

Samsung Electronics Develops Highly-Integrated System-on-Chip for HDTV and Digital Set-Top-Boxes

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[Samsung Electronics Co. Ltd.](#), a leader in advanced silicon technology solutions, today announced its new highly-integrated system-on-a-chip ([SOC](#)) device for High Definition TVs and digital set-top-boxes.

The S5H2200 is a single-chip solution that incorporates dual HD MPEG-2 decoders, which can simultaneously provide high-quality audio and video for digital broadcasts to the sub-screen as well as to the main screen, an ARM920T-based 330MHz CPU, and the company's proprietary picture improvement function, DNIE (Digital Natural Image Engine).

The S5H2200 supports various display modes such as multiple picture-in-picture (PIP) and picture-in-graphics (PIG), providing an added

convenience for digital TV viewers.

It also includes 24-bit digital signal processor (DSP) for high fidelity sound, and supports multiple-input Transport Stream Decoder (TSD) for Personal Video Recorder (PVR) application. Interfaces for various peripherals such as Memory Stick, ATAPI, IEEE1394 and USB make it compatible with external inputs from other digital devices such as digital STB, DVD, game console, and digital camcorder.

Especially, "Platform-base design technology is newly applied so that each function block(CPU, A/V Decoder, DNIE, and DSP) can be independently designed and then integrated with the others. This technology helps designers to upgrade and add new features at each individual IP level without touching the entire design. It is expected that this "platform-based design" greatly reduces time, cost and overall design risk for developing derivative products, as well as providing the framework for responding quickly to future technologies and changing market requirements."

"Our newest SOC device for the digital TV market stands shoulder to shoulder with industry leaders in every core technology from picture quality, performance, data processing, speed, and specialized design architecture," said Don H. Lee, vice president of Samsung ElectronicsSOC R&D Center. "As the adoption of digital broadcasting increases, HDTV is quickly emerging as a key product in the next-generation digital video segment."

The US Federal Communications Commission has a determining effect on both regulations governing both American and global broadcasting and communications. The FCC has ruled that 50% of all TVs with screens 36" and larger must be equipped with tuners for digital broadcasting this year. That stipulation will be extended to all TVs with screens of 13" or larger in 2007. Currently, US broadcasters are at least

99% ready to begin digital TV broadcasts.

In 2004, France and Italy are scheduled to begin digital broadcasting, and China will join the group next year. Consumer purchases of stand-alone and built-in-HDTVs are soaring, and demand for fusion products such as the PVR is growing steadily.

Market research firm, iSuppli, puts the average annual growth rate in the digital TV at 66%, and predicts the shipment of digital TV will be increased from 17 million units in 2004 to 77 million units in 2008.

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