STi7102

Cost-effective HD decoder for retail STB
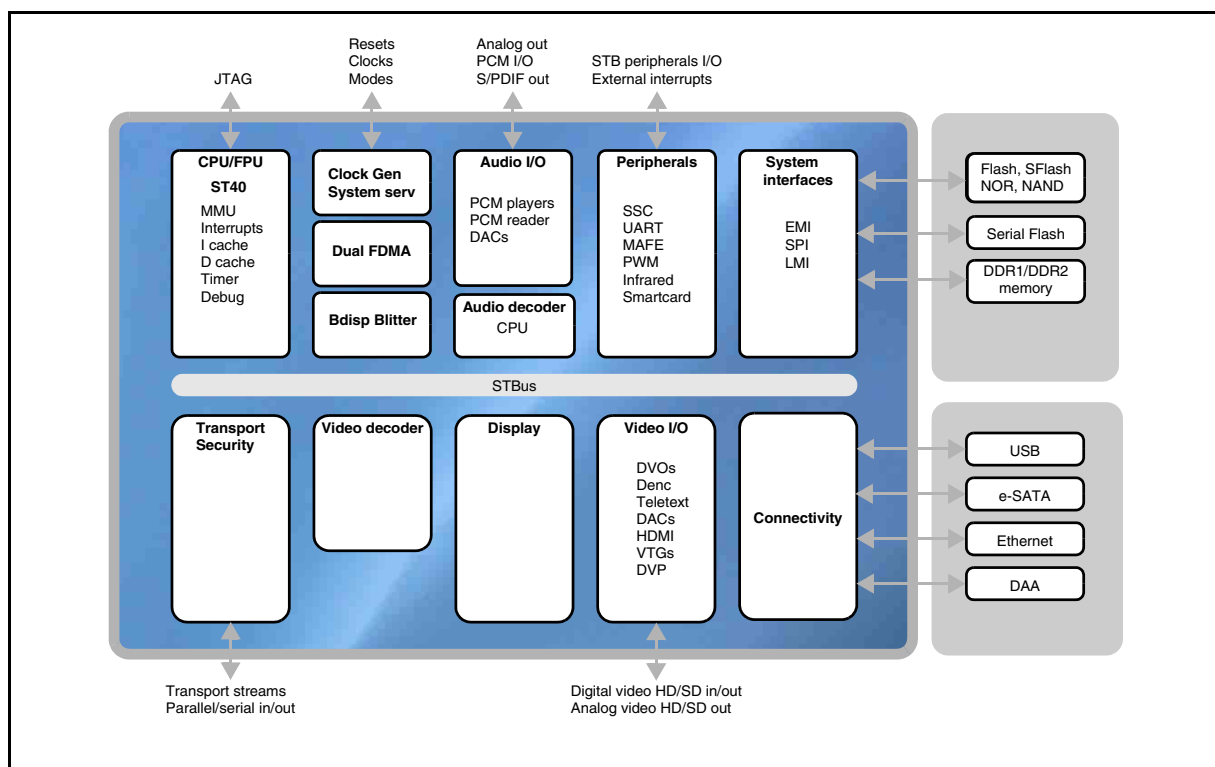
Features

- Advanced high definition video decoding (H264/VC-1/MPEG2)

- Advanced standard definition video decoding (H264/VC-1/MPEG2/AVS)

- Advanced multi-channel audio decoding (MPEG 1, 2, MP3, DD/DD+, AAC/AAC+, WMA9/WMA9Pro)

- DVD data decryption

- Multi-stream, DVR capable transport stream processing

- Linux, Windows CE and OS21 compatible ST40 applications CPU

- Multi-stream, DVR capable transport stream processing

- Single e-SATA port

- Dual USB 2.0 host ports

- Single16/32-bit LMI supporting DDR1/DDR2

- Single Ethernet GMAC

- Low power process and design, with dynamic power management architecture

Description

The STi7102 is a fully featured, HD, AVC decoder. The STi7102 integrates multi-stream transport demultiplexing, audio video decode, video processing, graphics and display handling, STB peripherals, audio video DACs, digital audio video outputs, HDMI, e-SATA, dual USB ports, an Ethernet GMAC controller, and an applications CPU.

For further information contact your local STMicroelectronics sales office.

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1   Introduction

The STi7102 is targeted at the latest Operator and CE manufacturer requirements for STBs that use advanced HD decoding (H264/VC-1/MPEG2). The STi7102 conforms to DVB, ISMA, ATIS-IIF, SCTE, ATSC, ARIB, CEA, ITU, OpenCable and MSTV specifications.

The STi7102 provides a solution for operators to specify a range of cost-effective, high performance HD STBs including zappers, IP clients, interactive STBs, DVR standalone and DVR server STBs. Content delivery is possible using broadcast or broadband networks, or both (hybrid STBs).

The STi7102 offers current users of ST's growing family of advanced decoding ICs enhancements in performance and features, while reducing cost and time-to-market for the next generation deployments.

Features	Benefits
ST40 applications CPU 32K I cache, 32K D cache	Sufficient CPU performance to ensure the implementation of high quality, HD, hybrid, DVR set-top boxes with internet access.
STMicroelectronics' DELTA video decoding system with ST231 processor	Decoding of advanced high definition standards for MPEG2, H264, VC-1 broadcast.
Dual USB 2.0 hosts, e-SATA, Ethernet MAC with MII/RMII and TMII, interfaces	Extensive high speed connectivity for the widest range of STB peripherals, such as Flash drives, external HDDs.
Low power process, design and architecture	Best in class, low power standby mode, to meet emerging energy standards for STBs. Dynamic configuration of power to individual sub-systems enables power-efficient active standby modes.
Advanced 2D graphics and display subsystem which also supports 3D user interface effects and 1080p60 display output	Allows visually appealing user interfaces and video rich navigation to be offered to consumers, while high quality progressive output can be watched on the latest high definition displays.

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
04-Jun-2010	1	Initial release.

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