

Innovations 2016

in the field of camera systems and image processing



ABS GmbH – The specialist for DSP- and FPGA-based digital camera systems

ROBUST CAMERA SYSTEMS FOR TOUGHEST OPERATING CONDITIONS FROM FARM MACHINERY UP TO HEAVY INDUSTRY

- very wide operating temperature range: from **-40° C** up to **+80° C**
- vibration/shock resistance: up to **200 times gravitational acceleration**
- robustness against various environmental influences: oil, dust, splash water, immersion, **IP65, IP67, IP69**, temperature shock, saline and corrosive environments, UV radiation, strong EMV fields, ESD, switching spikes, short circuit, induction currents of external sources, particle impact, high pressure cleaning, chemical substances, periodic vibrations, shock → **Contact us with your specific requirements!**
- system-adapted, robust lenses and specially selected cables
- protocol-monitored interfaces with „heartbeat“ control on both sides
- **USB3.0** suitable for industrial use – with transfer rates up to **400MByte/s**

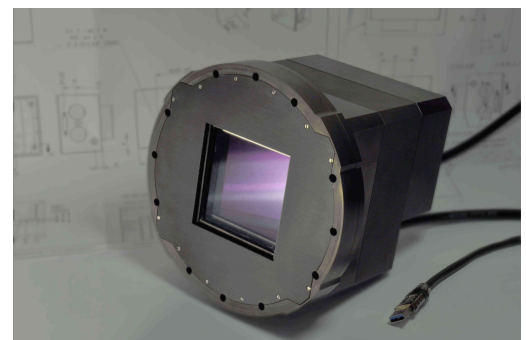


CONTINUOUSLY NEW CAMERAS WITH HIGH-RESOLUTION SENSORS

- latest **Sony** CMOS-sensors such as **IMX123, IMX174, IMX429** and **IMX224**
- **CMOSIS** CMOS-sensors: **CMV2000, CMV4000, CMV8000** until **CMV20000**
- **e2v** backside illuminated scientific sensors: **CCD230-84, CCD231-84**
- in addition, ABS also has camera solutions with image sensors of the following manufacturers:
- viimagic, Aptina, AWAIBA, Hamamatsu, ON Semiconductor, Dalsa, Andanta and others
- 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, ...

SPECIAL SOLUTIONS FROM MULTISPECTRAL TO ASTRONOMY CAMERAS

- multispectral SWIR camera with filter wheel and software solution for night vision, wafer inspection, laser beam analysis, material testing, ...
- PCIe camera platform PK8000 with data rates up to **800 MByte/s** (bidirectional, sustained) for direct connection to the PC hardware
- Industry-capable slow motion camera with up to **1000 fps** via USB3.0 with software solution and the ABS camera system UK31053
- **Endoscopy camera head** with extreme small dimensions $1 \times 1 \times 1,4 \text{ mm}^3$ (including lens/optics) and 250 x 250 pixels at 44 fps
- Astronomy camera with 16 megapixels, self-developed mechanical shutter, TEC and water cooling circuit as well as maximum light sensitivity



Reflections in the cover glass and the sensor surface are merely visual aesthetics and were produced artificially.

FURTHERMORE ALSO BE EXCITED ABOUT OUR INTERESTING INNOVATIONS AT OUR BOOTH

- 3D-Scanner: Probably the first and only optical music-box in the world
- Technical Endoscopy: Looking in tiny spaces with one of the smallest camera heads in the world
- Brand new: We will show you our newly developed, high-stability and software-supported LED light source

We are looking forward to talking with you about the realization of your demanding camera, image processing and electronics tasks!