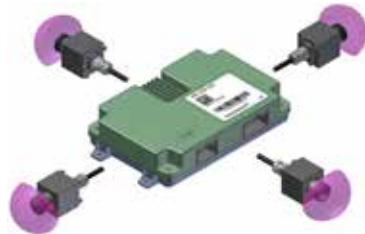First Sensor
is now part of

TE
connectivity

Embedded Area View –
based on HDR CMOS cameras

Embedded Area View from First Sensor is based on long-term experience in automotive CMOS cameras. The Area View application with its Embedded Control Unit (ECU) meets embedded and automotive requirements. The provided ECU facilitates up to six 2.0 MPix cameras to support difficult environments as well as large vehicles.

Features

Embedded Area View from First Sensor is based on **in-house rugged cameras, flexible ECU** and **modular software** design which meet embedded automotive requirements, e.g. A-Spice and ASIL.

- **HDR** CMOS cameras with advanced and innovative LVDS connection
- Support of up to **six 2.0 MPix cameras**
- Fixed focus optics
- Water tight optic with anti-scratch
- Automatic distortion and image correction
- **Automatic calibration** for automotive cars and trucks is supported
- Doubling camera streams to **two independent video streams**, processed by **two independent processor units** for independent functionalities and views
- Additional functionalities modular addable
- ECU and 2.0 MPix camera **available beginning of 2017**

Applications

Embedded Area View from First Sensor focuses on automotive cars, large vehicles and vehicles with limited driver vision to support improved **driver assistance** as well as **critical driving maneuvers**.

- Automotive cars and trucks
- Heavy trucks
- Fork lifters
- Agriculture equipment
- Mining machines

Embedded Area View – based on HDR CMOS cameras

The Area View application is the latest technology of driver assistance systems coupled with long-term automotive camera design know-how. Designed to increase safety and comfort driving using several ADAS functionalities from 360° area view up to object recognition and its derivations, it supports the principle of accident avoidance. It meets the rising demand for an embedded and robust system for automotive, industrial and safety markets.

Starting from basic functionality like well-known top view or bird view, a single viewing perspective from exactly above the vehicle, the Area View application supports any viewer position and viewing angle from the vehicle to the outside world, i.e. full 360° area view, or the view from outside to the vehicle. In driving mode the viewing position can be changed by selecting one of several predefined viewing positions.

The application architecture on hardware and software side meets embedded requirements, e.g. hard real-time and secure abilities. It is developed under Automotive Spice (ISO/IEC 15504-2) process rules. Additional functionalities like object recognition of pedestrians or traffic signs, distance measurement of objects, tracking, etc. are modular addable. More complex functions are under development. The system meets automotive temperature, shock, real-time, memory, processor power as well as ASIL constraints.