Sound Terminal™ for Bluetooth®

Embedding 2.0/2.1 FFX™ class D digital power stage with digital audio processing
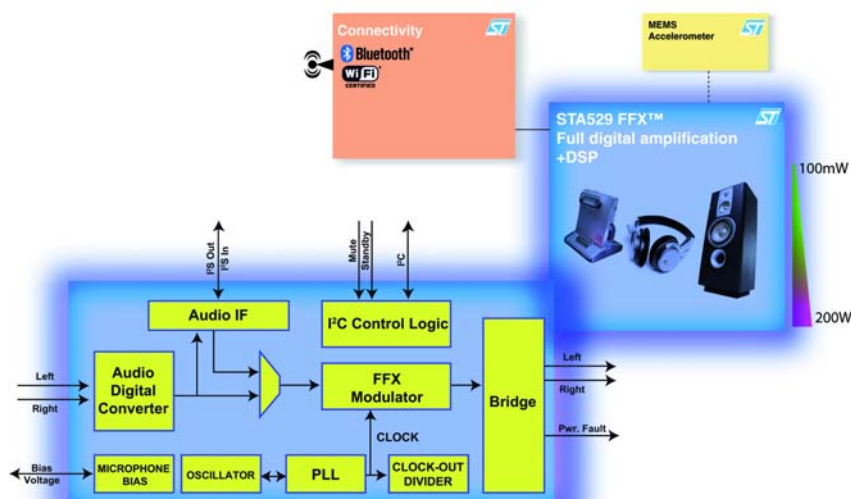
STA529: the ultimate digital audio solution for portable applications

STMicroelectronics sets the standard in the digital audio market by introducing a highly efficient *Sound Terminal* single-chip solution for wireless headsets with speaker capability.

This single-chip solution, allowing both cost reduction and design simplification of final applications, meets the increasing demand for wireless solutions.

The STA529 is the most efficient digital audio codec solution in the market. The STA529 contains a stereo digital class D FFX™ modulation, a stereo ADC, an audio PLL, volume control and can operate without a microcontroller.
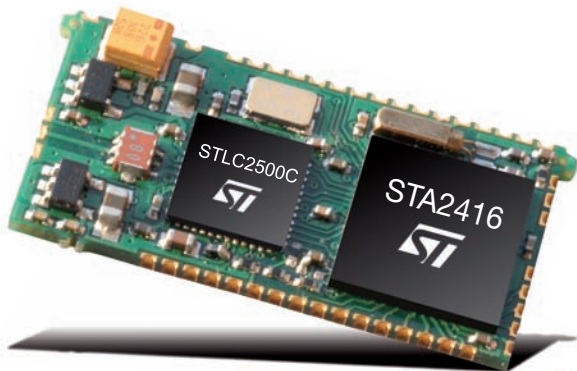
Features

- Low power consumption (100µA)
- Load driving capability: ≤ 4Ω
- Input:
  - Analog (with PGA)
  - Digital
- Internal muxing capability
- Output:
  - Speaker: 2 x 1.3W @4Ω
  - Headset: 2 x 100mW @16Ω
  - PWM (for digital power amplifiers)

- Filterless class D
- Supply voltage 3.3V
- 94% efficiency for longest battery life
- Drive headset/speakers/high power digital amplifiers with same output
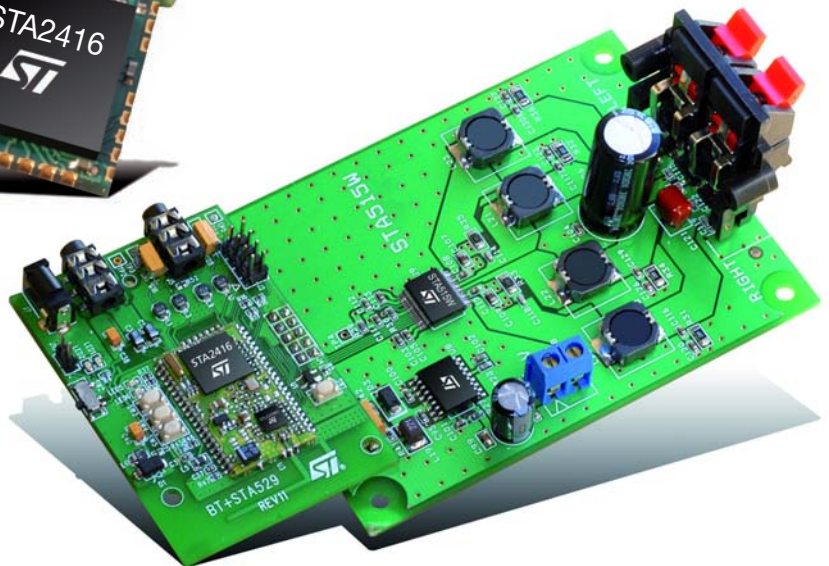
Reference design

To exploit all the capability of STA529 *Sound Terminal* in the wireless Bluetooth environment, two boards have been developed by STMicrolectronics allowing the following applications:

- RF link: using ST's BT-STA2425 Bluetooth v2.0 module with Bluetooth software stack written by Open Interface North America (www.oi-us.com) to two headsets driven by the STA529

- A cradle option: the STA529 module is combined with a STA515W digital class D amplifier board to drive two speakers up to 2 x 20W RMS

Bluetooth module

EDR development platform

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Full product information at www.st.com

Order code: FLSTBLUE0107

www.BDTIC.com/ST