

BF592audio

Blackfin module with 200/400MHz BF592 and dual-channel audio interface, e.g. for echo-cancelling applications



The **BF592audio** module is a very small, low-cost, easy to use audio processor system which can be operated in stand-alone or embedded applications. It comes with a powerful 200MHz (400MHz optional) Blackfin DSP and a stereo audio codec with stereo line-in and line-out channels, a microphone input and headphone drivers.

The system was designed for use in high-performance audio processing application such as echo and noise cancellation. It perfectly matches our G.165 and G.167 echo-cancellers as well as our frequency domain audio enhancement library.

Information on speech enhancement:
<http://numeriq.de/017>

Besides audio enhancement application, the module is suitable for speech compression using standard or non-standard algorithms such as G.722, G.726, G.729, G.723.1, G.722.2, GSM fullrate, GSM halfrate, Speex etc.

Information on speech algorithms:
<http://numeriq.de/018>

With a size of only 1.0" x 12.0", the board will fit every embedded platform. Widely used 100mill (2.54mm) pin headers are used to connect the module to a target board. Sixteen (16) general purpose I/O pins can be used to configure the firmware or indicate its internal status. Alternatively, these pins can be used as a high-speed synchronous serial port (SPORT1 primary data only), as a UART (RXD & TXD only). The SPI port 1 (with five CS outputs) can also alternatively be used as the PPI (lower byte only).

An additional two-wire interface can be used to incorporate the DSP in an I²C bus topology.

Specifications*:

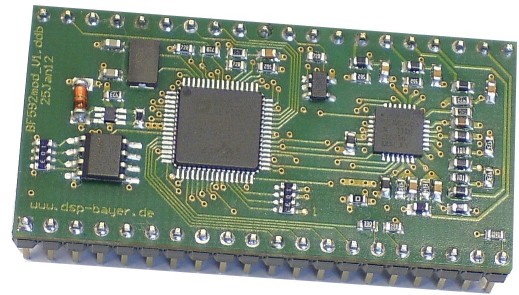
Power consumption: approx. 500mW @ 3.3V

Memory: 32kB program RAM, 32K+4K data RAM, 2Mb serial flash

I/O: 16 general purpose I/O pins, I²C, UART, SPI

Processor: ADSP-BF592KCPZ (400MHz) or KCPZ-2 (200MHz)

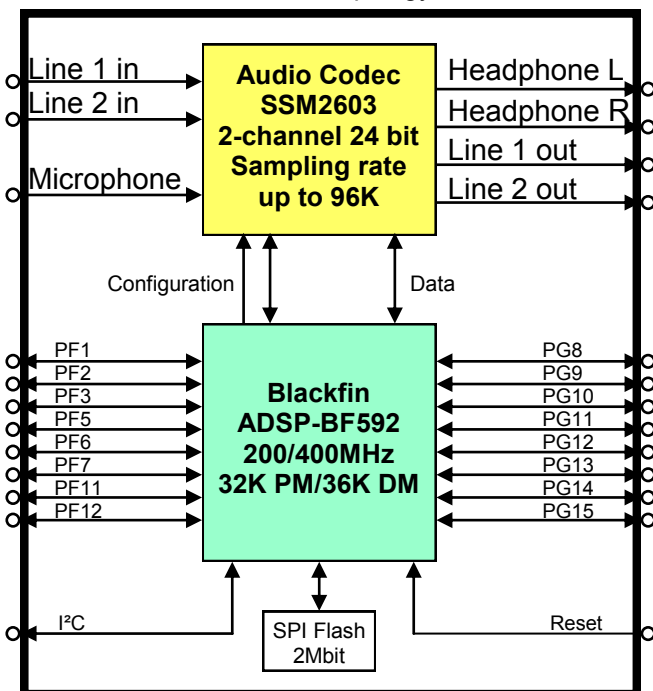
Physical Dimensions: approx. 51 x 25.5 x 12mm (2"x1"x.5") including pin connectors



BFaudio Module - approx. true size image

Example projects (miniBSP) for VisualDSP available with the hardware, demonstrating how to use the I/O framework for the board and launch applications.

A motherboard with a PSTN (analog telephone) interface and a mono power amplifier (1Watt) is also available for hands free demonstration and general evaluation purposes.



*Specifications may change without notice



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