



**These all helped ensure that the All-in-One PCs from the Germering specialists met all the prevailing project team requirements:**

- Reliable and low-maintenance industry PC technology
- High system stability
- Outstanding performance
- Standardized mounting

- Large display
- Simple touch-screen operation
- WLAN and dependable performance (a cable-independent solution is a "must" for these terminals)
- Compatibility with existing and new software tools
- A sleek design
- Swift service

**Project implementation**

The introductory phase of the UTC project lasted from May to September 2014, a relatively short time frame, which also reflected the fact that employees had previous experience of working with such media, thus eliminating the initial need for personnel retraining.

However, the clearly enhanced performance these changes elicited meant that additional applications and

programs could be loaded up and used. Dirk Gransow was responsible for the software alignment. Moreover, he was also tasked with implementing the new tools, such as the worker guidance, ANDON alarm system etc.

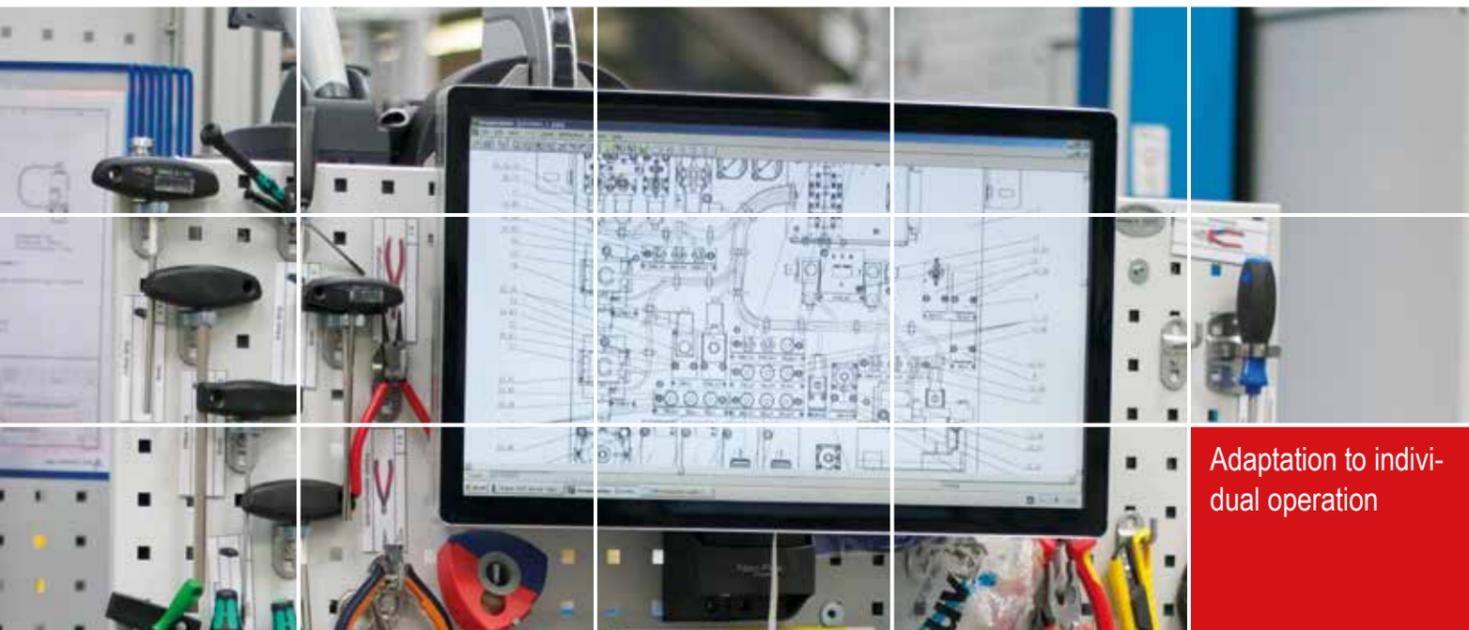
The intuitive menu navigation and super-sensitive touch-screen operation made training with these new 'tools' a breeze – taking no time.

English

- All-in-One Touchcomputer
- Windows 7, Windows 8, Linux
- Resistive / capacitive Multit-Touch
- Horizontal and vertical use

**Advantech-DLoG Reference**

**Industry PCs at Knorr-Bremse in Munich**

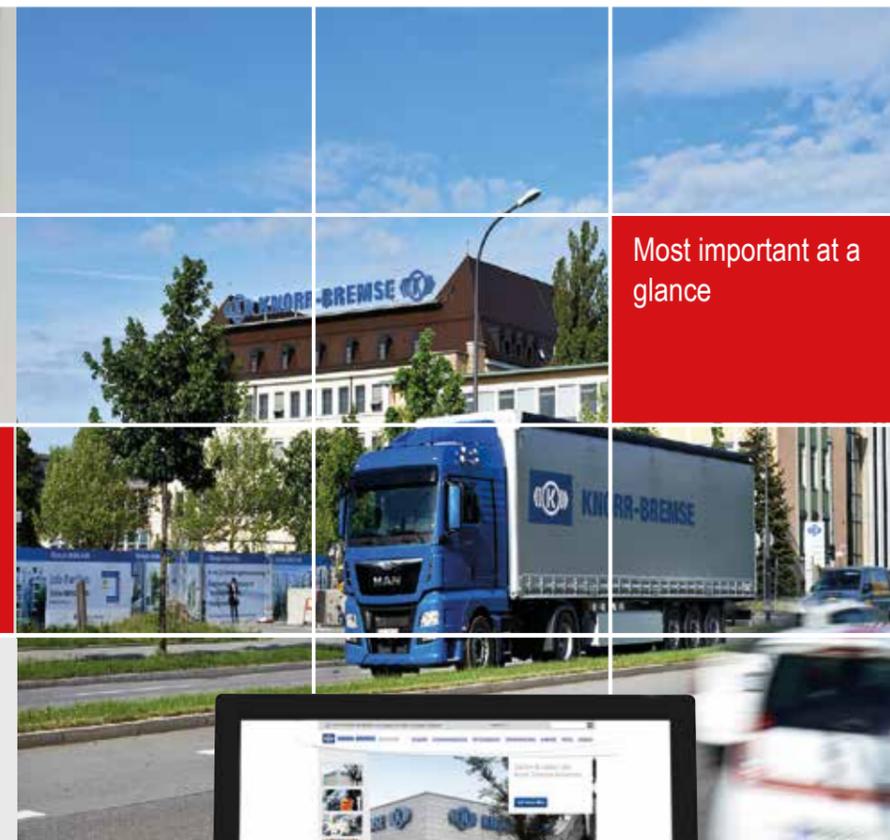


Adaptation to individual operation

**Summary**

Converting to the UTC series paved the way for visualization and documentation in each assembly cell, leveraging the integrated IT system. Employees also particularly appreciate how the UTC displays can easily be switched from

landscape to portrait format, which allows each worker to adapt their display set-up precisely in line with their own work procedures.



Most important at a glance

**Requirements:**

- Tried and tested industry PC technology
- WLAN and dependable performance
- Highly stable system
- Large display
- Terminals with touch screen

**Products deployed:**

- UTC-515 with 15.6" touch-screen display
- UTC-520 with 21.5" touch-screen display

**Benefits:**

- High system stability
- Outstanding performance
- Simple touch-screen operation
- Compatibility with existing and new software tools

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## Alarm system and SAP-based component tracking and order visualization in production

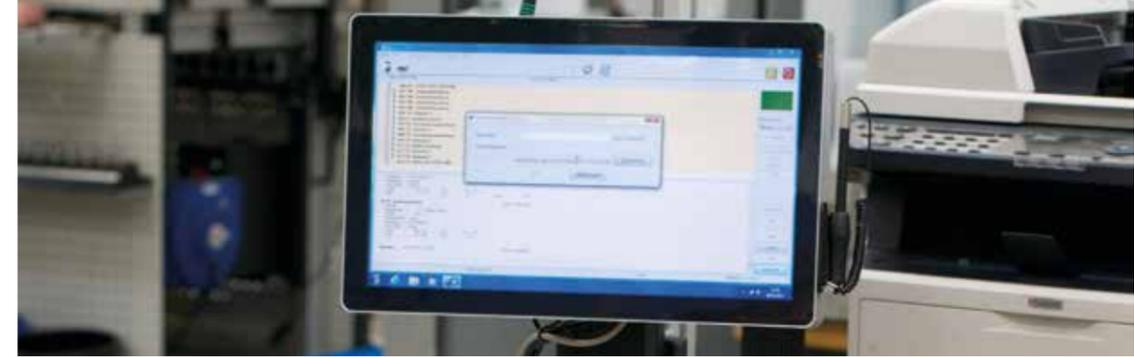
The Knorr-Bremse group, with a global total of more than 25,000 employees, develops and produces modern braking systems for rail and commercial vehicles. Systems for rail vehicles are used in high-speed trains as well as locomotives, train sets, subway trains, streetcars and freight cars.

The core competency of the systems business field for rail vehicles at the Munich site centers on developing, producing and project-planning for all-inclusive braking systems for all kinds of rail vehicles.

To date, the Center of Competence Brake Control (CoC BC) functioned smoothly using IPC-7 series Industry PCs from Advantech-DLoG. However, drastic changes arose in the computing performance requirements imposed as well as the need for additional network interfaces and larger displays. At the same time, there was a need to upgrade the operating system to Windows 7 (64 bit.) Ultimately, the decision was taken to go for the UTC series, which proved a convincing option, thanks to its industrial standard, appealing design and sophisticated 16:9 format.

### Configuration management, time management and worker guidance

The IPC-7 series terminals were used for the purposes of recording time and other special tasks, while the UTCs now run a range of applications: configuration management, the ANDON 4.0 alarm system, the time-management system, the worker guidance system and SAP.



This clearly boosts the rate of operational assembly: employees encountering production problems need no longer look for the relevant colleague ready to assist them further – the specialist responsible comes to the worker immediately. The ANDON alarms are also documented within the system and can be assessed to further optimize the production processes.

### Requirements imposed on the targeted terminals: System stability, WLAN, large touch-screen display, durability

Unable to meet increasingly stringent durability requirements, the classic Office PCs installed at Knorr-Bremse were phased out. Industrial computers from a range of providers were then tested as replacements.



Custom configurations

UTC 15" - 21" - 32"

Significant operational speed up the installation

### Maximum quality assurance thanks to the ANDON system

Inspired by the ANDON solution from Toyota, Knorr-Bremse has also been producing its own alarm system since 2008. Each assembly cell includes a UTC terminal with its own alarm button. In the event of any production-related issues that the worker is unable to solve unaided, this button is pressed, whereupon a selection window appears

with a range of standardized error messages. Depending on whether a particular component is lacking or defective, a work instruction is missing or a tool is defective etc., the employee selects a suitable area, which is then automatically conveyed via e-mail and SMS to the specialist responsible and the quality assurance and production planning divisions. The notified specialist then proceeds swiftly to the production colleague seeking assistance to rectify the problem.

The project team – Dirk Gransow, data management specialist, Andreas Koller, segment manager, joined by company management and CoC BC division employees – unanimously adopted for the UTC series from Advantech-DLoG for its exceptional graphical showcasing scope, the high performance of the Windows 7 machines, and the high-performance graphics card.

