

# HD cable STB processor with integrated demodulator and low-power standby controller

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## Data brief

## Features

- ST40 applications CPU with 256 Kbyte L2 cache
- 16-bit LMI supporting DDR3
- Decoding of H.264, MPEG2, VC-1 and AVS HD video streams
- 3DTV decoding and display compatible with HDMI 1.4b
- Extensive connectivity (2 × USB 2.0 ports; Ethernet MII/RMII/TMII port; SD/MMC card port)
- Secure boot from SLC NAND Flash or Serial NOR Flash
- Low-power process and architecture
- Integrated low-power standby controller
- High-quality video resizing and de-interlacing
- Targets two layer PCBs for cost-effective zapper and STB applications
- Integrates cable demodulation and FEC

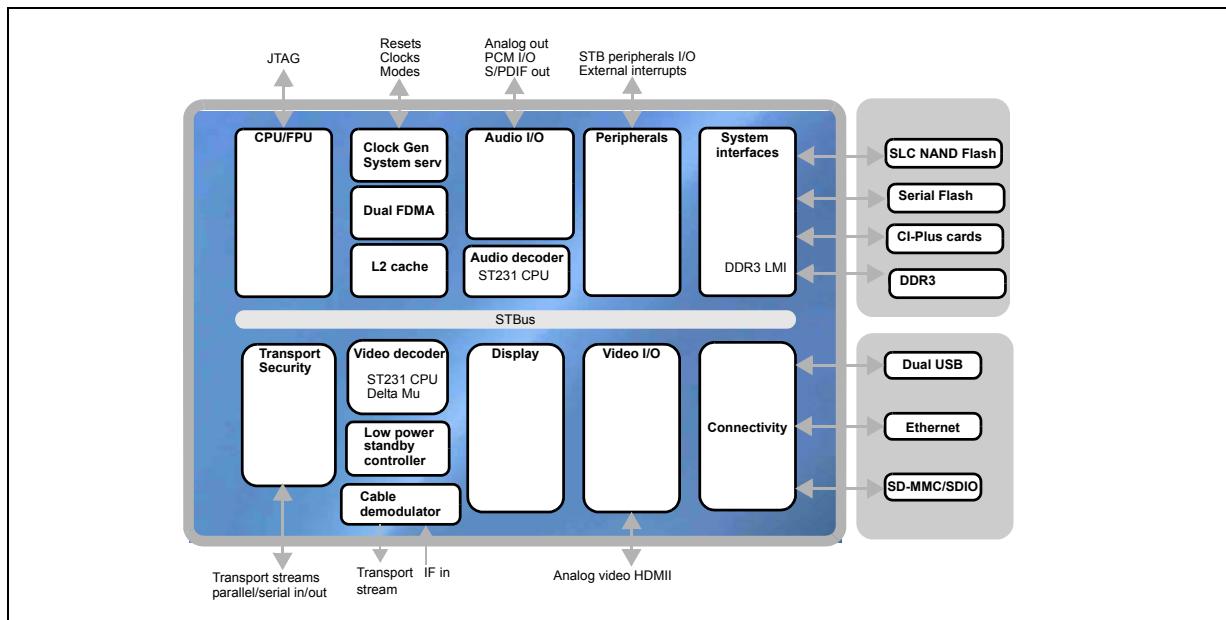
- Integrated Ethernet PHY

## Description

The STiH270 uses the latest process technology to provide a cost-effective, feature rich, highly integrated SoC for set-top boxes (STBs). It is targeted at the advanced decoding STB market across cable network, and is suitable for operator markets (with advanced security) and retail markets worldwide.

The STiH270 provides a solution for operators and manufacturers to specify a range of cost-effective, high-performance STBs, including basic zappers, interactive STBs, and DVR STBs with content delivery possible using broadcast or broadband networks or both (hybrid STBs).

The STiH270 integrates a high-performance cable receiver, supporting cable reception, channel demodulation and forward error correction (FEC). The cable receiver is compliant with ITU-T J.83 Annex A/B/C and DVB-C specifications.



## 1 Features benefits summary

The STiH270 offers current users of ST's growing family of advanced decoding ICs enhancements in performance and features, enabling operators to offer consumers new multimedia-rich services and viewing experiences, including new 3DTV features. Faster DDR3 memory is also supported, and the applications CPU benefits from an L2 cache. The STiH270 keeps pace with the latest advanced security requirements of the main CA vendors, and an integrated standby controller enables the STiH270 to target stringent low power regulations.

Features	Benefits
Integrated cable demodulation/FEC.	Highly integrated STB solution, reducing component count and manufacturing BOM.
ST40 applications CPU, with 32KI and 32KD L1 caches and 256K L2 cache.	High performance processing for applications and middleware.
Integrated low power standby controller within its own power island.	Secure hibernation to, and fast resume from, very low power passive standby mode, targeting STB standby power < 0.5 W.
Latest generation of ST's Delta video decoder coupled with a High Quality Video Display Pipeline (HQVDP).	Decoding of advanced high-definition standards (MPEG2, H264, VC-1, AVS) plus the performance and flexibility for web-based content decoding such as Flash®, DivX™, MJPEG and Real®, without impacting applications CPU performance.
Dual USB 2.0 hosts, Ethernet MAC with MII/RMII/TMII interfaces, SD-MMC/SDIO interface.	Extensive high-speed connectivity for the widest range of STB peripherals, such as Flash drives, external HDDs, Ethernet, home network controllers (such as MoCA®, Wi-Fi), DOCSIS® modem and memory cards.
NOCS3.0, NSK2.0 and DVB-CSA3 ready.	Fully-compliant with the latest advanced security requirements of CA vendors.

## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
30-Aug-2013	1	Initial release.
16-Sep-2013	2	<ul style="list-style-type: none"><li>– Removed RPN:STiH272 from the document. The document relates to only one RPN, that is, STiH270.</li><li>– Changed DVB-C in <i>Features</i> and <i>Description</i> sections to cable. Also, the change is done in cover page diagram and Features benefits summary.</li></ul>

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