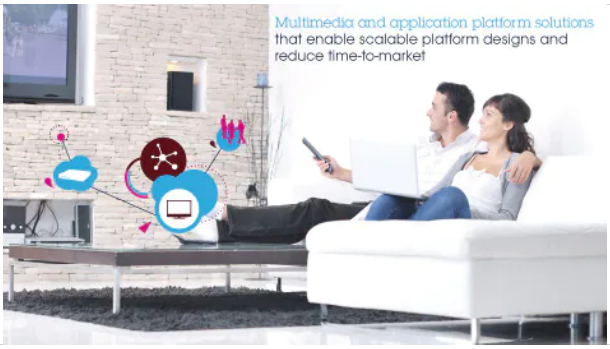
ИС цифровых телеприставок STiD337, STiH412
Технические характеристики

Digital Set-Top Box ICs

Overview

ST's portfolio of devices for home media and application platforms comprise everything from set-top box system-on-chips, to DOCSIS data gateway solutions.

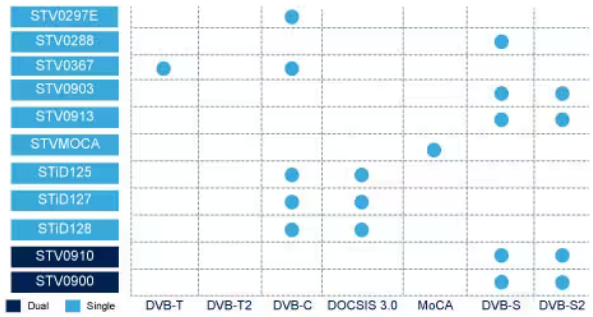
Built on cutting-edge IPs and flexible, scalable architectures, ST’s device portfolio supports platform that range from entry-level set-top boxes, to 4K-ready, home media server solutions.



Demodulators and Tuners

Overview

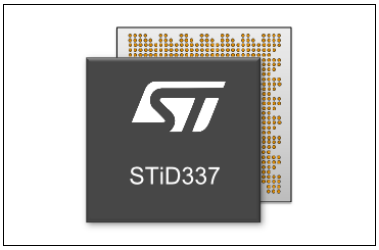
ST offers standalone demodulation ICs for cable, satellite or digital terrestrial data transmission. Demodulation is also is integrated in many of our multimedia and application processor SoCs.



STiD337

Satellite transceiver ARM® Cortex®-based SoC with integrated DVB-S2/S2X forward link and IQ-streamer for return link

Data brief



Features

- Integrated DVB-S/S2/S2X demodulator
- Dual core ARM® Cortex®-A9 application CPU:
  - Up to 1.2 GHz and 6000 DMIPS
  - NEON™ accelerator
  - 512-Kbyte L2 cache
- DDR3/3L 16-bit interface running at up to 1066 MHz (DDR3-2133)
- Integrated ARM® Cortex®-M4 standby controller with low-power micro and power islands
- Quad ST231 offload CPUs
- IQ data pipe and streaming engine to high-speed DACs
- Sample-rate conversion filter including root-raised-cosine
- High-speed IQ signal DACs
- High-precision low-speed DACs
- Connectivity:
  - 2 x USB 2.0 ports
  - 1 x PCIe port
  - 1 x SD card
  - 1 x eMMC
  - 1 x RGMII muxed with internal Ethernet PHY
  - 4 x input transport streams
  - 6 x UART
  - 9 x I2C
- Package: FCBGA 16 mm x 16 mm, 0.65 mm pitch, 552 balls

Description

The STiD337 is a system-on-chip (SoC) for interactive satellite applications that includes an integrated DVB-S2/S2X demodulator for the satellite forward link with flexible GSE and MPEG-TS PID filtering.

The compute platform is based on a dual-core ARM® Cortex®-A9 architecture with Neon™ coprocessors and multiple ST231 DSP offload processors.

The return link implements an IQ streamer which streams a linked list of pre-calculated data to the integrated 10-bit DACs for IQ output to external up-converters.

Accurate Network clock recovery (NCR) with precision real-time control is implemented for the most demanding applications.

Multiple interfaces such as integrated Ethernet physical layer (PHY), USB, PCIe, VCXO, GPIO, SPI, I2C, and I2S are included to provide a complete low-cost satellite modem.

UHD Set-Top Box Processors

Overview

ST’s set-top box SoCs bring a world of media into your living room. Our UHD portfolio offers high-end solutions for 4K broadcast content as well as supporting internet media and operator-specific applications.

Built on ARM® architecture, our device portfolio permits easy porting of applications between platforms.

Main benefits include:

- Powerful ARM® processing cores permitting support for 4K content, 3D graphics, gaming and a rich internet media access
- Support for the latest decoding standards, such as HEVC
- Compatibility with all major middlewares
- Compatibility with all broadcast standards
- Support for entire application platforms, from the multimedia/application CPU, to demodulation, to silicon tuners, ESD protection and all of the other electronic components – ST can support your entire design.
- Advanced security
- Very low power-consumption, meeting energy targets set by EnergyStar and EU standards

STiH4 series multimedia application processors

ST’s latest server-box multimedia application-processor system-on-chips, the STiH4 server-box product family (codenamed ‘Monaco’), support decode and display resolution up to the leading-edge Ultra HD and the next-generation H.265 / HEVC video compression. This combination sets to extend the viewing experience for end users with more realistic and in-the-action immersion.

The STiH4 'Monaco' series integrates the Faroudja® Transcode Engine, providing best-in-class transcoding capabilities for multi-screen streaming across consumer and handheld devices. T

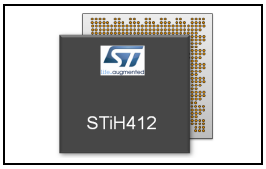
The STiH410 supports HEVC decoding, and therefore permits IP service providers a means of offering HD content to a greater number of customers.

The 'Monaco Ultra' STiH412 offers Ultra HD (2160p) decoding.

STiH412

Monaco Ultra - ARM-based, UHD multimedia server-box platform

Data brief



Features

- Dual core SMP ARM® applications CPU plus a quad-core GPU for true 3D graphics
- Ultra HD decoding up to 2160p30, combined with Faroudja® video processing technology
- Faroudja® video transcoding engine
- Advanced security supporting concurrent conditional access and DRM, to protect premium broadcast content
- Wide connectivity, including USB 3.0, PCI-e, SATA and Gigabit Ethernet
- Dedicated interfaces to a range of companion front-end solutions, including MoCA 2.0, DOCSIS 3.0, satellite and 802.11ac WiFi devices
- 28 nm process technology chip

Description

ST's STiH412 system-on-chip, belonging to its new 'Monaco' family, provides a full-featured solution for multi-HD and UHD IP set-top boxes, and server-box applications. This SoC supports integrated broadcast and broadband services, combined with the latest set-top box middleware and broadband software solutions.

ST's Faroudja® Transcode Engine provides best-in-class transcoding capabilities for multi-screen streaming across consumer and handheld devices. This allows operators to optimize network bandwidth, while offering an excellent quality of service throughout the home.

The STiH412 supports HEVC decoding, and therefore permits operators and service providers the means to offer UHD content to their customers.

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