STMicroelectronics Demonstrates Connected Home Platform

Posted by Chris Warner

STMicroelectronics is showcasing its latest-generation connected home platform in Las Vegas during the worlds largest Consumer Electronics Show.

Codenamed Orly when first revealed to the market in September 2011, the worlds most powerful connected home system on chip, now designated STiH416, is implemented in a 28 nm manufacturing process and provides the extreme performance needed for a truly amazing home entertainment experience. Combining advanced broadband and broadcast functionalities with intensive on-chip computing that includes a dual-core applications processor and a dedicated graphics engine, the STiH416 gives consumers easy access to the vast world of premium content and Internet-based entertainment, as well as personal content. The new device supports true multi-screen experiences, with real-time transcoding capability for seamless streaming to multiple equipments ranging from smartphones and tablets to large-screen televisions and delivers its outstanding performance with minimal power consumption.

STs demonstrations in Las Vegas highlight the STiH416 supporting advanced digital entertainment experiences such as integrated broadcast and Over The Top (OTT) Internet content, multi-screen multimedia streaming, 3D gaming and TV, social videoconferencing, and home automation communicating with other home devices and sensors.

"The new STiH416 is a game-changer for the home entertainment industry," said Laurent Remont, General Manager for ST's Connected Home Division. "As the first connected home IC to feature a dual-core ARM application processor combined with a high-performance graphics processor, advanced HD decoding and encoding functionalities to enjoy content from any screens, and a state-of-the-art flexible security engine, it provides a future proof platform for operators and retailers to deliver best in class digital entertainment, social and home service."

With its advanced features and security, as well as low power consumption, STs STiH416 supports the new and diverse ways that people want to use the Web, watch TV, share their own digital content, and network with friends while at home. At its heart, the dual-core ARM® Cortex™-A9 MPCore™ application processor and ARM® Mali™-400MP quad-core graphics processor enable the system-on-chip to manage software environments such as Android™, HTML5, Adobe® AIR® and Qt for optimized playback of content and applications, and to handle 3D graphics for advanced user interfaces, gaming and 3DTV. An advanced application framework is offered with this device, which takes advantage of the SoCs advanced security hardened features, in order to allow a light-weight framework to run multiple and independent applications simultaneously.

The STiH416s, high-performance flexible multimedia processing subsystem is able to decode multiple H.264 full HD as well as many other video standards such as DivX, Multi View coding (MVC) 3DTV, and Google WebM, etc.; all with the outstanding Faroudja™ video-image quality. Powerful transcoding and encoding capabilities enable the device to serve multiple screens with High Definition content as well as run videoconferencing applications. The STiH416 also integrates a dedicated transport processor for seamless streaming, as well as a security processor meeting the latest Conditional Access (CA) and Digital Rights Management (DRM) standards.

While it has engineered unprecedented performance and features into the STiH416, ST has also leveraged its low-power design expertise to achieve exemplary energy efficiency. The device is fabricated using low-power process technology, and has a power-saving architecture for both CPU and GPU with separate domains having independent voltage control. Multiple energy-saving modes minimize power consumption under all operating conditions, ultimately cutting consumption to less than 30mW in passive standby mode. Everything together makes the STiH416 simultaneously the worlds highest performing and lowest-power connected home set-top box system-on-chip.

The STiH416 is sampling now to lead customers, in a 35 x 35mm FCBGA package. Full production is scheduled for the second half of 2012.

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