

## Advanced STB decoder with integrated QAM demodulator

Data brief

### Features

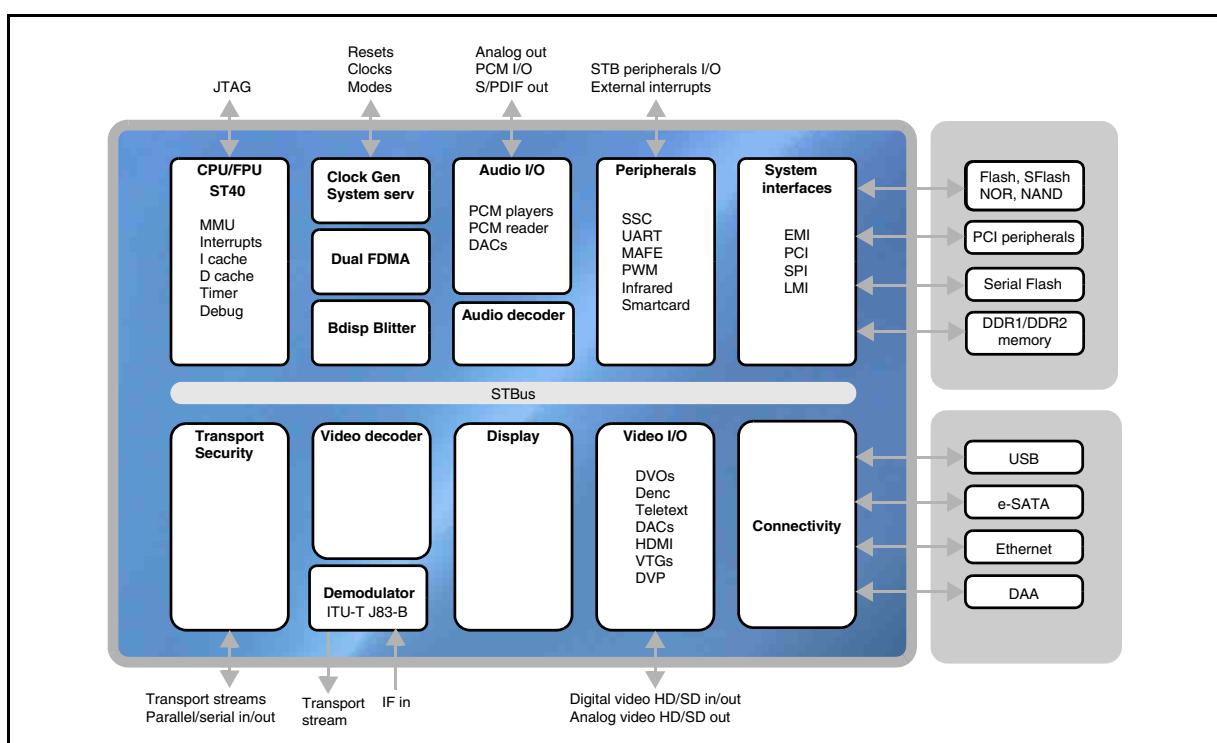
- ITU-T J83-Annex B compliant
- 256QAM demodulation and FEC sub-system
- Advanced high-definition video decoding (H264/VC-1/MPEG2)
- Advanced standard-definition video decoding (H264/VC-1/MPEG2/AVS)
- Advanced multi-channel audio decoding (MPEG 1, 2, MP3, DD/DD+, AAC/AAC+, WMA9/WMA9Pro)
- DVD data decryption
- Multi-stream, DVR capable transport stream processing
- Linux, Windows CE® and OS21 compatible ST40 applications CPU
- 32-bit DDR1/DDR2 compatible local memory interface

- Extensive connectivity (dual USB 2.0 host ports, e-SATA, Ethernet MAC/MII/RMII, and PCI)

### Description

The STi7197 is an advanced STB decoder with an integrated QAM demodulator, suitable for cable networks conforming to the ITU-T J83-Annex B standard (for example, US cable).

The STi7197 includes multi-stream transport demultiplexing, audio video decode, video processing, graphics and display handling, STB peripherals, audio video DACs, digital audio video outputs, PCI, e-SATA, dual USB ports, an Ethernet GMAC controller and ST40 applications CPU.



## 1 Introduction

The STi7197 is targeted at the latest operator and CE manufacturer requirements for STBs that use advanced HD decoding (H264/VC-1/MPEG2). The STi7197 conforms to DVB, ISMA, ATIS-IIF, SCTE, ATSC, ARIB, CEA, ITU and OpenCable specifications.

The STi7197 provides a solution for operators to specify a range of cost-effective, high performance HD STBs including cost-effective zappers, IP clients, interactive STBs, DVR standalone and DVR server/home network-capable STBs. Content delivery is possible using broadcast or broadband networks, or both (hybrid STBs). The STi7197 incorporates the latest generation of advanced security features.

The STi7197 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
Combines a QAM demodulator with STB decoding and display functions	This highly integrated SoC helps to reduce board area and manufacturing cost, allowing low-cost and small size STBs to be designed.
ST40 applications CPU, 32K I cache, 32K D cache	Superscalar performance from a single CPU core, using standard tools and operating systems (Linux, OS21).
STMicroelectronics' video decoding system	Decoding of advanced high definition standards for MPEG2, H264, VC-1 broadcast, with the performance and flexibility for web-based content decoding such as Flash, DivX, MJPEG and Real.
Dual USB 2.0 hosts, e-SATA, Ethernet MAC with MII/RMII and TMII, interfaces, PCI interface	Extensive high speed connectivity for the widest range of STB peripherals, such as Flash drives, external HDDs, home network controllers (for example MoCA, Wi-Fi), DOCSIS modem and so on.
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
11-Aug-2010	1	Initial release.

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