

# EM-T11X Rugged Tablet PC Becomes a Solid Backing for Railway Safety



## Challenge

With the rapid development of railway transportation and to ensure the safety of railway operations, governments of various countries need to conduct periodic inspection of railway lines to check the hidden dangers, including track environment inspections and infrastructure maintenance. The pressure on operation safety and equipment maintenance increases day by day. However, the railway lines are widely distributed, scattered, and complex, and manual inspection has problems such as slow speed, low work efficiency, and information delay. Therefore, the support of intelligent mobile terminals is urgently needed.

## Solution

EM-T11X rugged tablet PC can adapt to the complex environments, and the Android 12 operating system is unified with the customer's self-developed software, greatly improving the security. Through its wireless communication module and reliable GPS positioning to achieve the collection and sharing of railway information data, railway staff can view the data at any time from its HD and HB screen, accurately locate which sections of the road need to be maintained, which has been completed, and make accurate judgment decisions in time to ensure the normal operation of the railway.

## Benefits

The introduction of the EM-T11X rugged tablet PC supports the staff's daily railway inspection and equipment maintenance work. With its functions of data collection, real-time sharing, and accurate positioning, it provides timely and reliable decision reference data, which greatly improves the efficiency of railway inspection and maintenance. The EM-T11X rugged tablet PC's high-brightness screen ensures that the staff can still clearly look at the information in the outdoor strong light, and its strong performance is not affected by the climate and terrain, so there is no need to worry about being bumped or rained during inspection, ensuring the normal progress of the task.

**EM-T11X**  
Rugged Tablet PC

# Challenge

For all countries, railway construction is strategic, leading, and critical. The premise of railway development is safe transportation. So it is very important to realize efficient inspection of the railway operating environment, and identify and eliminate risks and hidden dangers in advance.

The client is a Brazilian company that integrates port, railway, and terminal logistics solutions to transport goods such as steel, minerals, and agricultural products, including railway inspection and maintenance of railway facilities to ensure the safe transport of goods. At present, the total length of Brazil's railway network is about 30,374 kilometers, which passes through complex environmental and climatic conditions, including rugged mountain roads and sections covered by various industrial and civil buildings, increasing the workload and the difficulty of inspection and equipment maintenance, and brings certain safety risks to the staff as well. In the face of increasing and complicated inspection and maintenance work, the traditional manual inspection and paper-and-pencil recording can no longer cope with it, and problems such as low efficiency and inability to communicate and share information in real time continue to plague the task of railway safety maintenance. In case of emergencies or failures, the inability to contact and communicate in the first place will limit personnel scheduling and command, and it is difficult to ensure railway safety, even the safety of the personnel.

To reduce workload and work difficulty, the client needs to introduce reliable intelligent mobile terminals to achieve accurate positioning, intelligent scheduling, and real-time communication. However, due to climate and environmental restrictions, consumer tablets do not have excellent performance in

waterproof and dust-proof and outdoor adaptability, and are very prone to failure after encountering water and bumps, resulting in data loss and equipment loss. Therefore, the client is looking for solid and durable rugged tablet computers to assist the safe railway inspection and maintenance.



## Solution

After a comparative test of rugged tablet devices from several manufacturers, the client finally selected the EM-T11X rugged tablet PC of Emdoor Information. EM-T11X rugged tablet PC is solid and portable. As a mobile device for real-time data query display, online communication, and data sharing, it can assist field personnel in efficiently and safely completing railway inspection and equipment maintenance.

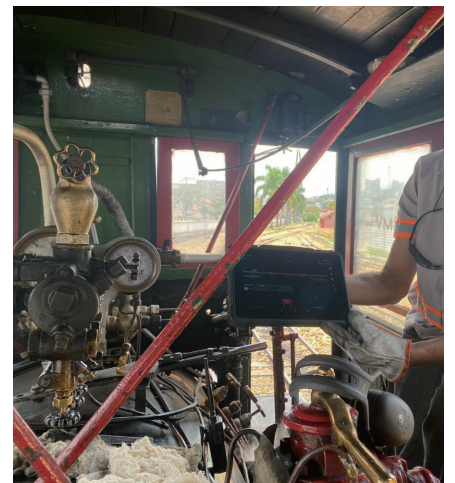
### Solution of EM-T11X

The EM-T11X rugged tablet PC is robust enough to withstand harsh outdoor railway environments. It has excellent running performance and high compatibility, and the easy-to-use Android 12 operating system can be adapted to the client's self-developed software, greatly improving the security.

Before railway inspection and maintenance, the administrator can create inspection tasks and send them to the staff's tablet through the system. Combined with the client's self-developed software, the staff can see which sections need to be maintained and which have been completed on the EM-T11X,

and then reasonably plan the optimal inspection route to the designated place to perform the maintenance task.

In the process of inspection and equipment maintenance, field staff record the operating status and data of the equipment through the EM-T11X rugged tablet PC instead of paper recording, and consult the information at any time through its 700nits HD screen. When there is an abnormal problem, the field staff can use the 13 MP rear camera of the EM-T11X to take pictures and record or use its 5 MP front camera to make video calls with backstage personnel. At this time, the wide coverage and stable mobile network can ensure online communication between personnel and the real-time uploading and sharing of data. It is convenient for the background to mobilize nearby personnel to support the on-site situation or to remotely guide the on-site staff to deal with problems. In addition, the background personnel can confirm the position and action trajectory of the field staff according to the GPS position reported by the EM-T11X in real time, and monitor the inspection situation in real time to prevent accidents. The data of railway operation and equipment status uploaded on site can be collected and analyzed to be used as a reliable basis for the next planning and scheduling to ensure the safe operation of railways.



## Benefits

### Accurate positioning, efficient inspection

Using multi-satellite positioning navigation systems of GPS, GLONASS, and Beidou, and with the client's self-developed software, the EM-T11X rugged tablet PC can accurately locate the road section that needs maintenance and action trajectory of the field personnel, providing an accurate basis for background management and scheduling, and greatly improving the efficiency of inspection tasks.

### Impressive performance, high integration

EM-T11X rugged tablet PC combines excellent performance and mobility. It uses the secure Android 12 operating system and sup-

ports 8GB+128GB memory configuration to ensure the smooth running of software and data storage. It integrates Bluetooth, WiFi, and 3G/4G wireless network, and its stable signal can cover every corner of the railway. EM-T11X applies mature technologies such as video recording function, remote wireless transmission, global positioning, and Internet of Things into the railway inspection system, easily realizing data recording, real-time sharing, and online communication on the railway maintenance site.

### Solid and durable, cost saving

The EM-T11X rugged tablet PC has passed the stringent US Army test standards and 1.22m drop test, achieving IP65-grade waterproof and dust-proof performance. It can

remain stable and efficient running in the extreme temperatures of -20 ° C to 60 ° C, which is enough to resist complex road conditions or crashes and falls on the railway inspection and maintenance site, ensuring that the task is not interrupted, reducing the equipment loss rate and maintenance costs.

### Bright light-readable screen

For railway inspection and maintenance, it needs to withstand the wind and sun for a long time. EM-T11X rugged tablet PC with a 700nits HD screen of 10-point capacitive provides a smooth screen experience whether in strong sunlight or the rain, helping workers at any time to read the information they need.

