HIGH QUALITY PTE™ AUDIO DAC WITH SMAB™ HEADSET AMPLIFIER

AV5230 - Further extending the music experience

The AV5230 is ST-Ericsson's new generation of PTE™ DAC+ Headset amplifier ICs that further extend audio playback time of mobile applications, even when playing high-quality audio.

It embeds the innovative SMAB™ headset amplifier (Class-G technology from ST-Ericsson), scaling the IC power to the audio signal amplitude which is played.

As with the previous PTE™ devices, the AV5230 provides an amazing 102 dB signal-to-noise ratio (SNR) for the whole audio path. It can be directly supplied from the battery, and use a true-ground type of amplifier.

PTE™ Playback Time Extender

SMAB™ Supply Modulated Audio Buffer

KEY FEATURES

- 24-bit stereo DAC, 102 dB SNR (full audio path to amplifier output)
- PTE™ function (Playback Time Extender)
- SMAB™ (Supply Modulated Audio Buffer). ST-Ericsson advanced class-G headset amplifier technology. 2x17 mW over 32 or 16 Ω, true ground
- 14 mW power consumption in playback mode
- Digital audio interface: I^2S and SPI
- Audio sample rate: 8 to 192 kHz
- Input clock: 32 kHz (PTE mode) or 13 to 38.4 MHz
- System clock generator: from 19.2 to 78 MHz
- Pop noise canceller function
- VFBGA-49: 4 x 4 x 1 mm, 0.5 mm pitch
- Supply:
  - Power supply: 2.3 to 4.8 V
  - I/O supply: 1.62 to 3.6 V

KEY BENEFITS

- Decrease the application power in playback mode thanks to the PTE™ function and SMAB™ headset amplifier
- High-quality audio (102 dB SNR)
- Reduced EBOM thanks to true-ground headset amplifier (no coupling capacitors) and direct connection to the battery
- No pop and click noise

TARGETED APPLICATIONS

- Portable devices requiring longer audio playback time and high audio quality.

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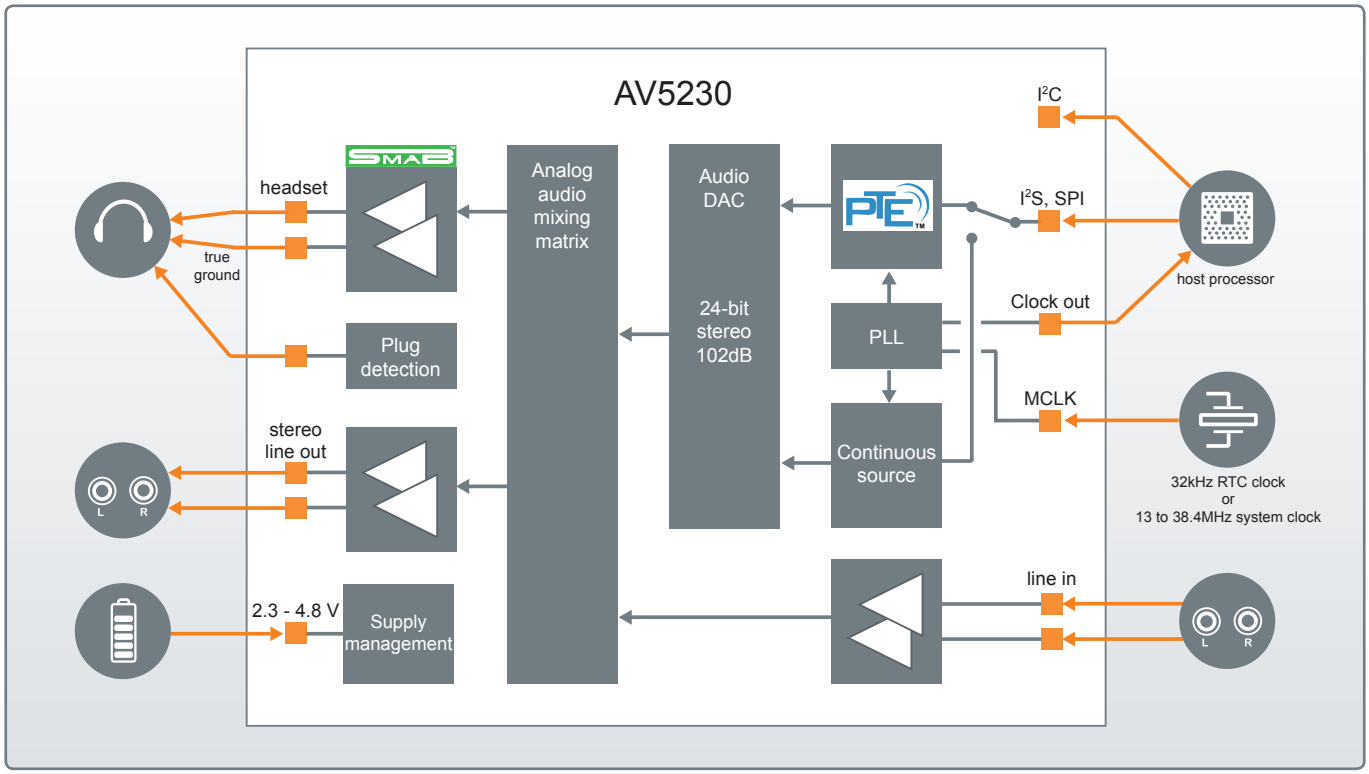


AV5230 block diagram

APPLICATION HIGHLIGHT

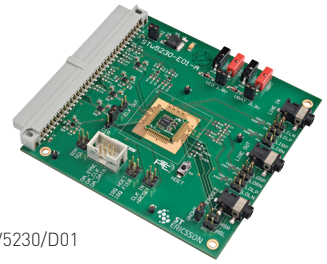
The AV5230 can be used either in standard mode (continuous) or in PTE (burst) mode.

For applications where reducing playback power consumption is the main objective, the AV5230 should be run in PTE mode. In this mode, audio data is loaded at very high speeds into the PTE block (I²S or SPI up to 50 MHz). When the buffer is full, the whole system can be set to low-power mode. The device then plays back authonomously the audio using the datas stored in the PTE memory. If the device is about to run out of data, a specific interrupt wakes up the rest of the application and the device can be fed with another burst of data.

In PTE mode, the AV5230 is driven by the 32 kHz clock only and is able to generate the system clock to the rest of the platform.

DEMO BOARD

Complete user-friendly demo board with software.



AV5230/D01

AV5230/M01

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For more information on ST-Ericsson, visit **www.stericsson.com**

Order code: AV5230FL_1