

CASE STUDY

Proscend Compact Industrial Cellular Router M330-W for Enhancing Smart Bus Reliable In-Vehicle Network Connectivity Experience.

Background

Smart buses play an important role that provide intelligent public transport services to satisfy the increasing demands of urban mobility for rapidly growing smart cities. Smart buses not only offer passengers a convenient traveling and efficient commuting, but also help bus operators to enhance fleet management, facilitate daily operations, and ensure safety.

Application Requirements

The critical challenge is how to enable the stability of the seamless networks in moving vehicles. Proscend's Compact Industrial Cellular Router M330-W has been adapted into smart buses in urban cities to ensure stable wireless technology and reliable network connections for flexibility, stability, and reliability in communication.

Application Features

- **Flexible Connection Communications**

Built in 4G LTE, WiFi, GPS/GNSS connectivity as well as equipped with Ethernet, Digital I/O, RS-232, Proscend's Compact Industrial Cellular Router M330-W allows bus operators to make smart buses offer value-added applications including WiFi hotspot, video streaming, infotainment services, ticket mobile payment, vehicle tracking data, video surveillance and enhance passengers' safety and comfort experience. The M330-W is competitive price-to-performance ratios that can overcome distance and coverage constraints while reducing interference and signal leakage.

- **Durable Industrial-Grade Design**

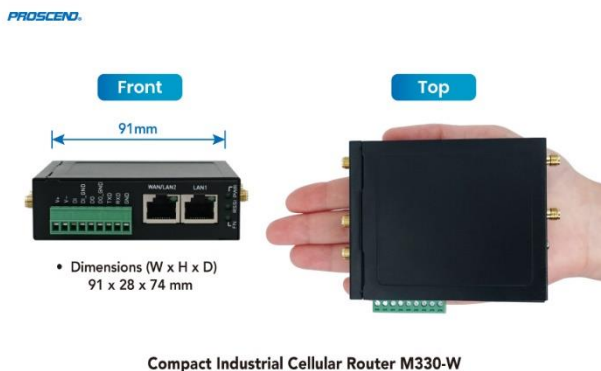
Proscend's Compact Industrial Cellular Router M330-W is designed to ensure reliable performance of mission-critical vehicle applications in the temperature -30°C to 70°C and support power supply from 8V to 48V for a wide range of harsh environments. With vibration-resistant design, Industrial Cellular Router M330-W offers anti-shock and anti-vibration protection to enable the stable wireless signal while bus is driving. Because of rugged compact appearance and industrial-grade components, the M330-W is the perfect

choice to install for space-constrained under fast moving conditions of in-vehicle applications.

- **Secure Remote Management Functions**

With Quality of Service (QoS) management function, Proscend's Compact Industrial Cellular Router M330-W supports advanced routing of the signaling and traffic load for real-time multimedia transmissions or sharing onboard contents. Featuring VPN tunnels, the M330-W is capable of providing the secure network communication between the bus and the control center to ensure the security of data transmission. The M330-W is suitable to be integrated network surveillance cameras and other related devices for monitoring and collecting live video data such as driving behavior and passenger flows to make bus operators utilize informative insights for boosting operation improvement.

Product Used



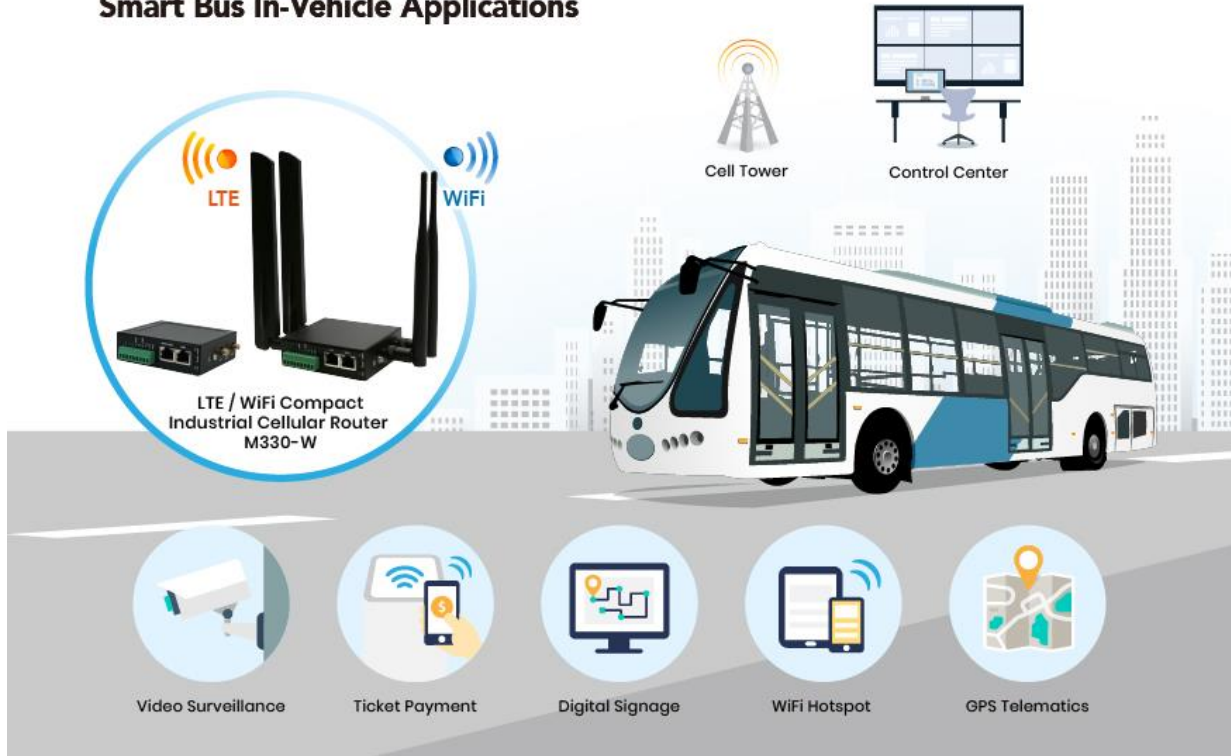
Compact Industrial Cellular Router M330-W5

- 1 x 10/100 Base-TX RJ45 LAN port; 1x 10/100 Base-TX RJ45 WAN port.
- Multi-band support for FDD LTE / TDD LTE / WCDMA / GSM / LTE Cat4.
- IEEE 802.11b/g/n Wi-Fi standards compatibility.
- Built-in micro SIM connector, RS-232 serial port, and DI/DO interfaces.
- Ultra-compact and lightweight metal design with DIN-Rail installation.
- LED indicators for connection and data transmission status.
- Industrial rated from -30 to +70°C for use in harsh environments.
- Flexible power supply range of 8-48 VDC.
- IPv4 and IPv6 dual stack management.
- VPN tunnels, Firewall and cryptographic protocols for cybersecurity.
- Support serial communication protocols for M2M connectivity.

Application Topology

PROSCEND®

Smart Bus In-Vehicle Applications



Proscend Compact Industrial Cellular Router M330-W Enables Smart Bus Application.