STEVAL-CCA018V1

Single-supply stereo digital audio line driver based on the TS4657

Data brief

Features

- Power supply range: 3 V to 5.5 V
- Audio line output: 2.2 V_{RMS} for entire V_{CC} range
- 16 to 24-bit audio data format stereo DAC, 32 to 48 kHz sample rate
- I^2S, right or left justified compatible digital audio interface
- 95 dB SNR A-weighted at 48 kHz, V_{CC} = 5 V
- 7.4 mA current consumption at V_{CC} = 3 V, full operation
- Internal negative power supply to ensure ground-referenced, cap-less outputs
- No external capacitor needed for the negative power supply generation
- Integrated structure to suppress pop and click noise
- Standby mode active low
- RoHS compliant

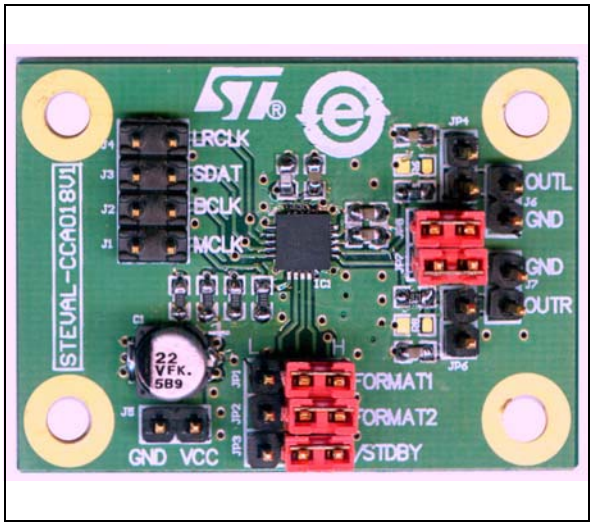
Description

The STEVAL-CCA018V1 demonstration board is designed provide a platform for evaluating the performance of the TS4657 stereo digital-to analog-converter (DAC). The TS4657 integrates a high-performance audio line driver capable of generating a 2.2 V_{RMS} output level from a single 3.0 to 5.5 V supply.

A single supply is sufficient for the digital and analog parts of the circuit, eliminating the need for external regulators.

The TS4657 is a low consumption device, with only 22 mW of power dissipation at 3.0 V power supply during full operation.

A 16-bit multi-bit sigma-delta DAC is used, operating at 256xFs with over sampling digital interpolation filters.



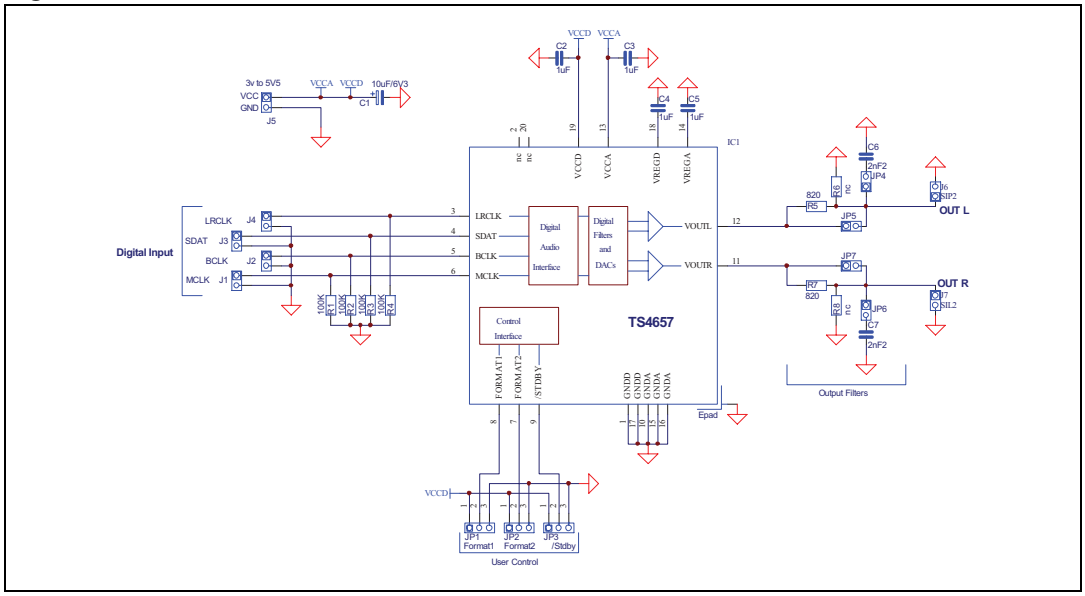
The digital audio data can be 16 to 24-bits long and sample rates from 32 to 48 kHz are supported.

The output stage signal is ground-referenced by using an internal self-generated negative power supply, so bulky external output coupling capacitors are not necessary.

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

1 Schematic diagram

Figure 1. Circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
29-Oct-2009	1	Initial release.

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