
zilog Z8 Encore! XP[®] Dual F1680 Series Development Kit

Quick Start Guide

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Introduction

This Quick Start Guide describes how to setup Zilog's Z8 Encore! XP[®] Dual F1680 Series Development Kit and start using it to build designs and applications.

Kit Contents

Hardware

The hardware included in Z8 Encore! XP Dual F1680 development kit are as follows:

- Z8 Encore! XP Dual F1680 Series development board
- USB Smart Cable for connecting the PC to the development board
- 5 V DC universal power supply

Software (on CD-ROM)

The software included in Z8 Encore! XP Dual F1680 development kit are as follows:

- Zilog Development Studio II (ZDS II)—Z8 Encore![®] IDE
- ANSI C-Compiler
- Sample code
- Acrobat Reader
- Document Browser

Documentation

The Z8 Encore! XP F1680 technical documentation (on CD-ROM) include:

- Z8 Encore! XP[®] Dual F1680 Series Development Kit User Manual (UM0212)
- ZDS II—Z8 Encore![®] User Manual (UM0130)
- eZ8[™] CPU User Manual (UM0128)
- Z8 Encore! XP[®] F1680 Series Product Specification (PS0250)
- Z8 Encore! XP[®] F1680 Series Product Brief (PB0164)

System Requirements

Table 1 lists the system requirements for running ZDS II.

Table 1. ZDS II System Requirements

Recommended Configuration	Minimum Configuration
<ul style="list-style-type: none">• Windows XP Professional• Pentium III 500 MHz or higher processor• 128 MB RAM• 135 MB hard disk space• Super VGA video adapter• CD-ROM drive for installation• USB high-speed port• Ethernet• RS-232 communications port with hardware flow control• Internet browser (Internet Explorer or Netscape)	<ul style="list-style-type: none">• Windows 98 SE• Pentium II 233 MHz processor• 96 MB RAM• 35 MB hard disk space (application only)• Super VGA video adapter• CD-ROM drive for installation• USB high-speed port• RS-232 communications port with hardware flow control• Internet browser (Internet Explorer or Netscape)

Configuring the Power Supply

The universal power supply kit features four different plug adapters in one box and the power supply itself in another. The power supply is shipped with a slide-out plate that must be removed to insert the location-specific plug adapter.

If a location-specific adapter plug is required, follow the steps below to install it:

1. Remove the slide-out plate.
2. Select the AC plug adapter appropriate for your locale and insert it into the slot that remains after removing the slide-out plate.
3. Slide the new plug adapter into the slot until it snaps into place.

You can leave the adapter slot cover in place and plug in a standard computer equipment AC power cord (purchased separately) between the AC cord receptacle on the end of the power supply and an electrical outlet.

Overview of Hardware and Software Setup Instructions

Follow the steps below to set up the Z8 Encore! XP Dual F1680 Series development kit hardware and software:

1. Install the ZDS II software as described in the [Installing the ZDS II—Z8 Encore! Software](#).
2. Connect your PC to the Z8 Encore! XP development board by following the instructions in [Installing the USB Smart Cable](#).
3. Connect the 5 V DC power supply to the development board.
4. Run the supplied sample project as described in [Getting Started](#) on page 5.

For more details on developing an application for the development kit, refer to *Zilog Developer Studio—Z8 Encore! User Manual (UM0130)* and the *Z8 Encore! XP Dual F1680 Series Development Kit User Manual (UM0212)*.

Installing the ZDS II—Z8 Encore! Software

Follow the steps below to install the software tools:

1. Insert the ZDS II CD into your computer's CD-ROM drive. **DemoShield** launches automatically. If **DemoShield** does not launch automatically, open the Windows Explorer, browse to your CD-ROM drive, and double-click the `launch.exe` file to launch the installer.
2. **DemoShield** provides several installation options. Select **Install Zilog Developer Studio** to install now. You can install other software and accompanying documentation later.
3. Follow the onscreen instructions to complete the installation.

Installing the USB Smart Cable

Follow the steps below to install the USB Smart Cable and associated driver software:

Windows XP

Follow the steps below to install the USB Smart Cable for a Windows XP:

1. Connect the Zilog USB device to the Host PC. The **Found New Hardware** Wizard should activate automatically after connecting the Zilog USB device for the first time; select **No, not at this time** if asked to connect to Windows Update.

-
2. Select **Install from a list or specific location (Advanced)**; then click **Next**.
 - ▶ **Note:** *If the Windows Logo testing dialog appears, select **Continue Anyway**.*
 3. Select **Search for the best driver in these locations** and **Include this location in search:**.
 4. Browse to the following driver directory and click **Next**.
`<ZDS installation>\device drivers\USB`
 5. Click **Next** after the appropriate driver is found.
 6. Click **Finish** to complete the installation.

Windows 2000

Follow the steps below to install the USB Smart Cable for a Windows 2000:

1. Connect the Zilog USB device to the Host PC. The **Found New Hardware** Wizard should activate automatically after connecting the Zilog USB device for the first time.
2. Click **Next** in the **Found New Hardware** Wizard after it has been activated.
3. Select **Search for a suitable driver for my device (Recommended)** and click **Next**.
4. Select **Specify a location** and click **Next**.
5. Browse to the following driver directory and click **OK**.
`<ZDS installation>\device drivers\USB`
6. Click **Next** after the appropriate driver is found.
7. Click **Finish** to complete the installation.

Windows 98 SE

Follow the steps below to install the USB Smart Cable for a Windows 98:

1. Connect the Zilog USB device to the Host PC. The **Add New Hardware** Wizard should activate automatically after connecting the Zilog USB device for the first time.
2. Click **Next** in the **Add New Hardware** Wizard after it has been activated.
3. Select **Search for the best driver for your device (Recommended)** and click **Next**.

4. Select **Specify a location:** and browse to the following driver directory, and click **Next**.

```
<ZDS installation>\device drivers\USB
```

5. Click **Next** after the appropriate driver is found.
6. Click **Finish** to complete the installation.

Connecting the USB Smart Cable to the Development Board



Caution: *The power to the development board must be disconnected or turned OFF before connecting or disconnecting the USB Smart Cable.*

Attach one end of the six-conductor ribbon cable (included) to the USB Smart Cable six-pin DBG connector as displayed in [Figure 1](#). Attach the free end of the ribbon cable to the DBG connector on the development board. Ensure that pin 1 on the ribbon cable (indicated by the dark stripe) is aligned with pin 1 on the target connector.

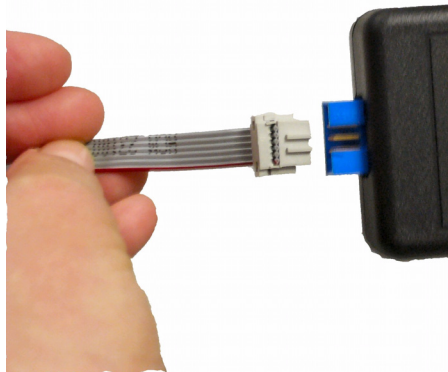


Figure 1. Connecting the Six-Conductor Ribbon Cable to the USB Smart Cable

Getting Started

For this demonstration, you must download code to the Master microcontroller unit (MCU) using ZDS II and then run the Slave MCU using a HyperTerminal window. Use the default settings for the board's jumper settings. For the default jumper settings, refer to *Shunt Settings for the F1680 Development Board in Z8 Encore! XP Dual F1680 Series Development Kit User Manual (UM0212)*.

Download Code to the Master Microcontroller

Follow the steps below to download the `OcdDemo.zdsproj` code into the Master MCU U3:

1. On the Z8 Encore! XP Dual F1680 board, set the S2 switch toward U11 (Master). In this position, the board uses the Master MCU U3 as displayed in [Figure 2](#).

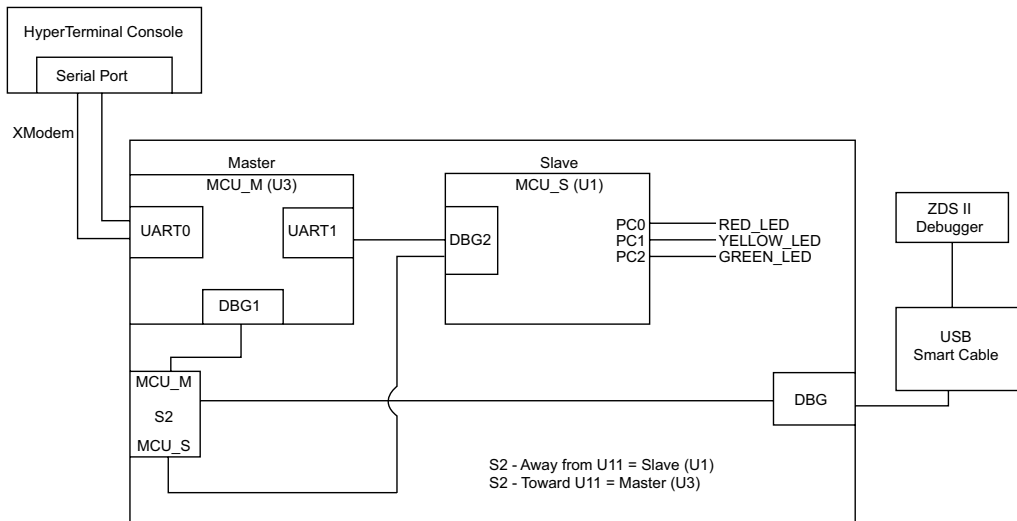



Figure 2. F1680 Development Board

2. Launch the HyperTerminal application.
3. Configure your connection with the following settings:
 - Bits per second: 57600
 - Data bits: 8
 - Parity: None
 - Stop bits: 1
 - Flow control: None
4. Run the ZDS II software. By default, the ZDS II program is located in the Start menu under:


```
Programs → ZiLOG ZDS II - Z8 Encore! <version_number> → ZDS II - Z8 Encore! <version_number>
```
5. Select **Open Project** from the File menu. The **Open Project** dialog box is displayed.

6. Browse to the `ledblink.zdsproj` file, located by default in:
C:\Program Files\ZiLOG\ZDSII_Z8Encore!_<version_number>\samples\Z8F1680_44Pin\LedBlink\src, where <version_number> is the ZDS II version number.
7. Select the correct Debug tool using **Project** → **Settings** → **Debugger** → **Debug Tool**. For example, select **USBSmartCable** when using USB Smart Cable.
8. Click **F1** for additional information on how to setup the debugger.
9. Click **OK**.
10. Select the `ledblink.zdsproj` file and click **Open**.
11. Click **Rebuild All** icon  to build the project and to create the `ledblink.hex` file. Wait for the build to complete.
12. Select **Close Project** from the File menu.
13. Select **Open Project** from the File menu. The **Open Project** dialog box is displayed.
► **Note:** *The sample used in the following steps is in the C programming language.*
14. Browse to the `OcdDemo.zdsproj` file, located by default in:
C:\Program Files\ZiLOG\ZDSII_Z8Encore!_<version_number>\samples\Z8F1680_44Pin\OcdDemo\src, where <version_number> is the ZDS II version number.
15. Select the `OcdDemo.zdsproj` file and click **Open**. The initial ZDS II program screen is displayed, see [Figure 3](#) on page 8. To view the project source files, click the plus sign to the left of the **Standard Project Files** folder on left side of the IDE interface. Double-click an individual file to open that file in the ZDS II file editor.
► **Note:** *Figure 3 through Figure 5 are for reference only. You might have a newer version of the software.*

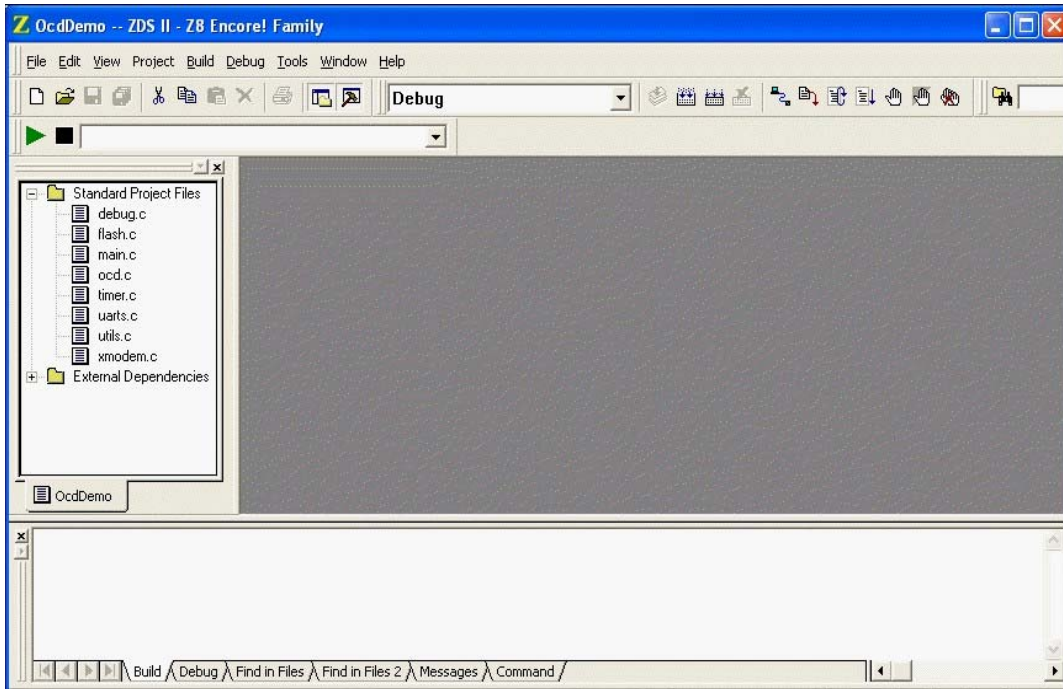




Figure 3. OcdDemo Opening Screen

16. Click **Rebuild All** icon  to build the project. Wait for the build to complete.
17. Click **Reset** icon  to connect and download the code to the development board.

The screen changes as displayed in [Figure 4](#) on page 9.

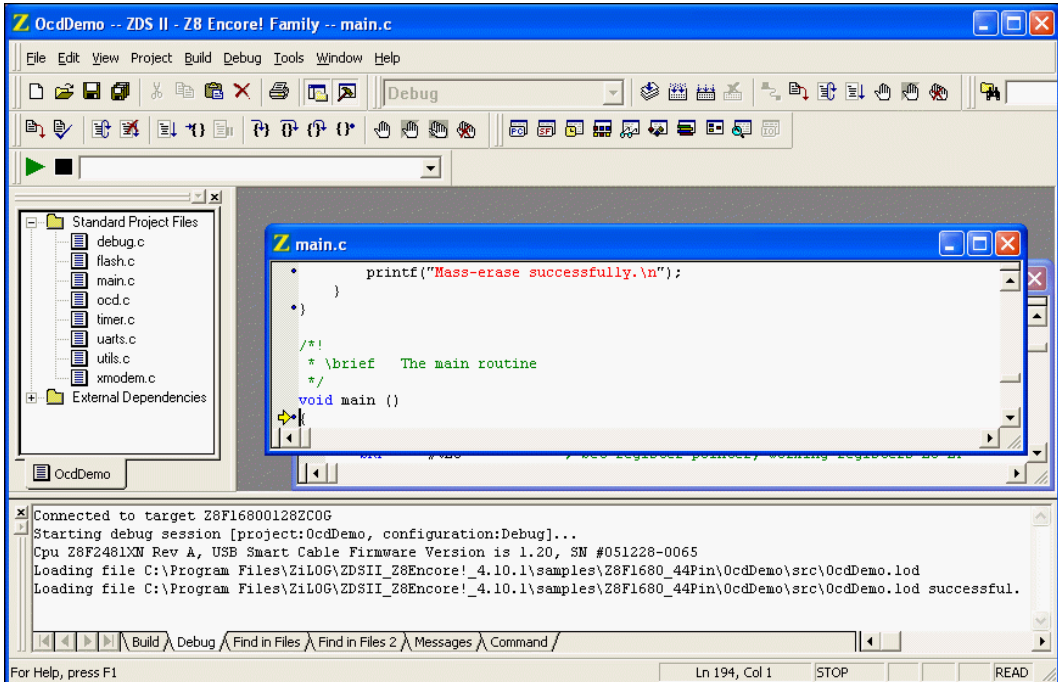



Figure 4. OcdDemo Active Screen

18. Click **Stop Debugging** icon  to stop the program.

19. Select **Close Project** from the File menu.

Run the OCD Demo in Standalone Mode

Follow the steps below to run the OCD demo in standalone mode (without ZDS II):

1. Disconnect the USB Smart Cable from the development board.
2. On the Z8 Encore! XP Dual F1680 board, set the S2 switch toward U11 (Master mode). In this position, the board uses the Master MCU U3 to control the Slave MCU (U1).
3. Press the **RESET** push button on the development board to reset the settings.
4. Type **h** at the **Z8Encore>** prompt in the HyperTerminal window to see the available commands, as displayed in [Figure 5](#).

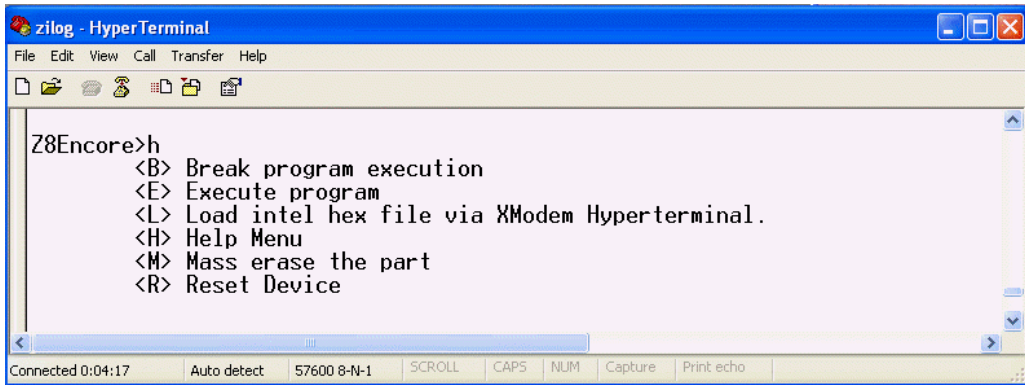


Figure 5. HyperTerminal Window

5. Type `l` in the HyperTerminal window to load a hexadecimal file.
6. In the HyperTerminal window, select **Send File** from the Transfer menu. The **Send File** dialog box is displayed.
7. Browse to the `ledblink.hex` file, located by default in:
`C:\Program Files\ZiLOG\ZDSII_Z8Encore!_<version_number>\samples\Z8F1680_44Pin\LedBlink\output`, where `<version_number>` is the ZDS II version number.
8. Select the `ledblink.hex` file and click **Open**. Ensure that the Protocol is set to **Xmodem**.
9. Click **Send**.
10. When the file is loaded, type `r` to reset the device.
11. Type `e` to execute the program.

The three LEDs on the development board begin blinking in sequence. If the LEDs do not blink, start over from [step 1](#) on page 9.

12. Type `b` to stop the program.

For more information on using ZDS II and building projects for Z8 Encore! XP Dual F1680 Series Development Kit, refer to *Zilog Developer Studio II—Z8 Encore![®] User Manual (UM0130)*.



Warning: DO NOT USE IN LIFE SUPPORT

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