

## SOLUTION NOTE

# PUBLIC TRANSPORT VEHICLES: BUSES

### Wireless Connectivity for Smart Mobility

### Connected Buses for Smarter and Safer Cities

#### The Challenges

Video surveillance onboard buses have become the common practice to improve the **Safety and Security** of drivers and passengers. These systems allow for quick evaluation and swift response to situations at hand. Now many bus operators and transport authorities collaborate with smart cities to expand their **city-wide surveillance network** by equipping buses, trams, and other light-rail systems with externally facing cameras to improve public safety.

Most buses also record critical performance data such as engine health and status to increase the uptime by creating individual service and maintenance plans. Other data such as fuel consumption, speed profiles and emission are recorded to promote eco-driving, support emission control strategies, and improve individual driving behaviour.

However, in the **Data Traffic Network**, the problem of efficiently offloading the data from the bus still persist. With video being recorded onboard Network Video Recorders (DVR/NVR), and motor data stored in IoT devices or engine computers, the data still sits inside the bus.



#### Operation

Fleet Management  
Vehicle Maintenance

#### Safety and Security

Driver Safety and Security  
Passenger Safety  
Video Analytics  
First Responders  
Safe City Investigations

#### Organization

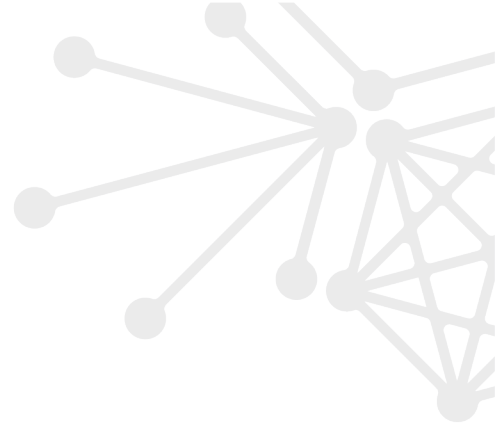
Fuel Consumption  
Speed Profile  
Driving Behaviour  
Eco-driving

#### Mobile Data Offloading Connectivity

When the bus enters the depot, much effort is spent on streamlining shift change, cleaning, refuelling, and various types of maintenance work. Despite the attention to the physical upkeeping of the bus condition, the practices for internal optimization, such as data offloading, are often neglected.

Poorly designed systems for data offloading often require the bus driver or other personnel to wait onboard the vehicle for up to an hour for the surveillance video and other critical data to be fully transmitted to the central video and fleet management systems. These practices are impractically inefficient, time-consuming, and error-prone.

To meet these challenges, we offer the most reliable, flexible, and cost-efficient solution for data-offloading from connected buses – the **Wireless Mobility Solution** from **Anywhere Networks**.



## Anywhere Wireless Mobility for **Connected Buses**

With **Anywhere Networks'** Smart Mobility Solution, buses automatically connect wirelessly to the central IT infrastructure upon arrival to the depot within a fraction of a second and without any manual interaction. Our **Wireless Mesh Network** enables effortless data retrieval from the entire fleet simultaneously, for immediate access to video surveillance recordings, fleet management and emission performance indicators, Eco-driving metrics, and more.

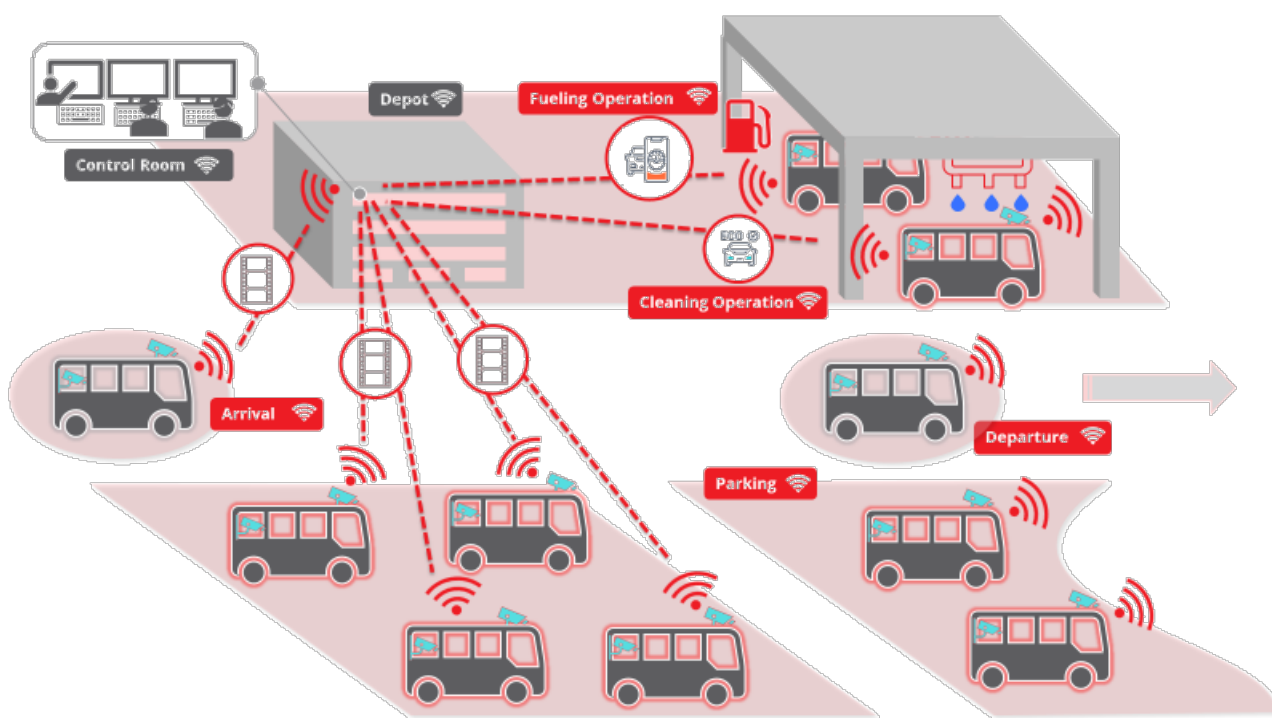
This wireless connectivity is established and maintained throughout the bus journey in the depot, whether parked, being cleaned or refuelled, or driving. With all buses connected to this unified wireless network within the depot, various teams can collaborate to prepare for the buses' next departure in the most time-efficient manner.

**Anywhere Networks' Wireless Mobility** is specifically designed for buses, trams, and other light-rail systems to enable hundreds of vehicles to simultaneously complete huge amounts of data offloading or onloading. It is crafted around the specific demands for enterprise-level robustness, high and rapid data connectivity and throughput, and flexibility for mobile vehicles. It is designed with strongest end-to-end encryption and for bus operators and authorities to have full ownership of the data transmission without tampering the cybersecurity unlike the vulnerability when data is shared over local telco companies' 4G or 5G networks.

With a secure, flexible, and efficient wireless bus connectivity, better fleet maintenance and management decisions and strategies can be made, as well as a safer and more secure environment for drivers, passengers, and the local community.

**Join us in an era of Wireless Mobility for a Smarter, Safer, and Greener World!**

## The **Anywhere** Connectivity Solution



High-Capacity Throughput • Security • Automatic Load Balancing • Flexible Topology Design

Redundant Smart Routing • Rapid and Easy Deployment