

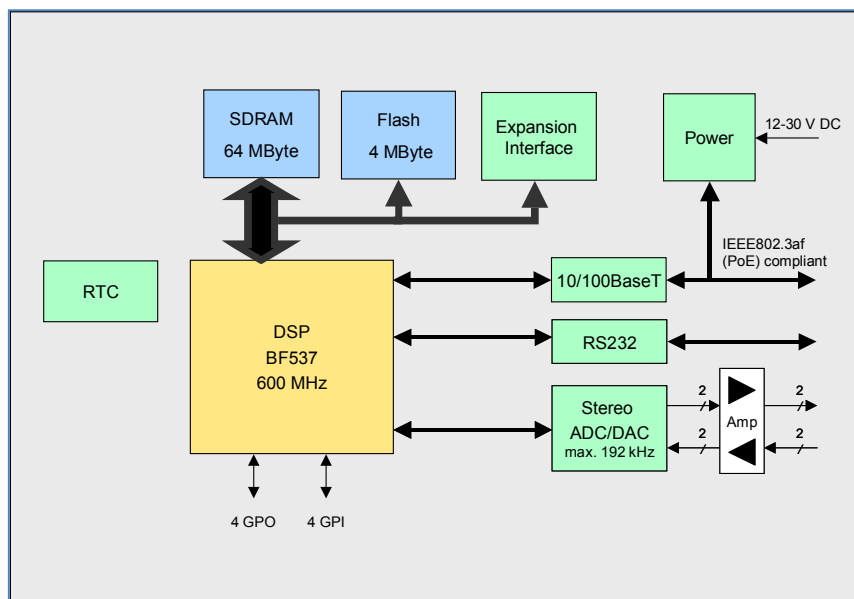
## DSPE-BF-IP

### VoIP Front-end mit PoE

#### OVERVIEW

DSPECIALISTS' VoIP front-end module DSPE BF-IP is a compact DSP module based on the 600 MHz Analog Devices Blackfin BF-537. It allows processing of analog audio signals with sample rates of 8 kHz up to 192 kHz and 24 Bit. This module is focussed on applications where audio streaming via Ethernet in TCP/IP networks is required. Due to its flexible power supply through the PoE-capable (IEEE802.3af class 3) Ethernet interface or the dedicated 12 30V DC connector it can be easily embedded into any customer-specific environment.

DSPE-BF-IP covers a wide range of embedded telecommunication tasks like noise cancellation, echo cancellation, Voice over IP and audio distribution in IP networks. The board is accompanied with hardware drivers and a software framework. Software for echo cancellation and noise cancellation is also available and can be licensed in a bundle with the hardware board. DSPE-BF-IP can be easily extended for other network applications like high-precision audio or video transmission over Internet protocol.



#### KEY FEATURES

- Stand-alone 600 MHz 16-Bit DSP system
- Stereo analog input and output
- Ethernet interface for audio transmission and control
- IEEE802.3af class 3 compliant Ethernet interface (Power-over-Ethernet)
- Open System  $\mu$ C Linux
- Echo cancellation algorithm
- Noise cancellation algorithm
- Adaptable to customer-specific hardware
- Software framework for customer-specific algorithms
- Parameter input via PC user interface

## Technical Specification

- Processor: ADSP-BF537 500/600 MHz
- SDRAM: 32M x 16 / 133 MHz / CL2
- Flash: 4M x 8 / 90 ns
- Audio Channels: 2 in / 2 out on 3.5 mm stereo jacks
- AD/DA Converter: AC97 codec, optional : HD codec
- Sample rate: up to 192 kHz, up to 24 bit
- Level: 1 Vrms / single ended, microphone phantom power
- Ethernet: RJ45 10/100BaseT, IEEE802.3af compliant (PoE) – class 3
- Serial interface: RS232
- Debugging interface: JTAG
- RTC: optional: real-time clock, battery buffered
- LED: 4 software controllable, 1 power-good
- GPIO: 4 input / output on pin header
- Power supply: 12 VDC .. 30 VDC / 3 Watt (dedicated power input and PoE / 12 W)
- Outline: 140 mm x 80 mm
- Expansion interface: Analog audio (balanced), I<sup>2</sup>S, TDM, SPI, I<sup>2</sup>C, video interface, GPIO, 2nd UART

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### ABOUT US

The products of DSPECIALISTS are marked by our use of tried and tested standard components. And they can be tailor-made to meet your individual requirements. The range of products and services provided by DSPECIALISTS includes customer-specific modules as well as complete systems. We use DSPs, PCs, micro controllers and programmable logic in our development Work.

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