



Automotive, Port & Heavy Duty

Use in the entire automotive supply chain

The automotive industry is not only one of the most important economic sectors in the world, but also one of the toughest in terms of quality requirements, product diversity and process complexity. The enormous variety of products induces difficulty and pressure of tough international competition. This makes it challenging to ensure efficient logistics. For this reason, industrial computing plays an important role in the entire automotive supply chain; from the allocation and storage of raw materials and components through production and delivery to the timely procurement of spare parts. Automotive manufacturing is a very demanding environment for computing hardware with many challenges:

- Modularization: align vehicles with specific needs
- Strict standards: guarantee quality and software security
- Increase in the proportion of electronics and software
- IoT connectivity and data management
- Quality management and factory control



Particularly demanding work environments in heavy duty applications

There are distinct requirements, especially in the heavy duty area, like protection against dust and water as well as perfect operation even in damp or dirty environments. In addition, there is a need for terminals that are robust and very durable when it comes to mechanical impacts or abrasion. Displays must be easy to read, even in direct sunlight and bright, reflective environments. This means that they are also suitable for surface and





underground mining, civil engineering and crane systems. The use of industrial computers in this area must be very resilient, as they are exposed to changing temperatures and strong vibrations up to extreme mechanical loads. The following properties are required in the heavy duty area:

- Extremely low failure rate to ensure safe operation
- Resistance to dust, moisture, temperature changes, as well as vibration and shock
- Uninterruptible power supply and mobile data acquisition
- CFAST, PSU media stability
- WLAN, LTE, Bluetooth and WWAN modules
- Tracking & Tracing, GPS, robustness and after-sales service



Control freight and ships at high intervals

At ports and in container depots, moisture, extreme weather conditions and rough handling place the highest demands on mobile computing solutions. Robust industrial computers help to keep the complex work processes running reliably, because ports contest for ships and capacity. The handling figures are increasing, the mix of goods is becoming more and more diverse and requires a high degree of flexibility. Containers, grab, liquid and suction goods such as classic general cargo or project loads also have to be handled. Container ports thus assume an important distribution function for the global flow of goods.

Optimizing the handling of goods at container ports is a logistical challenge. Processes have to engage seamlessly, because every standstill has fatal consequences and causes high costs. In this market, the pressure of time and competition is extremely high. The logistical processes are planned down to the smallest detail and are supported by a wide variety of transport vehicles - container cranes, gantry cranes and various vehicles ensure an orderly flow of goods.

Creating advantages through industrial computers

Industrial PCs for the automotive, heavy duty and port areas make it possible to manage all planning, processing of data sets, performance analyzes and KPIs. Security functions, mobile supervisors, as well as the monitoring and management of the devices take place directly via the terminal. Thus, it is possible to increase productivity and reduce maintenance cost, while accurate failure predictions can be performed.

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