Continental
The Future in Motion

UDCU – Universal Display & Control Unit

A Command Center for modern Electro- and Sports-automobiles, Commercial vehicles and mobile work machines.

A "UDCU – Universal Display & Control Unit" is Continental Engineering Services (CES) answer to the ever increasing flood of information impacting drivers of modern vehicles.

The UDCU acts as a center for information.

The UDCU collects data, prepares and summarizes them on easy to read charts and shows them on the displays. This is how the increasing complexity of the handling and control in a vehicle will be supported and optimized.

Due to its modular configuration the UDCU can be adapted to most different applications with little effort.

Besides the modular electronic concept, the usage of standard software as operating system and software framework is essential for a universal application.

CES is able to develop Human Machine interfaces independent from the final hardware – development times will be decreased, enabling fast customer feedback.

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Technical Description

Three Modules make up the electronic system. The CES Automotive CoreBoard works with the actual generation of Freescales ARM based i.MX6 Processors, which were specifically designed for the applications and high safety requirements in the automotive world. This module is responsible for the computing process of the total system. Consciously standardized CES Automotive CoreBoards will be used within CES, in order to keep an installation modular and easily adaptable.

A further module carries the electronic components for wireless interface like WLAN, UMTS / GPRS / GSM, Bluetooth and GPS.

A main module contains both standardized modules and enables the circuits for 12 or 24 V supply or other customized requirements. In addition it carries the gateways for external connections like bus systems as CAN and LIN, as well as digital and analogue inputs.

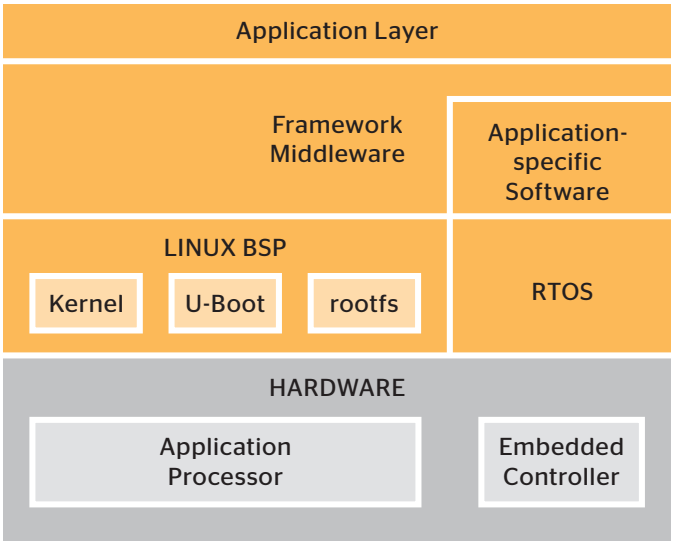
Hardware

- Scalable processing power and memory size based on the “Freescale i.MX6” platform
- Compatible with 12 and 24 V on-board power supply
- Available communication gateways: RS232, USB, Ethernet, G3/UMTS, WLAN, Bluetooth, GPS
- Two HD-compatible display interfaces for primary and secondary display with backward channel
- Analog video input
- Digital input and output gates
- Analog input gates
- Integration in the vehicle by CAN-/LIN interfaces
- Different variants for cases (blackbox, IP65, Single-/ Double-DIN)
- User-specific front panel designs (USB, SD-card, buttons, LEDs, display, ...) possible
- Robust due to passive cooling, avoidance of moving parts, high vibration resistance and design specific for automotive temperature range
- Low energy demand

Software

- Full featured embedded Linux System allows immediate application development
- HMI Technologies like QT, X11, Framebuffer are already available
- Different Linux Distributions, Windows Embedded Versions, Android and other Operating System can be supported upon request
- Our own Framework/Middleware offers easy, fast and transparent access to Peripherals for an accelerated Development
- Faster time-to-market through our available expert support

Software Architcture



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