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For immediate release

e-con Systems Launches FSCAM_CU135 - the latest 4K Multi Frame Buffer USB Camera

ST. LOUIS and CHENNAI, (India - July 31, 2019) - : e-con Systems Inc., a leading embedded camera solution provider company, today launched the **FRAMEsafe™**, a new family of USB UVC Cameras with internal buffer that ensures reliable transfer of images over USB interface. Powered by **e-con's** proprietary **FloControl™** technology, **FRAMEsafe™** cameras support on-demand image capture capability which can be controlled from the host application. The effective decoupling of camera image capture from the USB communication allows multiple **FRAMEsafe™** cameras to be used on the same host processor without losing the frames from any camera. FSCAM_CU135 is a first frame buffer camera in the FRAMEsafe™ camera series.



FSCAM_CU135 has a powerful 13 MP resolution-based 1/3.2-inch AR1335, a 1.1-pixel BSI CMOS image sensor from ON Semiconductors™ and is equipped with a S-mount (M12) lens holder that enables customers to pick a lens of their choice. It is powered by the Xilinx Spartan® series FPGA - with on-board DDR memory for storage.

It has 2 Gb DDR3 SDRAM to store and access frames at very high speeds. It can store up to five 13 MP (4208 x 3120) uncompressed UYVY frames, without any streaming disruptions. It is a perfect-fit for any mission-critical applications, where host is busy and dropping the data.

FSCAM_CU135 is a game-changer for industries such as 3D scanning, photogrammetry and parking lot management. This camera can be effectively used in clusters; for instance, multiple cameras can be connected to a single host system. The automatic bandwidth sharing feature ensures the streaming of all the connected cameras without any disruptions. It is the perfect fit when hundreds of cameras, with inbuilt image preprocessing capabilities, need to capture images at various angles of the same object without losing a single frame.

"With FSCAM Series of cameras, e-con brings the reliable image transfer mechanism for USB UVC cameras allowing customers to connect multiple cameras to a single host system without worrying about the reliability of image transfer from individual cameras. Powered by proprietary Flow Control technology, customers can retrieve images from FSCAM cameras on-demand at any frame rate while operating cameras in their maximum frame rate, thus minimizing the exposure artifacts", said **Ashok Babu**, President of e-con Systems Inc. "Our FSCAM series of cameras will be ideal for applications where customers want to connect multiple cameras over a single host and reliably receive images from each of these cameras" he added.

Additionally, **FSCAM_CU135** can be customized with different sensors or lenses to meet every application requirement. Some of its application usages for customers include:



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- Connect many (100 or more) cameras through a USB, capture one frame from all of them simultaneously, and leisurely transfer the images to PC one-by-one
- Capture multiple images without missing even a single frame, transfer all the images and easily retry to get the images to host
- Capture only one frame per second on request through a simulated trigger and transfer the most recent image or current frame
- Use Android with USB 2.0 interface and get 13 MP images without corruption

The demo application window (image streaming on FSCAM CU135) is shown below.



FSCAM_CU135 streams Ultra HD (3840 x 2160) at 30 fps and 4K Cinema (4096 x 2196) at 30 fps over USB 3.0 in compressed MJPEG format. It also streams FHD (1920 x 1080) at 60 fps and HD (1280 x 720) at 60 fps in both uncompressed (UYVY) and compressed MJPEG formats.

The Multi Frame Buffer Camera form factor of $50 \times 30 \times 31.3$ mm (with lens) and $50 \times 30 \times 30.2$ mm (without lens) consists of 1/3.2-inch AR1335, a 1.1 pixel BSI CMOS image sensor from ON Semiconductor® and the lens mounted on S-Mount holder (also known as M12 lens mount).

FSCAM_CU135 supports Type-C connector for USB3.0 interfaces with USB2.0 backward compatibility.

Sample Application

e-con Systems provides sample Windows applications (e-CAMView) and Linux applications (QtCAM) that uses the standard UVC protocol to access the camera controls. e-CAMView, a DirectShow-based image viewer application support controls such as Gain, Exposure, Saturation, Brightness, Contrast, and so on. The region of interest-based autofocus and auto exposure is enabled through the extension unit. Also enabled are Quality Control of MJEG streaming, Burst Mode, iHDR, Scene Mode, and De-Noise, as well as effects such as Sketch, Negative, Grayscale, and so on. The exposure time and the noise reduction level can be adjusted manually. QtCAM, an Open source Linux camera software application used for capturing and viewing video from devices that are supported by Linux UVC driver and also works with any V4L2 compatible device.



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Availability

FSCAM_CU135 is currently available for evaluation. Customers interested in evaluating **FSCAM_CU135** camera can order samples from e-con Systems' online store. For more information, please visit https://www.e-consystems.com/multi-frame-buffer-camera.asp. Also, watch the demo videos:

Multi Frame Buffer: https://www.youtube.com/watch?v=-GSsA0N7a74

3D Printing: https://www.youtube.com/watch?v=HLxST4I1dtw

Getting Started: https://www.youtube.com/watch?v=VZ1yc9K26Ug

Customization Services

If you are interested in customizing **FSCAM_CU135** or for any additional features, please contact <u>camerasolutions@econsystems.com.</u>

About e-con Systems

e-con Systems is a leading embedded camera solutions provider. We have a proven track record of serving customers across multiple industries, all over the world, for over 15 years. We provide specialized offerings such as 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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