PRESS RELEASE
e-con Systems Inc.
+1-314-732-1152
sales@e-consystems.com

e-con Systems' new 3.4 MP Autofocus USB 3.0 Camera with Varioptic – Invenios Liquid Lens

See3CAM_30 based on AR0330 sensor from On Semiconductor™. Varioptic Liquid Lens Autofocus Camera. Superior low-light performance - pixel size of 2.2µm. Streams 1080p@60fps & 3MP@60fps

ST. LOUIS and CHENNAI, India and Lyon, France – February 28, 2017 - e-con Systems Inc., a leading embedded camera solution company, and Varioptic, a Brand of Invenios today announced the launch of See3CAM_30, an ultra-low light Autofocus USB 3.0 camera with liquid lens. See3CAM_30 is based on the 1/3-inch AR0330, a 3.4 megapixel image sensor from On Semiconductor. Having Varioptic liquid lens, this camera delivers fast, continuous and effective Autofocus and provides robust Autofocus solution as there is no mechanical movement. Liquid lens consumes very low power and extremely fast response time making the See3CAM_30 ideal for security/surveillance applications, Industrial cameras and barcode scanning applications. This OEM camera can capture images at 0.1Lux, almost near darkness. The See3CAM_30 is the first Liquid lens auto focus camera from e-con Systems' See3CAM family of USB3.0 Super Speed camera products.

The See3CAM_30 streams uncompressed video 720p@60fps (HD), 1080p@60fps (FullHD), 3MP@30fps (2304 x 1296) and 3.4MP@ 24 fps in UYVY formats. See3CAM_30 also streams compressed MJPEG 720p, 1080p and 3MP at 60 fps and at full resolution it can stream 3.4MP @ 48 fps over USB 3.0 interface.

Fig-1: See3CAM_30 USB 3.0 Camera with Liquid Lens

"The See3CAM_CU30 Camera with S-mount lens holder using AR0330 sensor is one of our flagship cameras claiming more number of Design Wins in lot of our customer products. We have been receiving enquiries from our customers to enable Autofocus functionality on the same camera from our customers. We are excited to launch the See3CAM_30 camera that further enriches our AR0330 camera with Autofocus functionality powered by Varioptic's Liquid Lens. " said **Ashok Babu**, President of **e-con Systems Inc**.

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"The Varioptic Caspian S module used in e-con Autofocus Camera allows close focus, unlimited number of cycles, low power consumption, and outstanding resistance to vibration and mechanical shocks" says **Frederic Laune**, *Executive Director of* **Invenios** *France. "The e-con camera offers an ideal off the shelf solution for our customers who want to focus their design resources on the application rather than on the camera design", he added.*

See3CAM_30 is based on 1/3" AR0330 Image sensor with an on-board high-performance Image Signal Processor chip (ISP) that performs all the Auto functions (Auto White Balance, Auto Exposure control) in addition to complete Image Signal Processing functions and MJPEG encoding. This 2.2micron pixel size AR0330 sensor with the ISP provides best-in-class image quality and superior low light performance. The AR0330 sensor has very good responsivity in Near Infra-red wavelengths and that allows the See3CAM_30 camera to be used in NIR imaging applications and day-night applications.

Light Source: Visible Light - 0.5lux

Light Source: Infrared

Fig-2: 3.4 MP Images captured using See3CAM_30 with different light sources

The compact See3CAM_30 camera with form factor 30mm x 30mm is constructed as a two-PCB solution. The camera comes with the S-Mount holder and liquid lens connected. The USB3.0 base board contains the USB 3.0 Type-C connector, an indication LED and the GPIO header. Customers can also use the TRIGGER signal available on the GPIO connector to provide external TRIGGER signal for still image capture. The STROBE signal of the GPIO connector can be used to enable the LED Flash for external illumination.
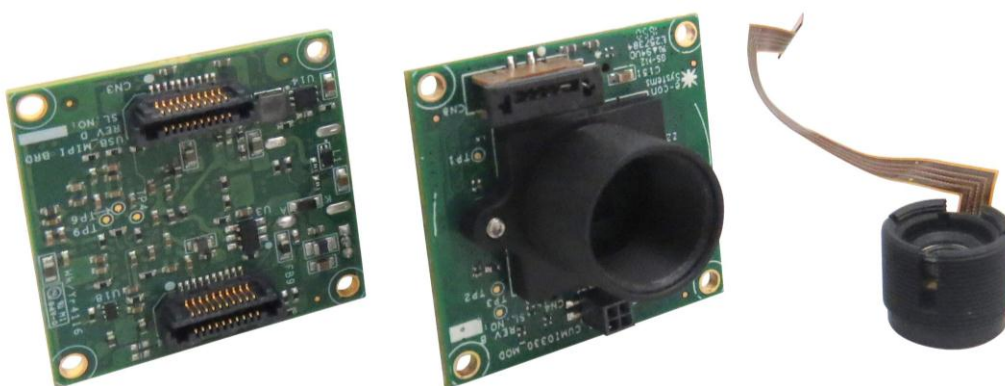

Fig-3: AR0330 Camera module, USB 3 Interface board and Varioptic's Liquid lens

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The See3CAM_30 camera also supports Zero Shutter Lag feature, where the 3.4 MP still images can be captured at any time during low resolution preview video within 0.3 seconds. The next generation low-power surveillance cameras can leverage this feature to perform motion analysis in the low-power preview mode and when motion is detected, a high resolution still image can be captured instantaneously for further image analytics.

See3CAM_30, a UVC-compliant camera is plug-and-play in both Windows and Linux without requiring additional drivers. In Windows, the camera is exposed as a DirectShow device, and in Linux as a V4L2 capture source. e-con Systems' sample e-CAMView - Windows applications and QtCAM - Linux application and use the standard UVC protocol to access the camera controls. The e-CAMView, Windows DirectShow based sample video viewer application enables controls such as Brightness, Contrast, Sharpness, Region of interest (ROI) based Auto focus, Saturation, Gamma, Gain, manual exposure, ROI based Auto exposure and White Balance (Manual and Auto).

Availability

The See3CAM_30 is currently available for evaluation. Customers interested in evaluating the See3CAM_30 can order samples from e-con Systems' online store.

For more information, please visit 3.4 MP Auto focus USB 3.0 camera with liquid lens. Also watch See3CAM_30 demo video at https://www.youtube.com/watch?v=IFNrvfN0zrs

Customization

Customers interested in customizing See3CAM_30 can contact sales@e-consystems.com for any customization and additional features.

About See3CAM
See3CAM is a series of UVC compliant USB 3.0 Cameras from e-con Systems that are "plug and play" on Windows and Linux. See3CAM USB 3.0 Camera does not require additional device drivers and work with the standard Windows (DirectShow) and Linux (V4L2) software.

The See3CAM's USB 3.0 SuperSpeed connectivity enables it to capture images 1080p (Full HD) up to 60fps. These simple and cost-effective USB 3.0 Camera series solves the problem of implementing high quality video and image capture in applications such as Machine vision, barcode detection on moving objects and object tracking. e-con Systems provides customization services around these cameras to meet specific customer requirements. See3CAM are also backward compatible with USB 2.0 host.

For more information, please visit http://www.e-consystems.com/See3CAM-USB-3-Camera.asp

About e-con Systems

e-con Systems specializes in camera solutions with offerings like camera modules, USB camera modules, camera boards for various microprocessors, camera Device driver development services on Windows/Linux/Android Operating systems, Camera reference design, software ISP, camera customization and camera tuning.

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About Varioptic / Invenios

Founded in 2002, Varioptic was acquired by Invenios in December 2016. Varioptic develops, designs, and markets electrically controlled miniature optics based on its proprietary and patented programmable liquid lens technology. The technological solutions developed by Varioptic are aimed at a number of markets in the digital camera sector (biometrics, machine vision, general consumers and the medical industry). For more information, please visit www.varioptic.com.

For more information please contact:

e-con systems

Harishankkar
sales@e-consystems.com
e-con Systems Inc., +1 314 732 1152
e-con Systems India Pvt. Ltd., +91 44 40105522
Website: www.e-consystems.com

Invenios France
Media contact
Ellen Karam : ellenk@invenios.com
Sales contact: sales@varioptic.com

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