

ADSP-2100 FAMILY EZ-KIT LITE EVALUATION PLATFORM

Ultra-Low-Cost Platform for Evaluating Processors and Development Tools

KEY FEATURES:

Evaluation Board

- 33 MHz ADSP-2181 16-Bit, fixed-point DSP
- Full-duplex 16-Bit Stereo Audio codec
- 32K words on-Chip RAM
- 128K x 8 socketed EPROM
- I/O and Memory Expansion Ports

Software Development Tools

- Assembler
- Linker
- Algorithm/demonstration source code
- Simulator
- PROM Splitter utility

Demonstrations

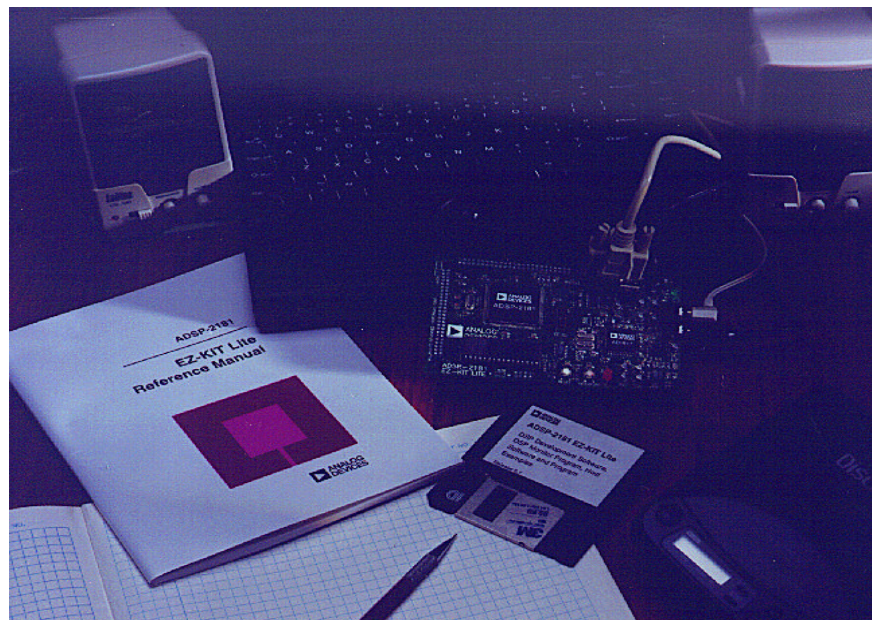
- MPEG Audio Decode
- Echo Cancellation
- ADPCM Speech Compression
- DTMF
- Filtering

OVERVIEW:

The EZ-KIT Lite is a powerful, inexpensive evaluation platform for the ADSP-2100 DSP Family. The kit is specifically designed to support your evaluation and includes tools that enable you to go beyond the starter stage to develop code to benchmark your application. Unique features, such as a socketed EPROM, PROM Splitter utility, and Simulator, let you plug in your own custom EPROM and fully prototype your DSP-based solution. Demonstration programs highlight the performance of the ADSP-2100 architecture, providing a clear picture of how well Analog Device's DSPs meet your application requirements.

16-BIT STEREO AUDIO I/O CAPACITY

The EZ-KIT Lite evaluation board provides full-duplex, 16-bit stereo audio I/O capability for evaluating a range of audio applications, from digital filtering to MPEG audio decode. The onboard AD1847 codec sampling frequency is user-programmable from 5.5 to 48 KHz with convenient programmable gain. Although the board is based on the highly-integrated ADSP-2181 DSP, ADSP-2100 Family code compatibility ensures that the EZ-KIT Lite can be used for evaluating any family member.



Hardware and software developers can quickly and inexpensively evaluate ADI's 16-bit DSP architecture and development tools using the low-cost EZ-KIT Lite platform.

The ADSP-2181 is a 16-bit, fixed-point DSP featuring 32K words of on-chip RAM, DMA ports, and low-power modes. Running the EZ-KIT Lite's MPEG audio decode demonstration, the ADSP-2181 DSP plays approximately 7 seconds of audio without the use of external RAM. The ADSP-2181's performance is equally impressive in many other applications. The ADSP-218x series ranges from 8K words to 80K words of on-chip SRAM. Every processor features low-overhead DMA and two serial ports.

CUSTOM CODE DOWNLOAD

A monitor program running on the DSP in conjunction with a host program running on the PC lets you interactively interface with the ADSP-2181. You can upload and download segments of data

memory and program memory, as well as download and run programs. A socketed EPROM gives you the flexibility to run the monitor program and demonstrations provided, or plug in your own EPROM containing custom code.

FULL-FUNCTION TOOLS

Designers can prototype their target application using the EZ-KIT Lite simulation tools. The instruction-level simulator lets you inspect all ADSP-2181 operations on a cycle-by-cycle basis. A user-configurable interface lets you see all registers in memory.

ADI's DSPs feature an easy-to-use algebraic assembly language syntax. The Assembler is a full-function code development tool that supports a number of assembler directives and macros, as well

as allowing flexible use of constants, labels, and variables.

If you require the high-level language support of a C Compiler, C source-level debugger, C runtime library, or librarian and simulations for other ADSP-2100 Family members, you can purchase the ADSP-2100 Family Software Development Tools (ADDS-21XX-PC-1).

In-circuit emulators (ICE) are also available for all ADSP-2100 products. The ADDS-218X-EZ-ICE emulator can be used directly.

You can order these tools and other information from your local ADI-authorized distributor. For the office nearest you, see our website at www.analog.com.

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