



AUTOMOTIVE MOBILE TEST SOLUTION

PANASONIC DESIGNS AND DELIVERS NEXT GENERATION
PRODUCTION LINE MOBILE TESTING SOLUTION FOR ONE OF THE
WORLD'S LEADING CAR MANUFACTURERS

When one of the world's leading automotive manufacturers wanted a new end-of-line testing solution for its flagship car production centre, it turned to Panasonic Computer Products Europe to design and build a rugged and versatile Automotive Mobile Test Solution (AMTS).



"The Automotive Mobile Test Solution is the next generation of mobile device to help deliver ever more efficient and cost-effective vehicle production for our customers."

With demands for new car variations ever increasing and the need for continuous improvements in the manufacturing process to drive efficiencies, innovation on the production line is a major focus for the automotive industry. So, when one of the world's leading automotive manufacturers wanted a new end-of-line testing solution for its flagship car production centre it chose to work with Panasonic Computer Products Europe and its Custom Design Solutions team to build the next generation of mobile testing device to help deliver ever more efficient and cost effective vehicle production.

Next Generation Testing Solution

The automotive industry giant wanted to keep its end-of-line testing software application but update the outdated, inflexible and heavy proprietary testing hardware from the same supplier. It was looking for a rugged, yet versatile, mobile device specifically designed for connecting to vehicles on the production line and at the end of the line to initialise ECUs (Electronic Control Units) and enhance production testing.

The device would be used to carry out the thousands of initialization and quality checks that a car goes through before leaving the factory as well as being needed to seamlessly integrate with the company's corporate IT environment. End-of-line tests are short-duration, mechanical evaluations of vehicles that often occur as an integrated step near the end of the production line. These tests can be automated inline operations that require minimal operator intervention, or offline quality audits when more detailed investigations are required.

The new solution also had to deliver for the long term, incorporating the many production line innovations that would be brought online in the flagship production centre over the coming years.

Collaborative Design Approach

The Panasonic Custom Design Solutions team worked hand-in hand with the automotive manufacturer over a two-year period to design, prototype and test the device to meet their needs. It was important that the solution could be easily connected to the vehicle whilst on the production line but also be easily carried and ergonomic to use for the production line engineers.

The Panasonic Custom Design Solutions team, headquartered at Panasonic Manufacturing in Cardiff, Wales, called on its many years of experience in integrating Panasonic's rugged Toughbook and Toughpad mobile devices into industry solutions. It used the latest 3D scanning and rapid prototyping capabilities to design, develop and certify the specialised solutions in-house.

Packed with Industrial Features

The resulting Panasonic AMTS is the next generation vehicle production and testing solution for the automotive industry. It is built around the market-leading, fully rugged Panasonic Toughpad FZ-M1 tablet, with its 7-inch capacitive multi-touchscreen display. The Microsoft Windows-based device has all the latest enterprise features for seamless integration into the corporate IT environment. It also features specific technology, such as a high powered infrared, 2D barcode reader and two military grade rugged USB connectors with power-in capability on both sides of the device ensuring simple and efficient vehicle engine initialisation and testing for both left and right hand drive vehicles.

Ergonomically designed with both the user and production process in mind, the device also incorporates a customizable steering wheel mount insert with scratch protection coating to reduce the risk of damaging vehicles, a flexible Vehicle Communications Interface (VCI) holder at the rear of the tool, a comfortable carry handle and programmable hot-keys.

A Decade of Automotive Collaboration

"Panasonic has a decade of experience collaborating with some of the world's leading automotive manufacturers to create rugged mobile devices designed for the industry's requirements," said Robert Blowers, Head of R&D and General Manager at Panasonic Computer Products Europe. "As a result of our relationship and collaborative approach with this manufacturer, The Automotive Mobile Test Solution is the next generation of mobile device to help deliver ever more efficient and cost effective vehicle production for our customers."

AMTS Key Features:

- Based on Toughpad FZ-M1 7" tablet
- Dual rugged USB and 12V DC-in via Fischer connector
- 2D BCR
- IrDA
- RFID
- Active cooling to ensure that there is no performance drop with temperature
- Ergonomic carry handle
- Custom mount for positioning on steering wheel
- 4 programmable hot keys
- Third party VCI to be mounted on rear of unit

