

DOCSIS 3.0-based high-speed cable modem SoC for full-HD multimedia and internet-TV services

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STMicroelectronics is going to demonstrate a cable modem meeting the latest DOCSIS 3.0 specifications at IBC 2012, Amsterdam, September 7 to 11.

ST's DOCSIS 3.0 modem is able to bond sixteen downlink channels and four uplink channels to achieve data speeds of 800Mbps downstream and 108Mbps upstream. This is significantly faster than modems in the market today and these data speeds will allow multiple users to experience high-quality full-HD multimedia and interactive Internet services simultaneously through the home network. ST's expertise in this technology insures high wireline data rates.

ST's DOCSIS 3.0-based [cable modem](#) technology is associated with a dual-core ARM Cortex-A9 processor and has applications in routing, switching, telephony, security and media-server functions.

With additional multimedia support and security algorithms for pay-TV and Internet-based services, it will be at the heart of a range of ST ICs for applications such as cable set-top boxes, headed/headless gateways, and cable modems.

"DOCSIS 3.0 specification defines the functionality and performance that cable operators need to innovate and enhance services going forwards," said Laurent Remont, ST's Digital Convergence Group Vice

President and Unified Platform Division General Manager. "Our DOCSIS 3.0-based technology outperforms all others currently available, and will empower ST customers to create advanced products capable of delivering high-quality content and new services such as [home automation](#), home security and e-Health."

DOCSIS 3.0 Technology

The Data Over Cable Service Interface Specifications (DOCSIS) cable modem is used by cable service providers and equipment suppliers in major territories worldwide. Widespread adoption of DOCSIS, including EuroDOCSIS throughout Europe, has enabled [cable TV operators](#) to become full-service video, voice, and data telecommunications providers.

The latest version, DOCSIS 3.0, supports Internet Protocol TV (IPTV) allowing services such as on-demand content and streaming video, and also supports the next-generation Internet Protocol (IPv6) and delivers improvements such as enhanced quality of service.

Moreover, DOCSIS 3.0 introduces channel bonding for cable modems, a flexible technique enabling high-performance devices that provide data speeds significantly over 100Mbps. This is a key enabler for delivering rich multimedia services and fast Internet access to multiple home users, simultaneously.

Shipments of DOCSIS 3.0 customer premises equipment are predicted to reach 49 million units by 2015, according to market analyst IMS.

Provided by STMicroelectronics

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