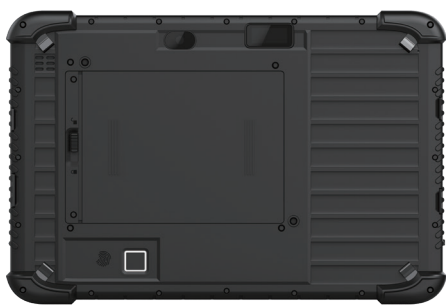


EM-Q16 rugged tablet achieves one-stop construction of smart bus



EM-Q16
Rugged Tablet PC

Challenge

In recent years, the demand for public transportation in a city in central China has been growing continuously, and the citizens' requirements for service quality have also upgraded, so the construction of urban public transportation is facing a certain pressure. In the past traditional mode of public transport, people had the anxiety of waiting for buses, and there was an imbalance in time and space between bus supply and demand. How improve transportation capacity according to data such as traffic conditions and real-time bus arrival is a key problem, which requires the introduction of highly intelligent and strong mobile terminals to solve.

Solution

With excellent stability and interactivity, EM-Q16 rugged tablet PC can adapt to the changing environment and bumpy road conditions faced by buses during operation, and becomes a mobile intelligent terminal for smart bus construction. Through the coordination of GPS precise satellite positioning system and stable 4G mobile network signals, the information barrier and spatial distance between passengers and buses are broken. And the unified adaptation of the Android system is used to build an integrated smart bus model through the dynamic interaction of information with the cloud platform.

Benefits

EM-Q16 rugged tablet PC can be firmly installed on the bus through a vehicle mount. Its excellent IP65-grade performance of waterproof, dustproof, and shockproof can protect it from bumps and falls, greatly assist the realization of smart buses, and reduce equipment maintenance costs. After equipping some buses in the city with EM-Q16 rugged tablet PCs, the sharing coverage of urban traffic data is formed for scheduling, which alleviates urban traffic congestion and improves the refined service level of bus travel and passenger experience.

Challenge

Bus is a regular means of urban transportation, and it is also one of the main ways of daily travel. Vigorously developing intelligent public transportation is the direction of modern smart city development, and it is also an effective measure for urban transportation to achieve high-quality development. According to statistics, in the past 10 years since 2013, the number of urban buses in the country has shown a rising trend, and the passenger volume is also growing. In the face of the imbalance between the growing passenger demand and the existing bus supply, traffic congestion, passenger anxiety about waiting for the bus, and other problems, the intelligent bus construction of the city is urgent.

The client serves the public transport operation of a city in central China. By the end of December 2022, the total number of buses in the city is 6,717, and there are 390 bus lines, 222 million kilometers of total operating mileage, and 335 million of passenger volume throughout the year. At the same time that the construction of urban public transport continues to increase, the client also focuses on the construction of overall intelligence, through the introduction of mobile intelligent terminals to optimize bus operation and passenger travel planning.

However, the consumer mobile tablets on the market can be used as a tool for collecting and displaying data, but due to their poor performance of waterproof, dust-proof, and shockproof, equipment failure often occurs after collision, resulting in data loss and work interruption. The brightness of the consumer tablet display also fails to meet the needs of strong sunlight, which makes it not easy for drivers to check the road conditions while driving. And the long driving work also has high requirements for the device endurance. Consumer tablets do not support battery replacement, so the charger needs to be connected to replenish the power when the power is low. All the above inconveniences will have an impact on the construction of the smart bus. For this reason, the client needs to introduce a rugged tablet with both safety and stability performance and excellent operation efficiency as the equipment support of the smart bus.



Solution

According to the actual use scenario and needs, the client finally selected EM-Q16, a rugged tablet PC of Emdoor Information, as the smart bus solution after an in-depth comparison of rugged tablets on the market, and equipped buses with EM-Q16. The EM-Q16 is a rugged tablet PC that offers excellent performance, durability, battery life, data transmission, and functionality expansion.

Solution of EM-Q16

EM-Q16 rugged tablet PC as a smart bus intelligent display terminal, can be firmly installed on the bus through a vehicle mount. EM-Q16 comes with rich interfaces and network ports, which are uniformly adapted by the Android 10 system, and integrates intelligent travel scheduling solutions with buses and bus stops. Through its built-in extensive coverage and stable 4G, dual-band WiFi, Bluetooth wireless mobile network, with cooperation platform of local bus groups or traffic information supervision departments, or service providers GPS positioning data to achieve data interaction and information sharing. EM-Q16's 10.1-inch high-lightness screen displays traffic light changes, current stops, and arrival terminals, and passenger boarding and unloading information. With EM-Q16's high-precision multi-satellite positioning system, the traffic status and vehicle position of the entire bus route can be displayed in real time. Moreover, through the intelligent bus stop perception device, it can grasp the passenger flow information of the station and accurately learn the passenger flow dynamics of each station in real time. Through the platform data analysis, it can effectively support the dynamic scheduling of the line and the optimization of the global line network, and achieve the accurate matching of "station-passenger", "station-bus" and "passenger-bus".

Benefits

Real-time collaboration, intelligent scheduling

Through accurate GPS and Beidou satellite positioning and navigation functions and network connection, EM-Q16 rugged tablet PC receives and displays real-time location and road conditions of buses, realizes real-time collaborative interaction between buses and traffic elements, facilitates

off-peak scheduling, and alleviates urban congestion and the contradiction between supply and demand between buses and passengers.

Improve efficiency and travel safety

The EM-Q16 rugged tablet PC offers excellent stability, compatibility, and extensibility to handle unexpected drops and bumps. With the 700cd/m² high-lightness screen, it is visible in the sunlight and convenient for drivers to view road information while driving. Through the adaptation to the cloud platform, an intelligent bus scheduling system, to achieve auxiliary driving functions, optimize scheduling, improve bus operation efficiency, and reduce the incidence of traffic safety accidents by up to 25%.

Refined service, experience upgrades

With the EM-Q16 introduction and application of the cloud platform, the "bus-station-passenger" data is integrated. The bus station integrates the visual system, electronic stop board, and other functional modules, which can provide passengers with comprehensive information such as the number of passengers waiting on the surrounding platform, bus routes, accurate arrival time, and the congestion of the carriage, to dynamically guide the public to travel, improve the level of refined bus travel service, optimize and passenger experience.

