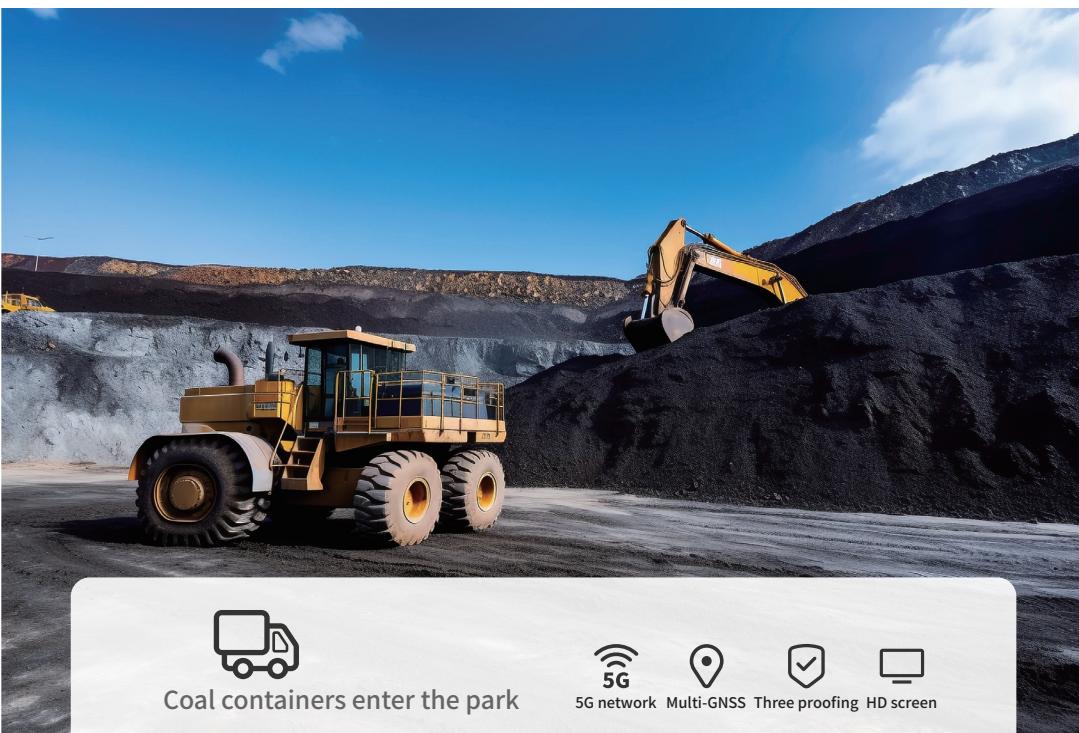


# Building Intelligent Logistics at Border Crossings with the EM-Q115M Rugged Tablet PC



Coal containers enter the park



5G network



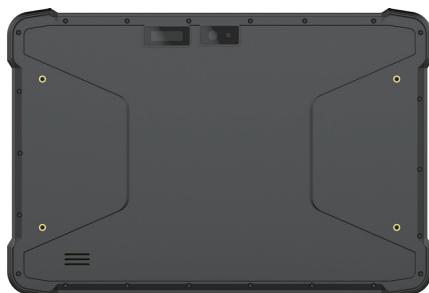
Multi-GNSS



Three proofing



HD screen



## Challenge

With the continuous expansion of international trade, the volume of goods at border crossings is rapidly increasing. The substantial increase in goods flow, however, can lead to chaotic use of transportation vehicles, inaccurate recording of transportation data, a lack of unified dispatching, uneven allocation of resources, and a significant impact on transportation efficiency. To enhance the circulation speed of border goods, it is necessary to introduce robust and durable intelligent terminal devices to assist in the accurate recording of cargo data and vehicle dispatch operations.

## Solution

The EM-Q115M rugged tablet PC is designed to withstand the extreme temperature variations and harsh conditions encountered in border crossing operations, which showcases its outstanding ruggedness features. Mounted on cargo vehicles through a vehicle bracket, it satisfies the need for fixed in-vehicle display. Moreover, drivers can detach the tablet for capturing photos and recording situations. With the built-in Android 11 operating system compatible with clients' order management software, it automatically records the vehicles in operation and those available, enabling unified dispatch based on truck type and quantity to achieve maximum utilization and empower the creation of a smart border crossing.

## Benefits

The EM-Q115M rugged tablet PC brings a more intelligent, efficient, and unified logistics solution to border crossings. Its 10.1-inch 10-point capacitive HD touch panel allows drivers to have a clear view of information outdoors and smoothly complete tasks such as receiving, sending instructions, data uploads, and real-time monitoring of cargo data. With built-in various communication modules, it interacts with the backend order management software through a widely covered and stable network. The operation speed of 5G and the octa-core processor meets the real-time transmission and retrieval needs of cargo and transportation vehicle data. It assists workers in efficient management, significantly improving the efficiency of border cargo transportation, and remarkably increasing freight volume.

**EM-Q115M**  
Rugged Tablet PC

# Challenge

In the era of globalization, border crossings stand as crucial hubs of international trade, facilitating the flow of goods between different countries and regions. However, with the increasing complexity of logistics networks and the expansion of trade volumes, border crossing logistics face unprecedented challenges. The rapid growth of international trade necessitates border crossings to adopt more efficient and intelligent logistics systems to cope with the growing volume of goods. Ensuring smooth transportation of goods requires enhanced vehicle scheduling and information tracking, which is a critical problem that border crossing logistics urgently need to address.

The client runs a logistics park located in Inner Mongolia, with borders connecting Russia and Mongolia, serving as a key frontier for the Belt and Road Initiative. It primarily handles the import and export of coal, with a cumulative freight volume reaching 34.9757 million tons in 2023. Before using Emdoor Information products, the logistics park faced challenges with the lack of a positioning system for freight vehicles. This hindered staff from conducting rational and unified scheduling based on vehicle location and usage, leading to operational chaos and uneven distribution of vehicle resources. Additionally, the absence of intelligent devices on freight vehicles made it impossible to assess drivers' daily workloads or verify the outcomes of transportation tasks. Despite the increasing freight volume, the park couldn't access real-time coal transportation data to monitor the coal storage status, resulting in a lack of accurate data support for management and scheduling decisions.



Additionally, the operational environment at the border crossings in Inner Mongolia is often characterized by large temperature fluctuations, strong winds, and sandstorms. Conventional consumer-grade smart terminals typically lack excellent ruggedness and outdoor adaptability, which can increase operational costs. To address these challenges, the client requires rugged and durable smart terminals to be installed on freight vehicles in the logistics park, to enable precise positioning, intelligent scheduling, and data statistics despite the harsh environmental conditions.

# Solution

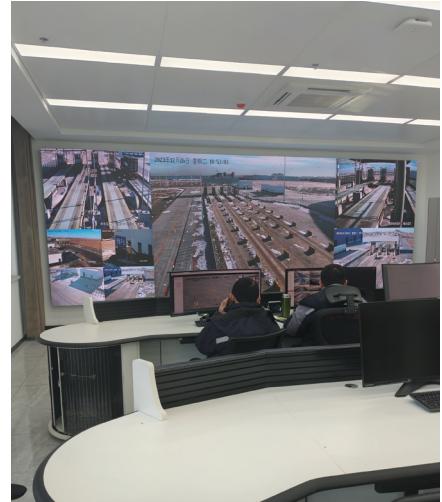
The EM-Q115M is a high-performance industrial-grade tablet PC. With its outstanding reliability and computing power, it stands out among numerous rugged terminal manufacturers, becoming the intelligent scheduling solution for the client's border crossing logistics.

## Solution of EM-Q115M

The EM-Q115M maintains high efficiency in the extreme hot, cold, windy, and dusty border areas of Inner Mongolia, unaffected by external weather conditions or interruptions from bumps. In addition to its ability to withstand pressure in extreme environments, it also meets compatibility requirements with port operation systems and ensures long-lasting battery life for 24/7 continuous operation.

The client has installed order management software on the EM-Q115M tablet, securely deploying it on various types of vehicles within the logistics park, including forklifts, loaders, and cranes. Even when traversing rough terrain and experiencing vibrations or impacts, the EM-Q115M tablet remains unaffected. Its high-definition 10-point capacitive touch panel provides clear visibility of all

necessary information to drivers even in bright outdoor conditions. When needed, drivers can easily remove the tablet to take photos and record cargo or transportation issues. The tablet is equipped with a built-in multi-satellite positioning system, which detects and reports the precise location and movement trajectory of vehicles in real-time. Upon the entry of coal containers into the park, the system automatically counts the operational and idle vehicles, and dispatches orders to corresponding vehicle types based on the type and quantity of inbound trucks, facilitating unified vehicle scheduling. Simultaneously, the EM-Q115M tablet records drivers' job acceptance and performance, enabling the assessment of their daily workload and performance verification. Upon successful order allocation, the tablet's stable multi-network connectivity uploads, retrieves, and displays daily coal transportation data in real-time, enabling operators and managers to make informed decisions regarding coal storage status and scheduling.



# Benefits

## Reliability against risk

The EM-Q115M rugged tablet has proven its resilience through MIL-STD-810G, IP65-grade waterproof, dustproof protection, and 1.22-meter anti-drop certifications. It remains stable and efficient even in extreme temperatures ranging from -20 ° C to 60 ° C, effectively withstanding the risks inherent in the outdoor environment of Inner Mongolia, including impacts and falls. This reduces the risk of downtime and equipment wear and tear, thus enhancing the logistics and management standards at the Inner Mongolia border port.

## Unified visual scheduling

Utilizing a multi-satellite positioning navigation system including GPS, BeiDou, GLONASS, Galileo, NavIC, and IRNSS, in conjunction with the client's software, the high-definition screen of the EM-Q115M accurately displays vehicle positions and logistics trajectories, which facilitates managers in effectively arranging vehicles, maximizing vehicle resources, increasing cargo capacity, and providing clear instructions and navigation positions for drivers on board. Visualizing the process reduces the likelihood of human errors with high transparency, ensuring orderly operations at the port.

## Impressive performance, high integration

In addition to its outstanding reliability, the performance of the EM-Q115M has greatly satisfied the client. Its octa-core processor delivers powerful performance, combined with the user-friendly experience and compatibility of the Android 11 operating system. Along with its multiple interfaces for expansion, the tablet integrates a full-process logistics solution from order allocation to completion of transportation at the port. Furthermore, the EM-Q115M supports dual-band WiFi, 4G/5G wireless networks, and Bluetooth 5.1, covering all corners of the logistics park, providing faster processing and data upload speeds, and accelerating the intelligence of logistics at the Inner Mongolia border port.

