

Sound Terminal™ for TV and speakers

Embedding 2.0/2.1 DDX® power stage
with digital audio processing



STA335BWS: the single-chip solution for ultimate flat panel TVs and digital audio applications

STMicroelectronics sets a step forward in the digital audio market by introducing the STA335BWS, a single-chip, highly-efficient digital class D amplifier, suitable for the most popular digital applications such as LCD/PDP TVs, cradle or mini and micro components.

This single-package solution allows both cost reduction and design simplification of final application, meeting the continuous demand for decreasing BOM.

STA335BWS features

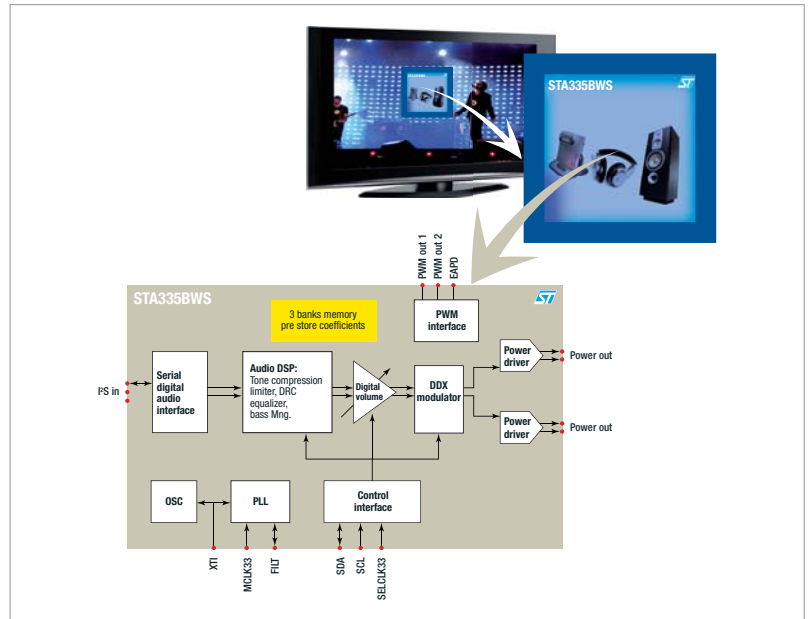
- Wide supply voltage range (4.5-21.5 V)
- I²C control with selectable device address
- 2 ch I²S input data interface
- 98 dB SNR and dynamic range
- 32 KHz to 192 KHz input sample rate
- Thermal overload and short circuit protection embedded
- Advanced AM interference frequency switching and noise suppression modes
- 576 xfs input mode support for video compatibility
- Digital gain/attenuation +48 dB to -80 dB in 0.5 dB steps
- Soft volume update
- Independent channel volume bypass
- Channel independent postscale
- Input channel mapping
- 2 preset anti-clipping modes
- DRC (Dynamic Range Compression)
- Automodes:
 - 15 preset crossover filters
 - preset nighttime listening mode
- Bass/Treble tone control
- 4x 28-bit user programmable biquads (EQ) per channel
- 3 memory banks pre store coefficients
- 4 power output configurations:
 - 2 channels of ternary PWM (stereo mode) 2x 20 W
 - 3 channels (Left – Right using binary and woofer using ternary) 2x 10 W + 1x 20 W
 - 1 channel PWM output (parallel mode) 1x 40 W
 - 2 channels of ternary PWM 2x 20 W + stereo lineout ternary/PWM driver
- Additional headphone output

STA335BWS description

The STA335BWS is a single-chip solution with 2.1 ch digital audio processor and binary/ternary DDX® modulation operated power stage.

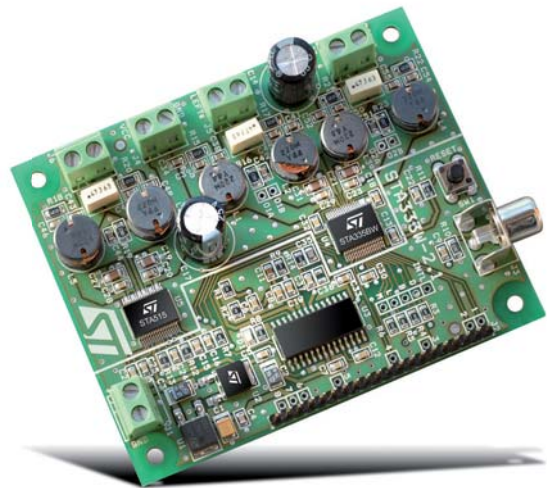
The STA335BWS offers 3 memory banks for different equalization settings and seamless audio streaming during channel and audio source change.

The STA335BWS includes additional DSP features for high-end applications, such as DRC, postscaler for configurable output power rate, 2.1 ch audio processor and 4 different output configurations at a supply voltage ranging from 5 V to 21.5 V.



Reference design and control panel

To simplify the test of the STA335BWS features and enable faster development, ST provides a comprehensive reference design along with the dedicated control panel.



STA335BWS reference design board



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Full product information at www.st.com

Order code: FLSTA3350108

