

inVISION

VISION 2018 review · December 2018

UNOFFICIAL ENGLISH TRANSLATION

The original article was published in German in inVISION, a trade magazine published in Germany. Prepared for CRETEC. The German original remains the reference.

inVISION Ausgabe 12.2018
Normgerechte Code-Verifikation mit Autofokus



CRETEC Pressemappe

Stand: 05.2020

Seite 98 / 116

Standards-compliant code verification with autofocus

SOURCE EXCERPT ONLY: the supplied clipping is page 18 of the VISION 2018 trade-fair review, not a complete standalone CRETEC article. It begins and ends mid-sentence. All supplied text and both captions are translated; missing preceding and following text has not been invented. Historical 2018 product and performance claims are retained. Original publisher artwork, logos and advertisements are retained in their original language.



Fig. 3: Baumer's AX camera, based on an open-source Linux platform, integrates a high-performance NVIDIA GPU (Jetson TK1/TX2).

[The supplied excerpt begins mid-sentence.] ... designed for a sensor diagonal of 17.6 mm and a minimum F-number of 1.8. Opto Engineering (www.opto-engineering.com) offers the TC Core Plus, ultracompact telecentric lenses for large fields of view, specifically designed for the new 1/1.8-inch and 2/3-inch CMOS sensors. Kai Lap Technologies (www.kailaptech.com) claims to offer the world's smallest gimbal stabiliser, the MGS (Micro Gimbal Stabilizer). Measuring 19 × 19 mm and weighing 7 g, it incorporates more than ten patents and enables smooth image capture. Sony IMX258, Samsung S5K3P3 and OmniVision OV2718 sensors are supported.

Embedded vision / deep learning

Allied Vision (www.alliedvision.com) presented its new Alvium camera series with a MIPI CSI-2 interface, currently comprising two models. Also shown was an embedded deep-learning neural-network demonstration, developed by Antmicro, using NVIDIA's Jetson AGX Xavier for real-time person and object detection. Lumenera (www.lumenera.com) presented the LS series, an intelligent 200 fps camera integrating a Xilinx Zynq UltraScale+ MPSoC and GPU. With corresponding software packages, it addresses sectors including machine vision, transport, life sciences, aerial imaging and biometrics/security. Electronics distributor Arrow (www.arrow.com) appeared in Stuttgart for the first time, presenting its portfolio of electronics and machine-vision components in the gallery. Deep learning was the dominant trend at the fair: it felt as though every fourth stand in Stuttgart featured a new approach or provider. Numerous exhibitors presented solutions already integrated into cameras or systems, including FLIR, IDS, Inspekto, Opto Engineering and Silicon Software, or corresponding pre-trained algorithms and libraries from Adaptive Vision, Cognex, Deevio, Euresys, i-Mation, MVtec, Sualab and others. The striking differences between the business models behind these solutions were also interesting.



Fig. 4: Cretec's VeriTube enables standards-compliant code verification with autofocus.

Solutions & systems

Slovenian company Photoneo (www.photoneo.com) received the €5,000 Vision Award 2018 for its PhoXi 3D camera. Claimed by the company to be the world's highest-resolution and most precise area-based 3D camera, it uses Photoneo's patented Parallel Structured Light technology, implemented by a proprietary CMOS image sensor. For the first time, users can capture moving objects with high precision at speeds of up to 40 m/s. At Lucid Vision Labs (www.thinklucid.com), visitors could see the Helios 3D camera with ToF technology, integrating Sony's new DepthSense IMX556PLR CMOS sensor. If this new Sony ToF CMOS follows the same development path as its polarisation chip, similar ToF cameras can soon be expected from other camera manufacturers. Teledyne DALSA (www.teledynedalsa.com) previewed its Z-Trak 3D scanner, opening a completely new product area for the company. The IP67 device achieves accuracy down to 10 µm on the Z-axis and is compatible with 3D tools including Spera Processing 3D, Sherlock 3D, Stemmer CVB and HALCON. Standards-compliant code verification with ...

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