

# **World's First Single-Chip Solution for Multi-Standard High Definition TV, DVD, Set-Top Boxes and Car Multimedia Center**

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STMicroelectronics has today announced the world's first single-chip Set-top Box (STB) solution supporting the High Definition H.264/AVC and VC1 specifications, which are poised to enable the next generation of high quality consumer video systems and broadcast services. ST is the world's leading supplier of ICs for set-top boxes, and the introduction of the new STB7100 allows manufacturers to introduce products that will enable this market.

The extraordinary level of integration of the new device - which combines all the STB functions and multi-standard decoding circuitry into a single chip, rather than being an add-on processor for an existing product - coupled with its production using ST's state-of-the-art 90nm process technology, results in the most cost-efficient solution and minimizes both design and production costs for STB makers.

Both VC1 - Microsoft's Windows Media 9 Series codec - and the H.264/AVC (Advanced Video Coding) standard, also known as MPEG-4 Part 10, are ultra-efficient, fully scalable video technologies that produces high quality video at lower data rates than current solutions for everything from HDTV and DVD to 3G (third generation) mobile phones. Services broadcast using H.264 use considerably less bandwidth than the currently widely used MPEG-2 coding scheme, and at a much lower bitrate, allowing broadcasters to economically transmit more high definition programming. Compression efficiency is improved by more

than 50%.

The latest advanced codec technologies for DVD-Audio and DVD security encryption are embedded in the new decoder, and the use of a powerful ST40 CPU makes the STB7100 the ideal platform for Car Multimedia Centers able to directly drive - as a Master device - applications such as GPS, at the same time as handling DVD and audio.

"By creating our STB7100 H.264 solution as a single chip in 90nm technology instead of taking the simpler co-processor path, ST is providing manufacturers with by far the most cost-effective base for their products in this market," said Christos Lagomichos, General Manager of ST's Set-Top Box Division. "The demand for new H.264 and VC1 video codec chips is incredible, and the availability of the STB7100 means that consumers will soon have HDTV boxes, IP-TV and DVDs that use the latest standard, and broadcasters will be encouraged to further develop their services. And this is the ideal platform for the HD-DVD and Blue-Ray DVD technologies."

The STB7100 can simultaneously decode multiple HD streams and output the resultant video to two television sets, or display picture-in-picture. Its CPU core is a high-performance 300MHz ST40, ST's 32-bit RISC family based on the SuperH™ architecture and widely used across digital consumer applications. It supports all of the current STB operating systems and middleware, with power to spare for software enhancements in the future.

The new device is based on an innovative video decoding architecture which combines hardware and software techniques to allow systems to be upgraded in the field to support new standards as they become available. For Digital Video Recorder (DVR) applications it features embedded peripheral interfaces - including serial, ATA and USB 2.0 - to allow external devices to be added easily to an STB or DVD player,

either during manufacture or by the viewer, in order to provide additional functionality. Viewers increasingly use digital video recording for program time shifting. Other peripherals that could be connected to a set-top box through the USB interface include digital cameras, printers, and memory cards.

The latest advanced codec technologies for DVD-Audio and DVD security encryption are also embedded in the new decoder, and the use of the powerful ST40 CPU makes the STB7100 the ideal platform for Car Multimedia Centers able to directly drive - as Master device - applications such as GPS, at same time as handling DVD and audio. It is a true multi-ple application chip.

The STB7100 is available now in sample quantities in a 35 x 35 PBGA package and costs \$29 when purchased in large volumes. Volume production is planned for early 2005.

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