Case Study: Smart Bus

Background

As growing urban population and increasing citizen demand for better living quality, smart city has become the global trend, which combines telecommunication technologies and IoT(Internet of Things) to manage a cities' asset. One of the essential ingredients for urban development is public transportation, and smart bus, which provides customers with a variety of value-added features including automated stop announcement, vehicle monitoring, and GPS location services, has been increasingly adopted by cities around the world to ensure passengers' safety and comfort.

Challenge

The fatal terror attack has risen dramatically over the past few years that homeland security has become the most critical issue worldwide. Havaş Shuttle, a Turkey-based bus company under the ownership of Turkish Airlines Inc, participated in a smart cities solution project with a Turkish Information and Communication company to track the real-time bus passengers and drivers' condition with 6 IP-Cameras installed in shuttle buses.

Through smart bus monitoring App developed by the information & Communication company, Havaş Shuttle can check the real-time status of each bus effortlessly. To ensure the quality of live video streaming, Havaş Shuttle was looking for a 4G LTE solution which can provide reliable and consistent internet connectivity in moving vehicles.
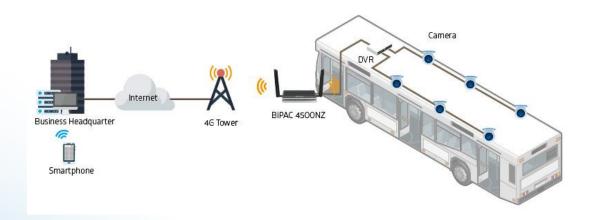
Our Solution

A seamless video streaming needs high-bandwidth to support simultaneous data transmission. Billion provides BiPAC 4500NZ, the 4G LTE SIM Embedded Wireless-N VPN Auto Failover and Firewall Router, to be installed in each shuttle bus. Integrating with the latest

4G/LTE technology, BiPAC 4500NZ enables a reliable and robust data transmission which transfers the real-time video back to Havaş Shuttle central console without interruption.Therefore, even though the video was damaged or destroyed by severe accident, the key console of the bus company can still have the backup file as the basis for future investigation.

Supporting robust VPN including IPSec/PPTP/L2TP/GRE, BiPAC 4500NZ allows users to establish encryption tunnels that data will be protected while being transmitted between shuttle buses and control center over the public internet.

BiPAC 4500NZ
4G LTE SIM Embedded Wireless-N VPN Auto

Result

Through the utilization BiPAC 4500NZ, the control center of bus company can monitor the onboard customers by accessing the seamless and high-quality live camera footage to respond to the emergency situation in seconds." Billion BiPAC 4500NZ provides a reliable and secure internet solution which helps us effortlessly track the real-time status of shuttle buses to make sure the safety of each pedestrian and improve the bus experiences", said by the Product Manager of Havaş Shuttle.