



Overview

Karachi Green Line Bus Rapid Transit (BRT) System is a public mass transportation service system initiated by the Government of Pakistan through SIDCL to alleviate the traffic congestion problems in the country's largest city and to improve the quality of life for daily commuters.

With safety and security in mind, SIDCL and the Government of Pakistan have been working on enhancing and improving the services of BRT. Since 2021, SIDCL started working with Wavetec and Altai to implement Super WiFi network at bus stations and along the whole bus route for live video surveillance.

The first phase has already been completed in late 2021 which involves a dedicated track of 20.7km with 23 stations being served by 80 buses. Altai's APs have been installed on poles at and between stations where the stations are separated between 0.5 – 1.0km. The wireless network is required to support six 4~5MP cameras simultaneously on every bus.

Customer Name:

Sindh Infrastructure Development Company Private Limited (SIDCL),
Government of Pakistan
Implemented by Wavetec Private Limited

Deployment Location:

Karachi Green Line Bus Rapid Transit System, Karachi, Pakistan

Application:

Private wireless network

Products used:

A3-Ei, VX200

Result:

Altai's wireless network has been deployed for video transmission along a track of 20.7km with 23 stations and 80 buses.

The Challenge

- Wireless network covering the whole bus route as well as all the stations
- Stable RF with bus mobility moving high speed along the route
- Maintaining low latency and high throughput wireless link along the route
- Limited site for AP installation along the route with bends and flyovers
- Different station layouts (split type, centre type and underground)



The Solution

Altai's A3-Ei high capacity dual band AP are installed on lamp posts along the route and in the stations, each site has been deployed with two sets of A3-Ei for opposite directions. The same principle has been applied at each bus station for coverage enhancement. In order to meet the stringent seamless handover requirement for video transmission, Altai's unique Always Connected solution has been proposed by using one VX200 dual band CPE per bus to ensure uninterrupted video feed. AltaiGate 200 is used in the OCC as WLAN controller for monitoring and managing all Altai devices.



A3-Ei



VX200

About Altai

Altai Technologies is a leading supplier of carrier-grade Wi-Fi products and technologies with a distribution network reaching 100 countries. Altai Super WiFi is the leading solution for vertical industrial markets, covering over 200 container ports, manufacturing plants and warehouses globally.

The Altai Super WiFi Solution includes a complete portfolio of indoor and outdoor products for carriers, WISPs, and enterprises to support a wide range of applications such as mobile data off load, public access, WLAN access, and backhaul.

Utilizing patented smart antenna technology, as well as a cloud-based management system called AltaiCare, the Altai Super WiFi Solution is designed from the ground up to deliver Wi-Fi networks that have unprecedented performance, reliability, scalability, and manageability.

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