STi7108M

Advanced HD AVC decoder with 3D graphics acceleration and MoCA

Data brief

Features

- Open GL ES 2.0/Open VG 1.1 compatible 3D graphics GPU for enhanced EPGs/UIs
- 1080p50, 1080p60 video decoding
- High-performance ST40 applications CPU with Level 2 cache
- High-performance ST40 real-time CPU
- MoCA® 1.1 interface
- Dual eSATA ports
- Triple USB 2.0 host ports
- Dual 16-bit/32-bit LMI supporting DDR2/DDR3
- Dual Ethernet GMAC
- Low power process and design with dynamic power management architecture

Description

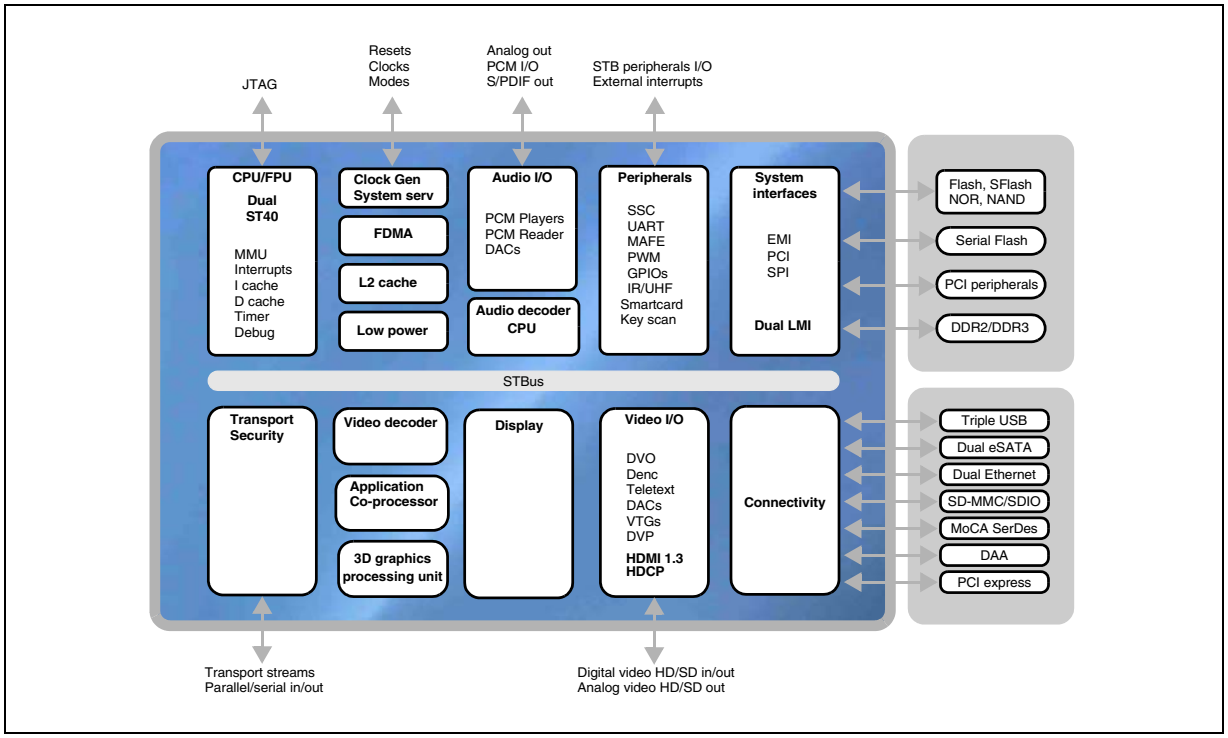
STi7108M is the next generation of HD, AVC set-top box decoder for satellite, cable, terrestrial and IP-STB markets that require MoCA® 1.1.

The STi7108M provides a solution for operators to specify a range of high-performance, MPEG2 / H.264 / VC-1 STBs.

The STi7108M can be used with zappers, IP clients, DVR standalone, and DVR server/home network STBs, especially where true 3D graphics is required.

Content delivery is possible using broadcast or broadband networks, or both (hybrid STBs).

The STi7108M is also targeted at next generation DLNA compatible Blu-ray (BD) and HD Media players.



For further information contact your local STMicroelectronics sales office. www.st.com

1 Introduction

The STi7108M integrates in a single IC, multi-stream transport demultiplexing, an applications CPU, a real-time CPU, A/V decode, video processing, true 3D graphics and display, advanced security, Multimedia Over CoAx Alliance (MoCA® 1.1) interface, STB peripherals, audio/video DACs, digital A/V outputs, HDMI, dual eSATA ports, triple USB ports, dual Ethernet controllers (GbE capable) and an SDIO/SD-MMC card controller.

Features	Benefits
ST40 applications CPU, ST40 real-time CPU, ST231 applications co-processor. Each CPU has 32KI and 32K L1 caches with 256K L2 cache for the ST40 applications CPU.	The high performance ST40 CPU for applications and middleware, is enhanced by a real-time companion ST40. The real-time ST40 off loads a/v management and network protocols. The applications CPU is complemented by a co-processor, for multimedia processing and security/DRM in home networks. Each ST40 works with the ST231 to deliver unparalleled CPU performance from a single STB SoC.
Integrated graphics processing unit (GPU). Programmable Vertex (geometry) processor and fragment (pixel) processor, accelerated four times full scene anti-aliasing (4 × FSAA).	True 3D graphics and 2D vector graphics acceleration, optimized for HD consumer digital video applications. Compatible with the latest Open GL ES 1.1/2.0 and OpenVG 1.1 libraries, for best-in-class 3D graphics effects/games, font rendering and Adobe Flash® support. Open GL ES 2.x ready. Decoded HD video can be used as textures for visually enhanced, video rich navigation guides and user interfaces, and provides a platform for 3D gaming.
Latest generation of ST's video decoder with an ST231-based multi-codec capable controller coupled with a High Quality Video Display Pipeline.	Decoding of advanced high definition standards for broadcast (MPEG2, H264, VC-1, AVS) plus the performance and flexibility for web-based content decoding such as Flash®, DivX™, MJPEG and Real®. New capabilities such as, Dual H264 HP@L4.1 decoding for HD PIP, and video-video transition effects, decoding of H264 HP@L4.2 (1080p50, 1080p60 decoding) and premium rescaling techniques open the way for high quality viewing of enhanced HD services on the latest generation of TVs.
Latest generation transport/security subsystem, with enhanced performance for DVR client/server-based home networks.	Multi-stream transport demultiplexing, descrambling and section/data filtering. Up to 6 live TS inputs supported.
MoCA® 1.1 subsystem, triple USB 2.0 hosts, dual e-SATA, Ethernet MAC with MII/RMII/TMII/GMII interfaces, PCI, SD-MMC/SDIO interface.	Extensive high speed connectivity for the widest range of STB peripherals, such as Flash drives, external HDDs, Gigabit Ethernet, home network controllers (such as MoCA®, Wi-Fi), DOCSIS® modem and memory cards.

Revision history

Table 1. Document revision history

Date	Revision	Changes
16-Mar-2011	1	Initial release.

Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST’s terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST’S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER’S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2011 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com