

## Sharp presents the world's first 3D TV with Quattron technology

**The future of television is three-dimensional: after the introduction of flat screens and more recently of HDTV, the next big trend in the TV market is 3D TV. Japanese electronics group Sharp regularly sets standards in the LCD TV segment, and is now announcing the market launch of the world's first 3D-capable LCD television with Quattron technology. With this new system, the fourth pixel colour – yellow – makes a decisive contribution to producing the most brilliant 3D pictures so far achieved by flat-screen TVs. The market launch for Germany and Austria is planned for the third quarter of 2010.**

**Hamburg, April 2010.** Over the next few days, Sharp will be presenting its first 3D LCD TV panel. The products based on this technology have unprecedented picture quality for 3D TVs. In particular, colour rendition is astonishingly bright and brilliantly clear. Moreover, Sharp has been able to reduce undesirable double-contour “ghost images”<sup>1</sup> to a minimum through the perfect interplay of innovative LCD TV technologies such as UV<sup>2</sup>A, Quattron and Super Edge LED Backlight. Sharp uses shutter technology to create the impression of 3D images. Viewers must therefore wear special “shutter glasses” to watch 3D content.

The combination of the latest display technologies from Sharp provides the best 3D picture quality so far available from flat-screen TVs. For example, the UV<sup>2</sup>A system developed by Sharp ensures optimal alignment of the liquid crystals in the display. TV picture quality is thereby optimized, and the aperture ratio of the panel is improved. This aperture ratio, by increasing the light admitted from the backlight, provides the ideal basis for compensating for the loss of brightness caused by the alternate left-right switching of the shutter glasses. With the Quattron system, Sharp has added yellow as the fourth sub-pixel primary colour, thereby further enhancing the picture quality of its displays. As a result, Sharp 3D TVs produce a brilliant 3D effect. The refresh rate is also perfectly adapted to the 3D panels. Finally, the innovative and extremely energy-efficient Super Edge LED backlighting from Sharp ensures perfect illumination of the display and therefore an even more brilliant picture.

In addition to outstanding picture quality, Sharp attaches high priority to the eco-performance of its products. This environmental concern also went into the development of 3D LCD TVs: watching television through 3D glasses makes the picture appear slightly darker, and so Sharp has responded by making the display 1.8 times brighter than conventional 3D TVs. The perfect interaction of UV<sup>2</sup>A and Quattron technology means that with the same backlight intensity, less light is lost when it is shone through the panel. The display is therefore brighter without increasing the energy consumption.

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<sup>1</sup> If the sequence of individual picture signals is too slow, an impression of offset picture replication (ghost image) is produced. This ghosting effect detracts from the overall experience when watching TV content.

To-date, shutter technology is the method that generates the best 3D effect. Consequently, Sharp 3D LCD TVs operate in combination with this additional equipment. Finally, the TV and glasses are perfectly synchronized. When all the components are activated, the television in 3D mode transmits images specially optimized for the right and left eye in rapid alternation. In synchronization with these signals, the glasses switch the right or left lens from "transparent" to "dark". The human eye cannot perceive this alternation between right and left images. Instead, a perfect 3D effect is created.

The best 3D picture available from flat screens, combined with outstanding environmental properties, is now packaged in the new AQUOS design. At IFA 2010, retailers, industry experts and end users will be able to see the new Sharp AQUOS 3D LCD TVs for themselves, receiving confirmation from their own eyes that these models provide the best 3D experience available. The market launch is scheduled for the third quarter of 2010, precisely to coincide with the world's largest CE trade show.

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#### Sharp's environmental activities

With its global environment strategy, Sharp has made environmental protection an integral part of its corporate culture. What we call the Sharp Super Green Strategy covers the production of energy-saving and energy-generating products in ecologically advanced plants, along with responsible recycling. One of the company's main aims on the road to becoming an "environmentally advanced company" is to significantly reduce both direct and indirect CO<sub>2</sub> emissions in our operations and products. Throughout the world, Sharp has defined environmental standards that apply to all our plants and products, and these are being continuously revised and dynamically improved.

You can find more information about Sharp's environmental activities on the Sharp Green Site at [http://www.sharp.eu/sharp/apps/eu/green\\_site/green\\_site.html](http://www.sharp.eu/sharp/apps/eu/green_site/green_site.html).