



CL-PS7500FE Development Kit

Quick Start Guide

Embedded Processors Division

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This document provides information to enable you to quickly setup and use the CL-PS7500FE evaluation board. Please refer to either the Hardware User's Guide or the Software User's Guide for more detailed information. The information contained in this document is subject to change without notice.

Quick Start Guide

Thank you for choosing Cirrus Logic's CL-PS7500FE development kit. The kit contains the following items:

HARDWARE

CL-PS7500FE Development Board

NULL modem cable

AC Power supply

DOCUMENTATION

Introduction Letter – Contact information

CL-PS7500FE Data Book

CS8900A Data Book

CS4333 Data Book

CL-PS7500FE Development Kit Product Bulletin

CL-PS7500FE Quick Start Guide

CL-PS7500FE Hardware User's Guide

CL-PS7500FE Software User's Guide

Board schematics

SOFTWARE (on CD-ROM)

ARM[®] SDT v.2.50 60-day evaluation version

Angel[™] Debugger

Peripheral library source code

Sample program source code

OrCad 7.2 board schematics & PDF printable schematics

Bill of Materials

Data books for board components

CL-PS7500FE board overlay diagram

Documentation

This quick start guide will help you get your board set up and run some of the sample programs provided on the CD-ROM.

What you need to get started:

An EDB7500FE-2 development kit from Cirrus Logic, and a PC running Windows 95® or Windows NT 4.0®. The 60-day evaluation version does not support Windows 98® or UNIX, but the full version of the ARM STD v.2.50 does support Windows 98 and UNIX.

Board Set Up

Connect the supplied NULL modem cable between the “COM 1” (i.e., J13) connector on the evaluation board and any available COM port on the host system. (For a diagram of this board, see the attached picture.)

Connect power to either the AT or the DC power supply connector.

Connect a set of speakers to the audio jack (i.e., J1), located near the top corner of the board.

Connect a monitor to the SVGA jack (i.e., J18), located near the bottom-right corner of the board.

Connect the mouse and keyboard to their respective PS/2 ports near the top-right corner of the board (i.e., keyboard port = J2, mouse port = J3).

ARM Software Development Toolkit

Install the evaluation version of the ARM SDT v.2.50 software on your PC by running the setup.exe file in the sdt250 directory. If you are unfamiliar with the ARM SDT, be sure to select the online manuals as one of the components to install.

The trial version you are installing is a fully functional evaluation copy of the SDT that will cease to execute after 60 days. To obtain the full version of the ARM SDT, contact ARM Ltd. (www.arm.com).

The evaluation version of the SDT will create a seemingly useless directory called “c_dilla”; do not remove this directory or its contents. If the contents of this directory are changed in any way, the evaluation version of the SDT will no longer work, uninstall correctly, or be reinstalled on your system.

Once the SDT has been installed, there are two applications that will be used to build and debug applications, the ARM Project Manager and the ARM Debugger. These applications are described fully in the online manuals, but brief instructions for basic use of these applications is provided in the Software User’s Guide provided in the kit.

Start the ARM Debugger on the host system.

Select “Configure Debugger...” from the “Options” menu.

Select “remote_a” as the target environment.

Click on the “Configure...” button to select the host COM port to be used. To speed the debugging process, select a baud rate of 115,200. Click on “OK” when done.

The ARM Debugger should connect to Angel, (the debugger on the evaluation board) and then print out a message similar to the following in the “Console Window”:

```
Angel Debug Monitor V1.20 (ARM Ltd. 1.20/Cirrus Logic 1.00) for the CL-PS7500FE
Built for ARM7 Serial, IRQ, cache on
Build number 1
Serial Rate: 115200
```

If there is a problem (such as a bad serial cable, attempting to use the wrong serial port, etc.), the following message will be displayed:

Cannot open target: the target is not responding.

If there are any communication problems between the host and the CL-PS7500FE evaluation board, the ARM tools might revert to using the ARMulator as a result of an obscurely worded dialog box. If this happens, you will have to use the “Configure Debugger...” option to switch back to debugging on the CL-PS7500FE evaluation board.

Run Sample Programs

The example software provided in the evaluation kit is designed to run under control of the Angel debug monitor from ARM. The source code for these programs is contained in the *ps7500fe\samples* directory of the CD-ROM.

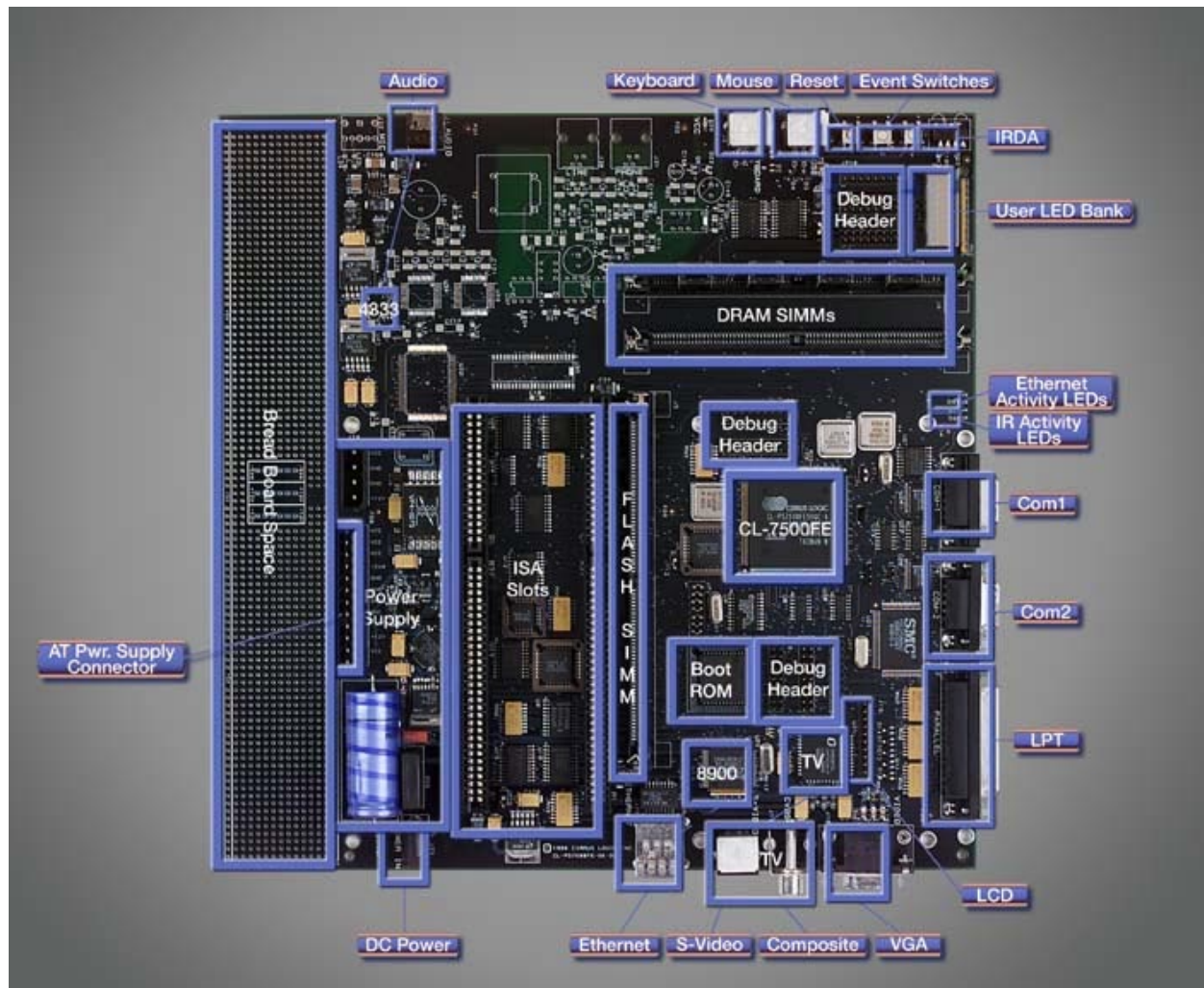
Run the ARM Project Manager program, which is found by going to the “Start” menu, then “Programs”, then “ARM SDT v2.50”. Once run, it will show an empty workspace. First, open a project file (which has an extension of “.apj”). This is done by selecting “Open” from the “File” menu. Go to the *ps7500fe\samples* directory and click on the desired demo “<filename.apj>” file, listed for each demo. Once the project has been opened, run the executable. To do this, select “Execute <filename.apj> ‘Debug’” from the “Project” menu, or press Ctrl+F5. This will launch the ARM Debugger, load the executable image, and begin execution of the program. To exit the program, refer to the exit program information found within each of the demonstrations below.

The ‘screen.apj’ project file will build the screen program. ‘Screen’ is a program that demonstrates the drawing capabilities of the SVGA controller. When run, it will draw a series of images on the display. Once each image is drawn, the program will pause until a keyboard button is pressed. Pressing any key will cause it to draw the next image. After the last image is drawn and a keyboard button pressed, the program will exit.

You must exit the ARM Debugger after each sample program is run or the system will lock up on you.

You should now be well on your way to use the features of the CL-PS7500FE development board.

For support please contact your local sales representative or e-mail us at epdapps@crystal.cirrus.com.



CL-PS7500FE Development Kit Block Diagram