MIPI® Support Added to Multilayer LCD Display Controller Available from CAST

NEWS: Woodcliff Lake, NJ and Patras, Greece — January 23, 2015 — Sophisticated graphics displays are critical for user acceptance and commercial success in many application areas. One of the most compact, lowest power, and fully featured controllers available for such displays—the ThinkLCD-ML Multilayer Display Controller Core available from CAST, Inc.—is now even more versatile with the addition of support for MIPI® Specifications for mobile display interfaces.

Sourced from MIPI Alliance Member Think Silicon Ltd., the ThinkLCD-ML controller efficiently composes display content by combining multiple video or graphic layers, scaling, clipping, and positioning each layer as required, with or without alpha blending transparency. It can significantly reduce system-wide energy usage by offloading these duties from a Graphical Processing Unit (GPU) or host processor, and it does so with a modest silicon gate count.

Multilayer Display Example
The ThinkLCD-ML Controller first sources from YUV data and scales it to full screen display. It then places nicely blended controls on top of the video.

The display controller is now ready for use in more applications, with optional interfaces compliant to the MIPI Display Bus Interface (DBI-2℠) and MIPI Display Pixel Interface (DPI-2℠) specifications. These join the BT.656, LVDS, Parallel RGB, YUV, and other interfaces already available, enabling the controller to work over HDMI, DisplayPort, or DVI connections.

Using the MIPI DBI interface yields an additional energy-saving benefit, support for partial screen refresh. This allows the system to update just the portion of the screen that has changed rather than the entire panel, which results in dramatic decreases in framebuffer memory accesses and LCD interface data traffic. The latter characteristic can significantly reduce a device's power consumption. This is especially true for applications with mostly static screen data, such as wearable fitness device status displays just counting steps or smartwatch faces just moving their simulated clock hands.

— more —

The updated ThinkLCD-ML Core is available now. It is part of CAST's royalty-free IP product line that also features 8051s and BA2x 32-bit Processors; graphics accelerators and processing units; video, image, and data compression; security, interfaces and other functions needed for complete system-on-chip designs. Call CAST at +1 201.391.8300 or visit www.cast-inc.com to learn more about licensing ThinkLCD-ML or other IP.

Visit www.think-silicon.com to learn more about Think Silicon.

About MIPI Alliance

MIPI® Alliance is a global, collaborative organization comprised of companies spanning the mobile ecosystem that are committed to defining and promoting interface specifications for mobile devices. MIPI Specifications establish standards for hardware and software interfaces which drive new technology and enable faster deployment of new features and services across the mobile ecosystem.

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