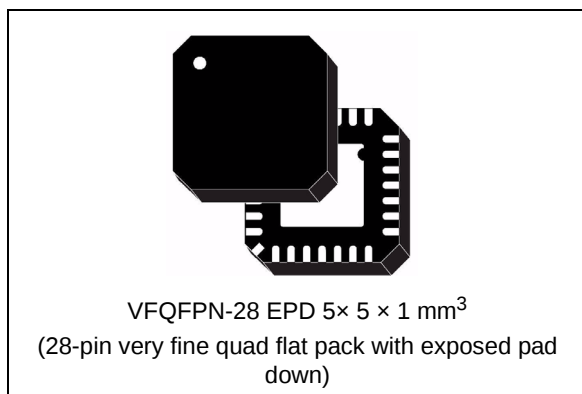


Audio/video buffer and four-channel SD video filter

Data brief

Features

- I²C bus control
- Video section:
 - 7-MHz, low-pass filters on four encoder video inputs
 - DC-coupled inputs
 - Each output is capable of driving an AC- or DC-coupled, 150-Ω video load at 3 V pp and CVBS output can drive a dual, 75-Ω video load
 - Fixed gain of 6 dB for each channel
 - Selective video output muting
- Audio section:
 - Stereo sound capability
 - Differential or single-ended audio inputs
 - Audio outputs drive 2-kΩ loads at 3 V RMS
 - Selectable audio gain of 0 to 28 dB
 - Audio output muting
 - 9 V to 12 V single supply operation
 - Pop-noise suppression management
- Low power mode
 - Audio/video standby function



Applications

- Set-top boxes (IP, cable, satellite, terrestrial)
- Integrated digital TV plug-in
- Blu-ray and DVD players

Description

The STV6432 is a fully integrated solution for filtering and buffering standard-definition signals, and buffering stereo audio signals from the MPEG decoder of a digital receiver, Blu-ray or DVD player, or iDTV plug-in.

The STV6432 embeds four buffers with 7-MHz, SD, low-pass filters, and a dual audio amplifier that operates with either differential or single-ended inputs.

Table 1. Device summary

Order code	Temperature range	Package	Packaging
STV6432AJ	0 to 70 °C	VFQFPN-28 (5 × 5 mm ²) EPD	Tray
STV6432AJT	0 to 70 °C	VFQFPN-28 (5 × 5 mm ²) EPD	Tape and reel

1 Introduction

The STV6432 is an I²C-controlled integrated circuit for filtering and buffering audio and video signals in any consumer electronics application with SD outputs. It can be used in products such as set-top boxes or DVD/BD players and recorders.

The STV6432 has a high level of integration and requires only the usual passive components for decoupling and termination. The tiny package VFQFPN-28 ensures a small footprint.

The STV6432 is one of the family of three, pin-compatible products (Figure 1) that complete the new generation of audio and video switches and buffers from STMicroelectronics. Together they cover, both technically and price-wise, the whole market spectrum from mid-range SD retail (zapper set-top boxes or basic recorders) up to DVR HD operators (set-top boxes or recorders with HD component output).

Features

DC-coupled video inputs.

AC- and DC-coupled high-drive capability video outputs (for 70-Ω (minimum) loads).

Smart pop-noise manager.

Selective standby command for audio or each set of SD video outputs.

8-step selectable audio gain up to +28 dB, supporting output of 3.1 V RMS (minimum).

Pin-compatibility with two other products.

Pin-compatibility with STV6440AJ and STV6437AJ.

Benefits

Reduces component count.

Connects to any type of display and drives several composite and RF modulator outputs without external active components.

Allows silent swap between active and standby modes.

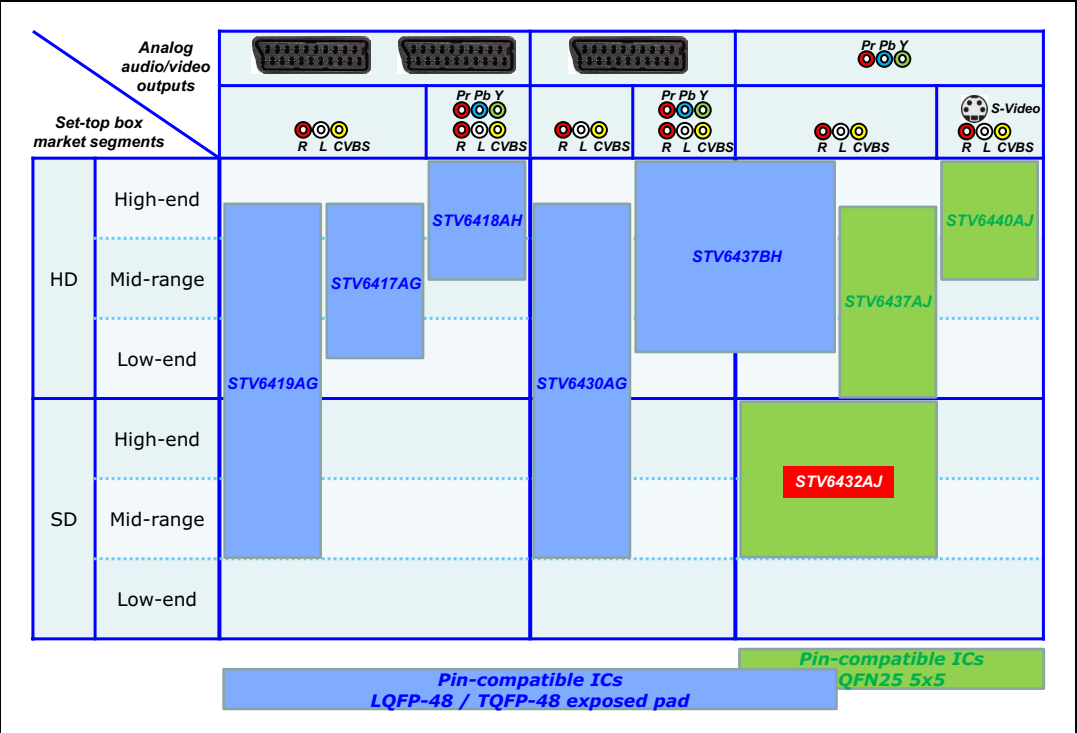
As low as 4-mW standby consumption supporting compliance to 0.5-W standby requirements.

Easy fine-tune of THD and SNR depending on requirements, whilst matching any specific audio output level, including China Cable, and saving external op-amps.

Combines single-device space-saving (up to 50%) benefits with commodity price/flexibility benefits to allow a single PCB design covering the entire market spectrum.

Provides dual-source solution at no cost premium in case of market shortage or sudden rise in demand.

Figure 1. Pin-compatible devices



2 Revision history

Table 2. Document revision history

Date	Revision	Changes
12-Aug-2011	1	Initial release.

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