator not only improved the user experience but optimized tour bus planning by analyzing passengers' internet usage behavior.

## Challenges

To improve tourists' travel experience, bus operator was looking for a total solution that offers stable Wi-Fi access for passengers of 400 tour buses. Bus operator also required the Wi-Fi to be automatically turned off while the bus was traveling to certain areas, such as bus station, to limit the Wi-Fi for on-board passengers only.



**M500**

LTE Industrial/In-Vehicle Multi-Carrier Router



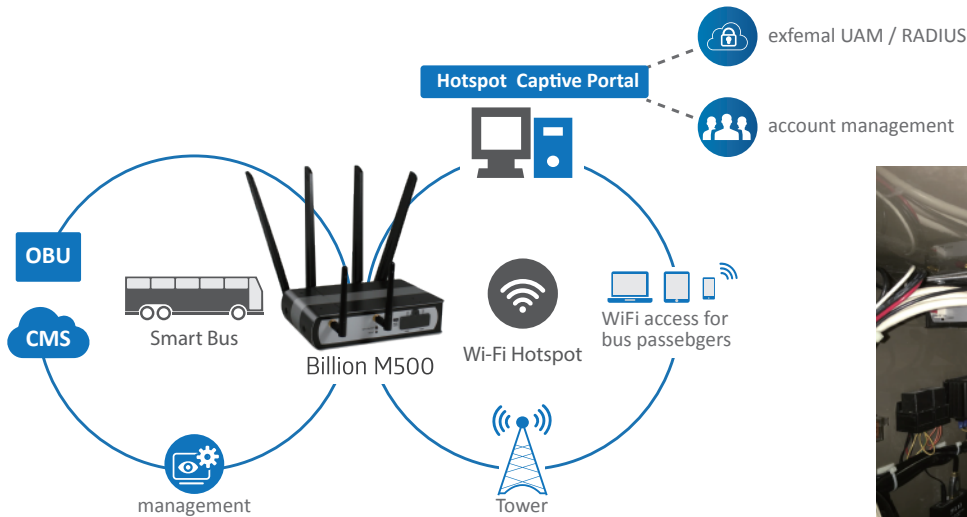
## Key Features

- Dual LTE Broadband Connectivity
- Multi-WAN Interfaces: Dual Radio and EWAN with Load Balance
- Withstand heat, humidity and protect form shock, vibration, etc.
- Support Ignition Sensing
- Embedded GPS Tracking
- Billion CMS Integration

### How Billion Solution Helped

The Billion M500 industrial & in-vehicle multi-carrier router features dual-SIM, multi-radios for seamless failover between carriers that can support a high number of connected users for internet access, streaming videos, uploading/downloading files, and other applications. Supporting 11N wireless access with a captive portal, M500 provides multiple authentication methods ensuring secure access to network assets for sanctioned devices and users accounts.

Meanwhile, M500 was successfully integrated with OBU(Onboard Unit) provided by the system integrator, enabling automatic Wi-Fi deactivation while the buses traveling to certain areas; M500 also supported captive portal configuration with RADIUS & UAM servers that can capture users' information for future bus planning and sales & marketing campaign. In addition to M500, the system integrator utilized Billion CMS as a centralized management platform that enables real-time device monitoring, troubleshooting, and maintenance to ensure the quality of network service. The system also delivers comprehensive analysis and record reports to further enhance router management.



### Conclusion

Through the utilization of Billion M500, tour bus passengers can check their email, browse social media, and access other online contents by connecting to onboard Wi-Fi, and bus operator can further improve buses service by collecting users' data via a captive portal. With Billion CMS, managers can easily monitor and manage M500 through a centralized platform.

### CMS (Central Management System)

CMS is designed to remotely control and manage Billion 4G LTE and VDSL/ADSL business routers. It can perform remote firmware update, device reboot, load default setting, CPE configuration backup and restore based on schedule and generate alarm to inform any abnormal event, enabling users to minimize deployment, lower supporting service expenses and maximize operational efficiency.

