

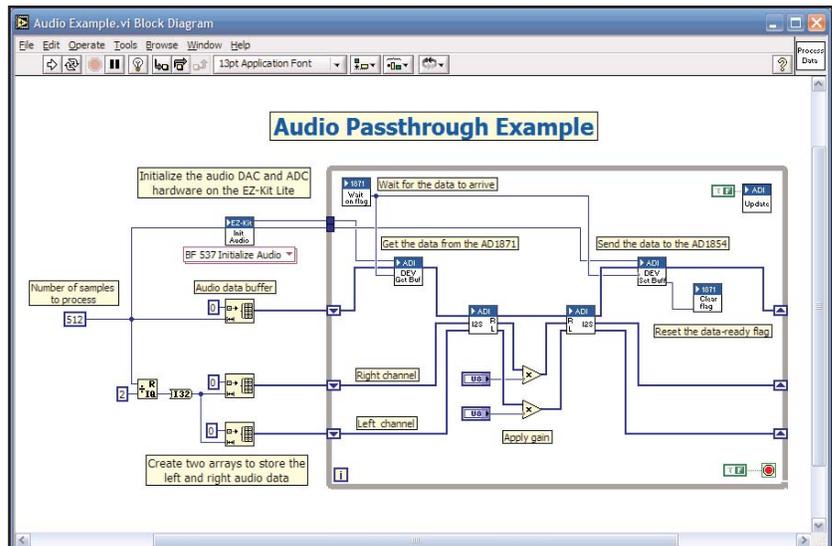
# LabVIEW Embedded Module for Analog Devices Blackfin Processors

## Key Features

- Utilizes LabVIEW system design capabilities and graphical programming
- Targets Blackfin high performance, low power, embedded processor family
- Delivers fully integrated solution from concept to deployment
- Offers ability to reuse existing embedded algorithms or legacy embedded software
- Includes fully integrated component drivers for several popular ADI converters

## Included Software and Hardware

- NI LabVIEW Full Development System
- ADI VisualDSP++ Full Development Seat
- NI LabVIEW Embedded Module for ADI Blackfin Processors
- ADSP-BF537 EZ-KIT Lite® evaluation board
- Cabling and headphones
- Data acquisition adapter
- Automatic software updates and support available



A complete audio application written with LabVIEW Embedded for Blackfin.

## Overview

The National Instruments LabVIEW™ Embedded Module for Analog Devices Blackfin® Processors is a comprehensive graphical development environment for embedded design. Jointly developed by ADI and NI, this module seamlessly integrates the LabVIEW Development Environment and Blackfin Embedded Processors. Included in the LabVIEW Embedded Module is everything required to develop your application quickly in LabVIEW and ultimately target a custom-developed hardware solution, taking designs from concept to production in a single integrated development environment. By using this approach, engineers and scientists can achieve faster development times, lower development cost, and still deliver a high performance embedded processing solution.

## Graphical Design for Embedded Systems

This module builds on NI LabVIEW embedded technology, which facilitates data flow graphical programming for embedded systems, and includes hundreds of analysis and signal processing functions, integrated I/O, and an interactive debugging interface. With the NI LabVIEW Embedded Module for ADI Blackfin Processors, you can easily access essential VisualDSP++® specific compiler options such as the ability to enable cache, optimize linking, and view live front-panel updates via JTAG. To help you debug those challenging designs, you can connect the host development PC to your evaluation hardware or end product using an ADI JTAG emulator. LabVIEW includes a wide array of built-in visualization features, including tools for charting and graphing real-time data and reconfiguring attributes of your data presentation, such as colors, font size, and graph types. Furthermore, you can dynamically tune your application at run time through live front-panel controls.

## Analog Devices VisualDSP++

The LabVIEW Embedded Module for ADI Blackfin Processors includes the ADI VisualDSP++ development environment. LabVIEW combined with VisualDSP++ provides a seamless debugging environment by allowing you to step through graphical code and C code simultaneously and visualize the embedded code in the VisualDSP++ IDE. With VisualDSP++ you have access to over 140 hand-tuned algorithms specifically designed for Blackfin Processors that can be embedded directly into your code.

## Target Hardware Platform

Included with the LabVIEW Embedded Module for Blackfin Processors is the standard ADI EZ-KIT Lite evaluation board. This board contains a 600 MHz ADSP-BF537 Blackfin Processor capable of 1200 million multiply and accumulate operations per second (MMACS). This high performance processor is supported with ADI's embedded software framework and libraries to simplify development. A full board support package including on-chip peripheral libraries with native component drivers for audio and video DACs, ADCs, and audio codecs is included.

Numerous hand-tuned algorithms and examples are included with the module to help engineers and scientists begin developing designs quickly and easily. These examples range from simple digital LED and push-button control examples to more complex signal processing examples. Combined with an active on-line community and full access to technical support, the LabVIEW Embedded Module ensures you a faster and more successful start.

## CROSSCORE Development Tools

The ADSP-BF537 EZ-KIT Lite is a part of the Analog Devices CROSSCORE® Development Tools product line, which is composed of a comprehensive set of development tools providing engineers with easier and more robust methods for developing and optimizing systems.

The CROSSCORE components include:

- VisualDSP++ development and debugging environment
- EZ-KIT Lite evaluation kits
- EZ-Extender® daughter boards
- Emulators

The easy to use VisualDSP++ integrated development environment speeds development, debugging, and deployment while shrinking product development cycles and improving time to market. The EZ-KIT Lite evaluation kits provide an easy way to investigate the performance of Analog Devices' family of embedded processors and DSPs. EZ-Extender daughter boards give developers access and ability to connect various peripherals from ADI and third parties to the expansion interface of the EZ-KIT Lite evaluation kits. Emulators are available for both PCI and USB host platforms for rapid on-chip debugging.

## Embedded Processors and DSPs

Analog Devices is a leading supplier of digital signal processing solutions, from the high performance Blackfin Processors, TigerSHARC® Processors, and SHARC® Processors to integrated, mixed-signal DSPs for an increasing spectrum of applications. Our advances in design provide faster processing, more memory, lower power consumption, and simplified system integration. Analog Devices gives you a competitive edge by providing a complete solution, including expert technical support, comprehensive development tools, and an independent network of third-party developers called the Collaborative™. For more information about ADI processors and DSPs, visit [www.analog.com/processors](http://www.analog.com/processors).

## CROSSCORE Tools Support

Tel: 1-800-ANALOGD

Web: [www.analog.com/processors/tools](http://www.analog.com/processors/tools)

Analog Devices is committed to providing high quality, timely, accurate, and free technical support and software upgrades.

## Ordering Information

Please call your local ADI sales representative or distributor for pricing and ordering information for part number: VDSP-LABVIEW-EMB.

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