

# HDMI bridge IC streamlines mobile HD connectivity

ECN Europe

[Toshiba Electronics Europe](#) [1] has introduced the TC358743 HDMI to CSI-2 bridge, which overcomes the limited video-input capabilities of many application processors by allowing an incoming HDMI video/audio stream to be connected to the processor's MIPI CSI-2 camera input.



[2]When connected to the embedded application processor of a tablet device, a smart TV or a set-top box, the TC358743 enables a user to connect the HDMI output of a video source device such as a smartphone or laptop PC, a game console, a BD-player or Cable-box directly to the available HDMI input, using just a cable. Since the TC358743 also has an on-chip Consumer Electronic Control (CEC) unit, the user can then control the connected source device using the TV or set-top box remote. An NEC-compliant infrared input is also integrated on-chip.

The TC358743 HDMI to CSI-2 bridge supports the latest HDMI 1.4 standard, and accepts RGB or YUV video in 2D as well as common 3D formats at up to 60 frames per second and up to 1080p resolution. HDMI Display Data Channel (DDC) and Extended Display Identification Data (EDID) are also supported. Robust content protection is assured by an integrated High-bandwidth Content Protection (HDCP) decryption engine and HDCP key storage, plus integrated authentication engine.

The MIPI CSI-2 (version 1.01) output of the TC358743 provides up to four 1Gbps lanes for transmitting video, audio and InfoFrame data to the application processor's MIPI CSI-2 camera input. An I2S port is also integrated, enabling the bridge to transmit audio from the HDMI stream through an I2S connection or embedded in the CSI-2 stream.

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The TC358743 is housed in a 1.2mm-high 6mm x 6mm 64-pin 0.65mm-pitch ball grid array package.

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### **Links:**

[1] <http://www.toshiba-components.com>

[2] <http://ecneurope.files.wordpress.com/2012/05/170512-toshiba.jpg>