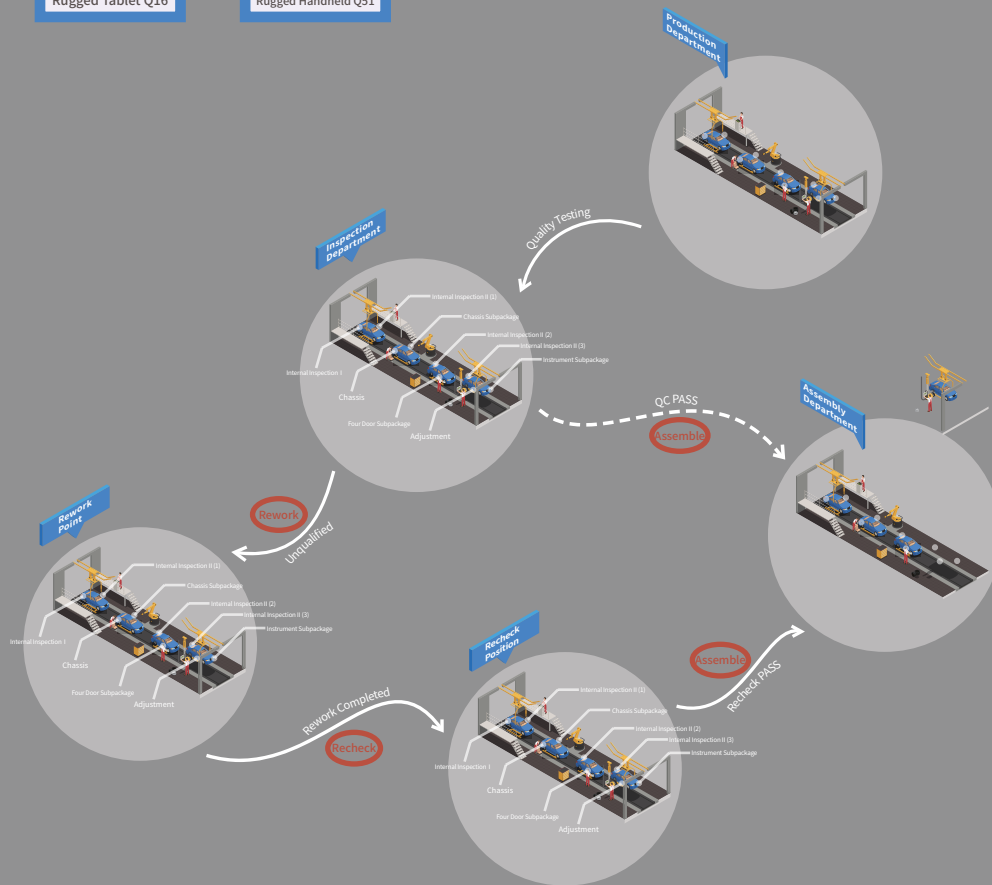
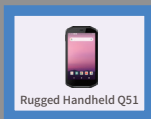


# Better Automotive Workshop production with Emdoor rugged computer



## Challenge

As the market demand for automobiles continues to expand, how to improve automobile production efficiency and safety has become the main focus of automobile manufacturers. The past paper-based inspection process can no longer meet the requirements of higher quality and more cost-effective vehicle production. A digital process that can replace cumbersome and error-prone paper documents and provide full visibility and traceability of the entire production process has become the first choice for optimizing automobile manufacturing.

## Solution

A digital inspection process cannot do without intelligent computing devices and production software capable of performing a range of shop floor functions. The leading automotive company in Anhui Province, China, sought a rugged mobile device for its production center to improve operational efficiency and productivity. Emdoor's EM-Q16 tablet and EM-Q51 handheld have excellent capabilities to meet the client workshop environment and technical challenges and support workshop technicians' high-quality work.

## Benefits

Emdoor has more than ten years of product experience in rugged computers. In addition to meeting the extremely high durability required in the automotive factory environment, the mobile devices launched by Emdoor also have the mobility, connectivity, and processing power to acquire, analyze and share data at different locations in the workshop. Which helps eliminate unnecessary downtime and provides state-of-the-art support for introducing new efficiencies as production demands grow.



EM-Q51

Rugged Handhelds PC

EM-Q16

Rugged Tablet PC

# Challenge

The client is a well-known automobile company in Anhui Province. For many years, it has been using traditional manual paper records to inspect the quality of automobile production. The information transmitted between the inspection department, rework point and re-inspection department mainly relies on a paper card of each vehicle. The staff of the quality inspection department needs to manually record the qualification status of the vehicle on a paper card and pass it to the next department when completing the comprehensive inspection of the car's engine, chassis, refrigeration, sand board, and spray paint every day. This process is time-consuming and prone to human error. In addition, each person's handwriting is different, and the progress of subsequent car production is often affected due to scribbled handwriting. Moreover, based on paper records still has the problem of being difficult to solve and hold accountable after the problem occurs. Because the information transmission of the paper card is lagging, there are many departments and related personnel.



As the business continued to thrive, the client company realized that its current situation required a more cost-effective way to increase order fulfillment capabilities, and implementing mobile technology to digitize the paper-based process was the best option.

# Solution

It has become a top priority to find a mobile device that can be seamlessly integrated with the production line environment and can be used for a long time to perform strict quality inspections. The client realizes that using consumer-grade equipment may reduce the productivity of technicians and increase the cost of purchasing replacement equipment due to its fragility. To this end, the client turned to Emdoor for help. After clarifying the customer's needs, Emdoor recommended the rugged multifunctional vehicle inspection solution EM-Q16 tablet and EM-Q51 handheld.



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With high reliability, durability, and excellent software compatibility, hundreds of EM-Q16 tablets and EM-Q51 handhelds have been introduced into the customer's factory. From 9 vehicle inspection points to 9 repair points and 9 re-inspection points, the staff at each point has a dedicated mobile device EM-Q16 tablet or EM-Q51 handheld to bind them with China Southern's self-developed information management system and their workstations. Their daily information exchange no longer depends on the paper card, but through real-time data circulation between the mobile terminal on hand and the background system. At the same time, the recording and verification of vehicles no longer rely on manual labor. Use the EM-Q16 tablet /EM-Q51 handheld professional scanner to identify the 2D barcode pasted on the vehicle body, and the result will automatically enter online. If the inspection result is good, the vehicle will enter the later process smoothly. If not, the trouble can also be reported to the system for subsequent quick rework. When the production schedule is affected by the quality inspection of the car, it is not as difficult to trace the problem as before. Under the collaboration of the EM-Q16 tablet/EM-Q51 handheld and the system, the person in charge of the

tracking-related work only needs to identify the QR code of the car body.

# Benefits

Emdoor rugged EM-Q16 tablet and EM-Q51 handheld are the core of the customer's digital production solution. The automated real-time data stream they provide helps the factory realize the migration of paperless workflow. With their assistance, the production efficiency of the customer's factory has increased by nearly 65% compared with the previous one.



## Good compatibility with vehicle detection systems

Workshop technicians can directly access diagnostic data and do fast vehicle quality inspections are inseparable from the stable connection between communication equipment and the inspection system. EM-Q16 Tablet PC and EM-Q51 Handheld combine the system configuration and wireless communication function required by the compatible vehicle detection system, allowing technicians in different positions to receive faster data transmission under the same system platform.

## Automatic data collection to speed up work efficiency

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## Rugged design for non-stop operation anytime, anywhere

Emdoor EM-Q16 tablet and EM-Q51 handheld are specially designed to withstand harsh conditions. They have passed MIL-STD 810G and IP65 standard certification, which can support on-site technicians reliably and securely accessing their data and applications in challenging shop floor environments without fear of equipment being damaged.