

## Mess- und Fördertechnik is a systems provider for loading applications in the oil industry

Mess- und Fördertechnik (M+F, [www.mfx-systems.de](http://www.mfx-systems.de)) is a leading full-scope system provider in many areas of oil product handling: truck, barge/ship and rail car loading, blending and additive injection, aircraft refuelling, pipeline metering, and barrel filling.

Since the Nineties, M+F is an important supplier of On-Truck Computers. These systems are installed in large quantities.

Refueller and Dispenser vehicles are fitted out with latest technology from M+F for monitoring of fuelling processes. A part of this data logging, as well as data communication via WLAN.



As a communication interface between main computer, human and machine, a Janz emVIEW-8T is used. This is built in to the cab of the Refueller vehicle and shows all relevant data, allowing operator input via touchscreen. The emVIEW communicates via CAN Bus with the fuelling system, with the monitor and the user, as well as via WLAN with the main computer. Placing the computer here, it is possible to show clearly not only the relevant data, but also alarms indicating adjustments required, and allowing relevant data to be saved or sent in real time via radio to central control system.

Fuelling orders and other relevant information can also be transmitted directly to the vehicle.

The emVIEW has to meet some tough requirements:

- In-vehicles performance must be reliable, despite years of operation in a vibrating environment.
- Since the PC is in an enclosed housing, power consumption must be low to avoid overheating issues.
- The computer has to work without problem at -20 degrees Centigrade.
- CANbus and touchscreen are required for individual use.
- The units have to have long-term availability in order to be certified for installation.
- A short computer start-up phase is required when starting the vehicle.

The decision to use a Janz system was made due to:

- Experience with CAN Bus technology for many years.
- Good support for customization of software used in M + F systems.
- Service + Support of the computer from a single source - Janz in Paderborn.
- Necessary customization of hardware and software could be realized without problems.



emVIEW systems used in this case were the emPC-A400 with various available display sizes. Displays (standard with touchscreen) attach directly to the emPC, but systems with or without display are also possible.

The emVIEW-8T (see figure) is fitted with an 8.4" SVGA LCD display and touchscreen. The resolution is 800x600 with a luminance of 400 cd/m<sup>2</sup>. This HMI is available with an emPC-A400 as a control system. It offers power consumption from 400 MHz and up to 128 MB memory.