

1 INTRODUCTION

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About VisualDSP++

Thank you for purchasing VisualDSP++, an easy-to-use project management system for developing DSP applications.

VisualDSP++ consists of a single Integrated Development and Debugging Environment (IDDE), which enables you to manage projects from start to finish. The user interface provides full access to code development tools, which include a C/C++ compiler, assembler, linker, and loader.

About This Manual

Purpose of This Manual

The *VisualDSP++ Getting Started Guide for ADSP-21xxx DSPs* provides a step-by-step tutorial that highlights many of the VisualDSP++ features. By following this tutorial you will become familiar with the VisualDSP++ environment, and you will learn how to use these features in your own DSP development projects.

Intended Audience

This manual is intended for DSP programmers who are familiar with Analog Devices' DSPs. The manual assumes that the audience has a working knowledge of Analog Devices' DSP architecture and the DSP instruction set.

DSP programmers who are unfamiliar with Analog Devices DSPs can use this manual, but they should supplement this manual with other texts (such as the DSP user's manual) that describe the Analog Devices' DSP architecture and DSP instruction set.

Contents Description

In addition to this “Introduction,” the guide contains the following chapters:

- Chapter 2 — Features and Tools

Provides an overview of VisualDSP++ features and code development tools

- Chapter 3 — Tutorial

Provides step-by-step instructions for creating sessions, and for building and debugging projects by using examples of C/C++ and Assembly sources

The tutorial is organized to follow the steps that you take in developing a typical programming project. Before you begin actual programming, you should be familiar with the architecture of your particular processor and the other software development tools.

Conventions

The following conventions apply to all chapters. Additional conventions, which apply only to specific chapters, may also appear in this document.


Table 1-1. Notation Conventions

Convention	Example
<p>The following appear in bold:</p> <ul style="list-style-type: none">• Names of menus and menu commands• Toolbar buttons• Keyboard keys and key combinations• Tabs and tab pages• Dialog boxes• Dialog box control buttons and text boxes• Values typed or specified by the user• Words highlighted for emphasis	<p>From the Debug menu, choose Restart and then press F5 to run the program.</p> <p>In the End address box, type 0x4e4, but do not click Add.</p>
<p>The following appear in <i>italics</i>:</p> <ul style="list-style-type: none">• Variable information to be specified by the user• First occurrences of key terms or phrases defined in the text• Titles of books or other reference texts	<p><i>filename</i></p> <p>You run the DSP projects that you develop as <i>sessions</i>.</p>
<p>Examples of program code and system-generated messages appear in a mono-spaced, sans-serif font.</p>	<p>Set a breakpoint at <code>main()</code>.</p> <p>The message “Halted” appears in the status bar.</p>
<p>When you are instructed to enter a value in a text box, type or select the value but do not press the Enter key unless instructed to do so.</p>	<p>In the Start address box, enter <code>a_dot_c</code>.</p>


VisualDSP++ Help

When using the development software in VisualDSP++, you can access the online Help to obtain information about the environment or build tools. The following table explains how to use the VisualDSP++ online Help system:


Table 1-2. VisualDSP Help Navigation

For information about...	Do the following...
VisualDSP++ windows, menus, icons, or dialog boxes	<p>Use one of these methods to obtain context-sensitive help:</p> <ul style="list-style-type: none"> • Select the item (context) and then press the F1 key. • Press the context-sensitive Help button  and then click the item (context).
VisualDSP++ operations, command syntax, or tools	Use the Online Manuals help topic to open Portable Document Format (PDF) file versions of the user manuals in Adobe Acrobat Reader, which must be installed on your system. These manuals provide quick access to information about VisualDSP++.

To access online versions of manuals from the VisualDSP++ environment:

1. From the **Help** menu, choose **Contents**.
2. On the **Contents** tab page, click the **Reference** icon .
3. Under **Reference**, click **Online Manuals**.

The **Online Manuals** help topic appears in the right window pane.

4. Click  to view the list of manuals.
5. Click the button to the left of the manual title to open the manual.

You can copy Help text and paste it into your application. Be aware that the copied text may carry unwanted control codes. See the online Help for details.

Related Documents

For information about development software and Analog Devices DSPs, see the following publications:

- *VisualDSP++ 2.0 User's Guide for ADSP-21xxx DSPs*
- *VisualDSP++ 2.0 C/C++ Compiler and Library Manual for ADSP-21xxx DSPs*
- *VisualDSP++ 2.0 Assembler and Preprocessor Manual for ADSP-21xxx DSPs*
- *VisualDSP++ 2.0 Linker and Utilities Manual for ADSP-21xxx DSPs*
- *VisualDSP++ Kernel (VDK) User's Guide*

Your VisualDSP++ software distribution CD-ROM includes this and all the listed publications. To access these publications within VisualDSP++, use the **Help Topics** command on the VisualDSP++'s **Help** menu, click the **Reference** book icon, and select the **Online Manuals** topic. From the **Help** topic, you can open any of the manuals, which are in Adobe Acrobat PDF format. If you are not using VisualDSP++, you can manually access the PDF files from the CD-ROM by using Adobe® Acrobat®.

Other documents related to your design DSP publications, such as Hardware and Instruction Set Reference Manuals, are available for download from:

http://www.analog.com/industry/dsp/tech_doc/gen_purpose.html

Information Services

For Additional Information about Analog Products

Analog Devices is online at www.analog.com. Our web pages provide information about our broad range of products: analog integrated circuits, amplifiers, converters, and digital signal processors. For information about our digital signal processors, visit our website at www.analog.com/dsp.

Our web pages provide access to technical information, documentation, product overviews, and product announcements. You can also obtain additional information about Analog Devices and its products in the following ways:

- FAX questions or requests for information to:

(781) 461-3010 (North America)

089/76 903-557 (Europe)
- Access one of these DSP Division File Transfer Protocol (FTP) sites:

[ftp.analog.com](ftp://ftp.analog.com)
[ftp 137.71.23.21](ftp://137.71.23.21)
<ftp://ftp.analog.com>

For Technical or Customer Support

You can reach our DSP Tools Customer Support in the following ways:

- E-mail development tools questions to:
`dsptools.support@analog.com`
- E-mail processor questions to:
`dsp.support@analog.com`
- Phone questions to: 1-800-ANALOGD
- Visit our World Wide web site at: www.analog.com/dsp
- Telex questions to: 924491, TWX:710/394-6577
- Cable questions to: ANALOG NORWOODMASS
- Contact your local ADI sales office or an authorized ADI distributor
- Send questions by mail to:
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