

Dialog Semiconductor enables 3D experience for smartphones and tablet PCs with first 2D to 3D video conversion IC

13 December 2010

13 December 2010 Low power 3D enabled portable devices with instant access to unlimited 3D content and no need for glasses

Kirchheim/Teck, Germany 13th December 2010 – Dialog Semiconductor plc (FWB: DLG), a provider of highly integrated innovative display, audio and power management semiconductor solutions, has announced the DA8223, the world's first real time 2D to 3D video conversion chip for portable devices including smartphones and tablet PCs. The device also integrates a [parallax barrier](#) screen driver that lets users view 3D content without the need for glasses.

The IC analyses each 2D video frame and creates a layered depth map, isolating foreground and background objects. From this, each original image pixel is mapped into left and right eye pixels that, when viewed through a parallax barrier filter on the display module, renders the 3D image directly. The DA8223 integrates the complete 3D conversion process which means that unlike traditional software-based solutions, there is no extra load on the host application processor and no external memory requirement.

Mark Tyndall, VP corporate development and strategy at Dialog Semiconductor commented: "The demand for a 3D experience on your smartphone is now here, but very little 3D content currently exists. Using the DA8223 our customers can, without compromising battery life, create a truly unique offering; products with immediate access to unlimited 3D content."

"The DA8223 is the first hardware based 2D-3D conversion technology optimised for portable devices. It requires virtually no software development and uses a tiny fraction of the battery and compute power of competing application processor based software-approaches," added Tyndall.

Supporting still images and video at 60fps, and able to display 3D content in both portrait and landscape formats in real-time, the DA8223 ensures an enriched and very comfortable 3D viewing experience of actual 2D content, even during prolonged use.

The DA8223 is compatible with the widest range of 3D capable displays from 3.8 inch smartphones up to 10 inch Tablet PCs. It will also work with any display equipped with a parallax barrier filter including OLED and the latest TFT displays from Sharp.

The 5x5mm 81-ball UFBGA chip can be mounted on the PCB, between the application processor and 3D display, or on the display module as a chip-on-flex. Device samples will be available early in 2011, enabling products to be in mass production from the second half of 2011.