

Line Echo Canceller for Analog Devices Blackfin



Line Echo Canceller

Our implementation of a Line Echo Canceller is designed to reduce or even cancel electrical echoes in the transmission of speech signals. The tail length of the echo suppression can be adjusted to system requirements.

The algorithm is required in DECT telephony systems and similar applications.



Performance:

- Software controlled Coefficient Adaptation
- Software controlled Leakage
- Software controlled Non-linear Processor
- Software controlled Tone Disabler
- Double Talk Detector with Adaptation Control
- Programmable Tail Length

Our implementation of a Line Echo Canceller algorithm is available for Blackfin platforms and can be demonstrated on BF533-EZLite or simulated on PC platforms.

The algorithm was implemented to be independent of the hardware interface, i.e. the user specifies input and output channels and must handle buffers in his framework.

The algorithm is fully re-entrant and can easily be integrated in a "C"-environment.

Specifications:

- ~10 MIPS per channel (32msec tail)
- < 3 kBytes program memory
- $88 + 32 \cdot T$ Bytes data memory (T = tail in msec)
- Runs on all Blackfin devices

Support

- Demo for BF533-EZLite available under NDA
- Fully documented library
- Customization/Integration support available
- Code portable to other platforms (DSP, non-DSP)

Ingenieurbüro Bayer DSP Solutions

Ingenieurbüro Bayer DSP Solutions was founded more than a decade ago by Andreas Bayer, a first hour DSP specialist.

Originally specializing in the telecommunication field, the company has grown its DSP expertise to provide comprehensive services around Digital Signal Processing applications by using DSP chips from Analog Devices, Texas Instruments, NEC, Freescale and other renowned DSP vendors.

Our goal is to provide comprehensive coverage of all Digital Signal Processing topics, including hardware design, FPGA design, DSP algorithms, software integration, tools and complete products.

Today we support many DSP families including Texas Instruments C54x, C55x, C3x, C6x, Analog Devices ADSP218x, SHARC and Blackfin, Motorola DSP56K as well as DSPs from other vendors.

Ingenieurbüro Bayer DSP Solutions is a registered and active Third Party of Analog Devices, Texas Instruments and other silicon vendors.



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