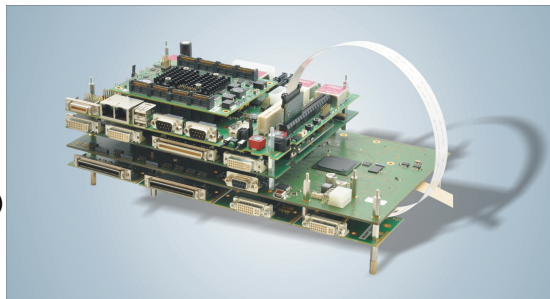


in the field of camera technology and image processing

ABS GmbH - Specialist for DSP and FPGA-based digital camera systems

◆ Scalable Multi-FPGA-Board

- high-end image processing with **10 Gigabit Ethernet**
- up to 6 SerDes-Interface coupled FPGA ECP3-150 from Lattice™ with up to **6 × 51,2 Gbit/s** memory bandwidth and **6 × 64 GMAC/s** processing power
- supported image resolution up to 2560x1600 pixel (WQXGA)
- Interfaces: PCIe, 10GigE, HD-SDI (4 parallel channels), DVI, LVDS, XAUI, UART, SPI, USB2.0
- expandable with plug-in modules for data-intensive applications (eg. high-resolution real-time image correction, image fusion, multi-sensor image processing)



◆ ABS continuously integrates new high-resolution image sensor families

▪ CMOSIS CMV image-sensor-family

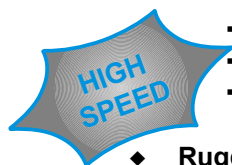
Image Sensor	CMV2000	CMV4000	CMV8000	CMV12000	CMV20000
Resolution (pixels)	2048x1088	2048x2048	3360x2496	4096x3072	5120x3840
Frame rate (fps)	340	180	104	300	30
Megapixels	2,2	4,1	8,3	12,5	19,6
Optical Format	2/3"	1"	1½"	1¾"	2½"
Format display ratio	2:1	1:1	4:3	4:3	4:3

- top-current **Sony-CMOS-Sensors** such as:
 - **IMX124** (Exmor R, BSI, Rolling-Shutter) for Security-Camera-Systems
 - **IMX174** (Exmor, Global Shutter) for industrial applications
 - **IMX224** (Exmor R, BSI, Rolling Shutter) for **4K video** with 60 fps
 - additional sensors will follow shortly
- in addition the ABS offers camera solutions with image sensors of the following manufacturers:
 - e2v, Viimagic, Aptina, AWAIBA, Hamamatsu
 - ON Semiconductor (former Kodak respectively Truesense Imaging), Dalsa, Andanta, ...



◆ Specialist in high-speed interfaces in combination with high-resolution sensors

- ABS enables industrial usage of **USB3.0** – robust with transfer rates of up to **400 MByte/s** (sustained)
- up to 16 serial channels per chip and up to 3,2 Gbit/s per serial channel
- 10GigE, HD-SDI, 3G-SDI, SDI, PCIe, HDMI, DVI, USB3.0, USB2.0, ...



◆ Rugged camera systems including lenses

- usable in a wide temperature range
- high vibration resistance and shock robustness
- insensitive to strong EMI fields
- application areas: rail vehicles, agricultural machinery, automotive and other special applications



◆ Special camera solutions from multispectral and slow-motion to miniature cameras

- multispectral **SWIR-camera** with filter wheel and software solution for night vision, wafer inspection, ...
- PCIe camera-platform PK8000 with data rates up to **800 MByte/s** (bidirectional, sustained)
- **slow-motion camera** for industrial applications with up to **1000fps** via USB3.0 with software solution
- **miniature camera head** with a size of 1 x 1 x 1,4 mm³ (including lens) and 250x250 pixels at 44 fps

Take advantage of our nearly 25 years of experience to accomplish your demanding signal processing and electronics tasks. Visit us at the electronica 2014!