



## PRESS RELEASE

e-con Systems Inc.

+1-314-732-1152

[sales@e-consystems.com](mailto:sales@e-consystems.com)

### For Immediate Release

#### **e-con Systems Launches World's first MIPI CSI-2 Camera Solution for nVIDIA® Tegra K1**

*e-CAM130\_CUTK1 – 13MP Camera for NVIDIA® Tegra K1, Jetson DevKit daughter board, Ultra HD Streaming @ 25fps in MJPEG, Uncompressed 13MP streaming @ 14fps 1/2.3" Optical format AR1820HS Sensor*

ST. LOUIS and CHENNAI, India — April 22, 2015 — **e-con Systems Inc.**, a leading embedded design services company specializing in the development of advanced camera solutions announces the launch of the world's first MIPI CSI-2 camera solution for nVIDIA(r) Jetson Tegra K1 development kit - [e-CAM130\\_CUTK1](#). e-CAM130\_CUTK1 is a 13MP MIPI CSI-2 camera board for nVIDIA® Tegra K1 powered Jetson development kit.

The e-CAM130\_CUTK1 is based on e-con Systems' [e-CAM130\\_CUMI1820\\_MOD](#) - 13 MP Camera Module and interfaces with the Tegra K1 processor over 4-lane MIPI CSI-2 interface. e-con Systems has developed the Linux camera driver for this MIPI CSI-2 camera and the camera driver is compatible with standard V4L2 APIs. Together with the sample viewer application, the e-CAM130\_CUTK1 forms a complete 4 lane MIPI CSI-2 camera solution comprising 13MP MIPI CSI-2 camera module, the compatible Linux driver and the sample viewer application running on Ubuntu distribution.

The e-CAM130\_CUTK1 solution is ideal for customers who wish to leverage the 4-lane high-speed MIPI CSI-2 interface of Tegra K1 CPU. The camera driver is a standard V4L2 driver and any V4L2 compatible application can access this camera. e-con Systems distributes a sample viewer application that demonstrates the video preview and still capture application. This viewer application runs on the Ubuntu distribution of Jetson development board. The 13MP camera module along with the adapter board allows the developer to incorporate this camera in to their designs immediately.

"We are excited to launch the 4-lane MIPI CSI-2 camera solution with the V4L2 driver for nVIDIA Jetson Tegra K1 CPU through our e-CAM130\_CUTK. Earlier we launched 8 MP USB 3.0 camera support for Jetson board. Some of our customers using this USB3 camera have been asking for 4-lane MIPI CSI-2 support for Tegra K1 CPU citing to high performance. We are glad to have this fulfilled with the state-of-the-art camera solution that not only supports 4-lane MIPI CSI-2 but also 13MP resolution", said **Mr. Ashok Babu, President, e-con Systems Inc.** "Our customers can also engage with e-con Systems for customizing or porting our driver to any camera module or to any of their customized Tegra K1 boards. e-con Systems also provides customization and porting services for our MIPI CSI-2 camera driver", he added

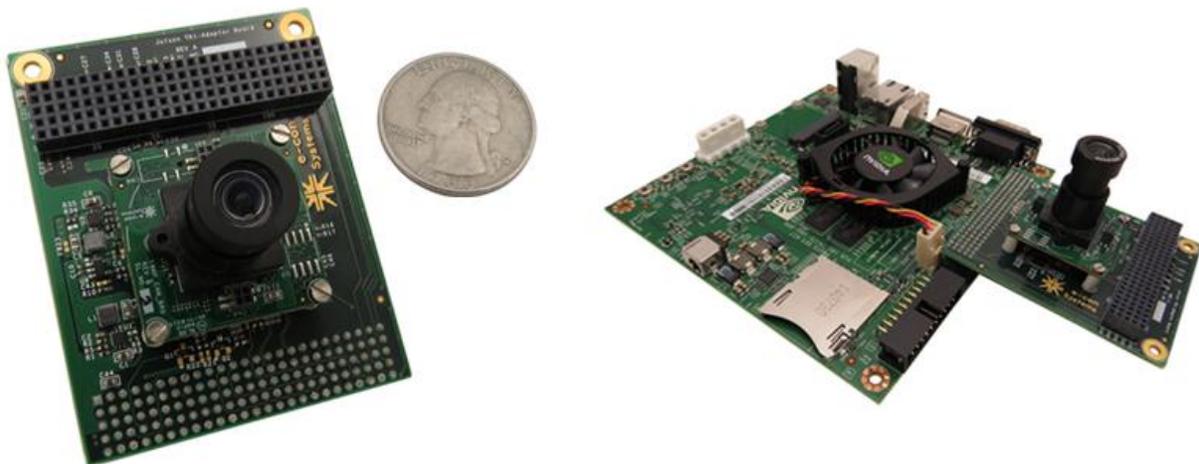


Fig: e-CAM130\_CUTK1 on nVIDIA® Jetson TK1 development kit



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The e-CAM130\_CUMI1820\_MOD is based on AR1820HS CMOS Image sensor from Aptina Imaging and is provided with the S-mount (M12) lens mount that enables customers to choose a lens of their choice. This camera module houses an high-performance ISP chip that performs Auto functions (Auto Exposure, Auto White Balance, etc) in addition to the complete ISP pipeline that provides best-in-class images and video along with the optional MJPEG compression. The e-CAM130\_CUMI1820\_MOD supports 4-lane MIPI CSI-2 interface for video transport and the standard I2C interface for camera control. Through the 4-lane MIPI CSI-2 interface, this camera module supports Ultra HD (3840x2160) video streaming in addition to Full-HD and HD video streaming in both uncompressed YUV422 and MJPEG formats. The still image capture is supported at full 13MP resolution in both uncompressed BMP and compressed JPEG format.

On the nVIDIA Jetson development kit, the e-CAM130\_CUTK1 supports streaming VGA@ 102 fps, HD@ 60 fps (720p60), Full HD@50 fps (1080p30), 4K or Ultra HD@ 22 fps (3840 x 2160) and 13MP@ 14 fps in uncompressed YUV format. It also streams VGA@ 102 fps, HD @ 50 fps, FHD @ 52 fps and 4K or Ultra HD (3840 x 2160) at 25 fps in compressed MJPEG format. This can also stream the 13MP video at a maximum of 15fps in compressed MJPEG format. The camera driver also exposes the standard camera controls such as exposure, brightness, contrast, saturation, white balance, gamma, gain, sharpness etc through the V4L2 interface.

### Availability

The e-CAM130\_CUTK1 is readily available from e-con Systems. Customers interested in the e-CAM130\_CUTK1 can write to [sales@e-consystems.com](mailto:sales@e-consystems.com) to get the availability and pricing information.

### Customization services

Customers, who are interested in supporting any other MIPI CSI-2 camera on Tegra K1 or Jetson board can contact e-con Systems directly with the requirements. e-con Systems offers such customization services for supporting any image sensor and for any customized platform. For further enquiries, please write to [sales@e-consystems.com](mailto:sales@e-consystems.com)

For more information, please visit the product page of [13MP MIPI Camera for NVIDIA® Jetson TK1](#) or watch demo of e-CAM130\_CUTK1 at [https://www.youtube.com/watch?v=yIDqji-hi\\_k](https://www.youtube.com/watch?v=yIDqji-hi_k).

### About e-con Systems

e-con Systems specializes camera solutions with offerings like camera modules, USB camera modules, camera Device driver development services on Operating systems like Android/WinCE, Camera reference design, Software ISP, camera customization services and camera tuning services.

### For more information please contact:

Harishankkar

[sales@e-consystems.com](mailto:sales@e-consystems.com)

e-con Systems Inc., +1 314 732 1152

e-con Systems India Pvt. Ltd.,

Website: <http://www.e-consystems.com>

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