
zilog Z8 Encore! XP[®]/Z8 Encore![®] (F0822, F082A, F1680, and F083A Series) Development Kits

Quick Start Guide

QS004310-0608

Introduction

This Quick Start Guide describes how to set up Zilog's Z8 Encore! XP[®]/Z8 Encore![®] Development Kit (20-/28-pin) and start using it to build designs and applications.

Kit Contents

Hardware

The hardware requirements include:

- One of the following:
 - Z8 Encore! XP F082A Series Flash Microcontrollers Development Board
 - Z8 Encore! XP F042A Series Flash Microcontrollers Development Board
 - Z8 Encore! XP F0822 Series Flash Microcontrollers Development Board
 - Z8 Encore! XP F1680 Flash Series Development Board
 - Z8 Encore! F083A Series Flash Microcontrollers Development Board
- Smart Cable for connecting the PC to Z8 Encore! XP Development Board
- 5 V DC Universal power supply

Software (on CD-ROM)

The software requirements include:

- Zilog Developer Studio II (ZDS II)—Z8 Encore![®] Integrated Development Environment with ANSI C-Compiler
- Sample Code
- Acrobat Reader
- Document browser

Documentation

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

- Development Kit User Manual
- ZDS II—User Manual

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- eZ8 CPU User Manual
 - Product Specification
 - Product Brief

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">• PC running MS 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• One or more RS-232 communications ports• USB High-Speed Port• Ethernet	<ul style="list-style-type: none">• PC running MS Windows 98SE• Pentium II/233 MHz processor• 96 MB RAM• 35 MB hard disk space (documentation not installed)• Super VGA video adapter• CD-ROM drive• One or more RS-232 communications ports• USB High-Speed Port

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 ships 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 appropriate AC plug adapter 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.

- **Note:** *Previous versions of the development kit used the Serial Smart Cable. New kits as of June 2006 will use the USB Smart Cable. Refer to the following instructions for specifics on installing the cable available with your kit.*

Installation Overview

Follow the steps below to set up the Z8 Encore! XP[®]/Z8 Encore![®] development kit hardware and software:

1. Install the ZDS II software as described in [Installing the ZDSII—Z8 Encore![®] Software](#) on page 3.
2. For initial setup, ensure that the jumper JP4, DIS IRDA, is IN (shunt installed). For information on jumper descriptions, refer to the following *Z8 Encore! XP Development Kit User Manuals*:
 - Z8 Encore! XP[®] F0822 Series Flash Development Kit User Manual (UM0150)
 - Z8 Encore! XP[®] F082A Series Development Kit User Manual (UM0186)
 - Z8 Encore! XP[®] F042A Series Development Kit User Manual (UM0166)
 - Z8 Encore![®] F083A Series Development Kit User Manual (UM0206)
 - Z8 Encore! XP[®] F1680 28-Pin Series Development Kit User Manual (UM0203)
3. Connect your PC to the Z8 Encore! XP/Z8 Encore! development board as follows:
 - (a) If your kit was supplied with the USB Smart Cable, follow the steps in [Installing the USB Smart Cable](#) on page 4.
 - (b) If your kit was supplied with the Serial Smart Cable, follow the steps in [Connecting the Serial Smart Cable to the Development Board](#) on page 6.
4. Connect the 5 V DC power supply to the adapter board.
5. Connect the development kit to your PC and run the supplied sample project as described in [Getting Started Using ZDS II](#) on page 7.

For information on developing an application for the development kit, refer to *Zilog Developer Studio—Z8 Encore![®] User Manual (UM0130)*.

Installing the ZDSII—Z8 Encore![®] Software

Follow the steps below to install the ZDS II—Z8 Encore![®] software:

1. Insert the ZDS II CD into the CD-ROM drive. **DemoShield** launches automatically. If the **DemoShield** does not launch automatically, open the Windows Explorer, browse to your CD-ROM drive, and double-click `launch.exe` to launch the installer.

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2. Click the **Install Products** button from the main installer menu.
 3. From the product installer list you can choose to install ZDS II alone, or both ZDS II and associated documentation. You can also copy the documentation directly from your CD-ROM drive to your hard disk using Windows Explorer or read the documentation directly from the CD-ROM itself.

For customer service and technical support, Zilog® recommends you to create an account on <http://support.zilog.com>.

Installing the USB Smart Cable

Follow the steps below for installing the USB Smart Cable and associated driver software.

Windows XP

Follow the steps below to install the USB Smart Cable for 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\x32`
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 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\x32`
6. Click **Next** after the appropriate driver is found.
7. Click **Finish** to complete the installation.

Windows 98SE

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

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\x32`
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 (see [Figure 1](#) on page 6). 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 (indicated by a square silkscreen on the DBG pin).

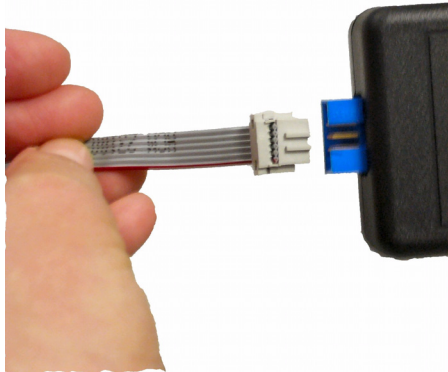


Figure 1. Connecting the Six-Conductor Ribbon Cable to the USB Smart Cable

Connecting the Serial Smart Cable to the Development Board

If you are using a Z8 Encore! XP/Z8 Encore! kit that is supplied with a Serial Smart Cable, your development PC communicates with the development board using the serial port of the PC. The Z8 Encore! Serial Smart Cable converts the RS-232 signals into the 3.3 V bidirectional open-drain signals to communicate with the on-chip debugger.



Caution: *Always use a grounding strap to prevent damage resulting from electrostatic discharge (ESD). Do not connect the power supply to the development board before connecting the Z8 Encore! XP/Z8 Encore! Smart Cable to both the host PC and development board.*

Follow the steps below to connect the Serial Smart Cable to the development board:

1. Connect the serial port of the PC to the Z8 Encore! Smart Cable DB-9 female connector.
2. Connect the Z8 Encore! Smart Cable to the development board pin header P2.

Connecting Power to the Development Board

Connect the power supply to the development board at J1, then to an electrical outlet (see Figure 2).

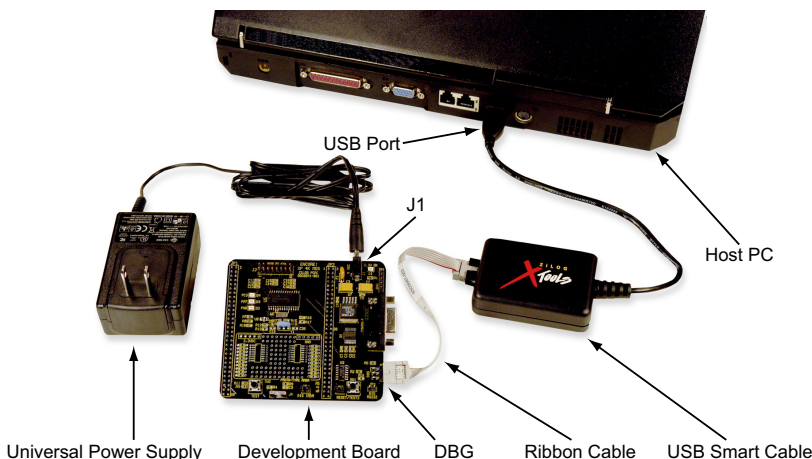


Figure 2. Development Board External Connections (USB Cable Installation Shown)

Getting Started Using ZDS II

Follow the steps below to open and use the `ledBlink.zdsproj` sample project:

- **Note:** *These procedures reference the `ledBlink.zdsproj` file located in `c:\Program Files\ZiLOG\ZDSII_Z8Encore_<version_number>\Samples\Z8xxxx_ledBlink\src`, where `<version_number>` is the ZDS II version number and `Z8xxxx` is the CPU family.*

For example, for ZDS II v4.10.1 or lower

```
c:\Program Files\ZiLOG\ZDSII_Z8Encore_4.10.1\Samples\
Z8F04XP_ledBlink\src.
```

For ZDS II v4.11.0 and later

```
c:\Program Files\ZiLOG\ZDSII_Z8Encore_4.11.0\Samples\
XP_F082A\XP_F042A_LedBlink\src.
```

1. Connect and apply power to the development board.

2. Run the ZDS II software. By default, the ZDS II program is located in the **Start** menu at **Programs → ZiLOG ZDSII Z8 Encore! <version_number> → ZDSII Z8 Encore! <version_number>**.

3. Select **Open Project** from the **File** menu. The **Open Project** dialog box appears.

► **Note:** *The sample used in the following steps is in the C programming language. An assembler version of the ledBlink sample is located in the <CPU family>_ledBlink_asm\src folder.*

4. Browse to the **Samples** folder for the ledBlink.zdsproj file, located by default at:

```
c:\Program Files\ZiLOG\ZDSII_Z8Encore_<version_number>\Samples\
Z8xxxx_ledBlink\src
```

For example, for ZDS II v4.10.1 or lower

```
c:\Program Files\ZiLOG\ZDSII_Z8Encore_4.10.1\Samples\
Z8F04XP_ledBlink\src.
```

For ZDS II v4.11.0 and later

```
c:\Program Files\ZiLOG\ZDSII_Z8Encore_4.11.0\Samples\
XP_F082A\XP_F042A_LedBlink\src.
```

5. Select the ledblink.zdsproj file and click **Open**. The initial ZDS II program screen is displayed (see [Figure 3](#) on page 9).

To view the project source files, click the plus sign to the left of the **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.

6. Select the correct debug tool using **Project → Settings → Debugger → Debug Tool**. For example, select **USBSmartCable** when using the USB Smart Cable.

7. Click **F1** for more information on how to setup the debugger.

8. Click **OK**.

► **Note:** *The following figures are for reference only.*

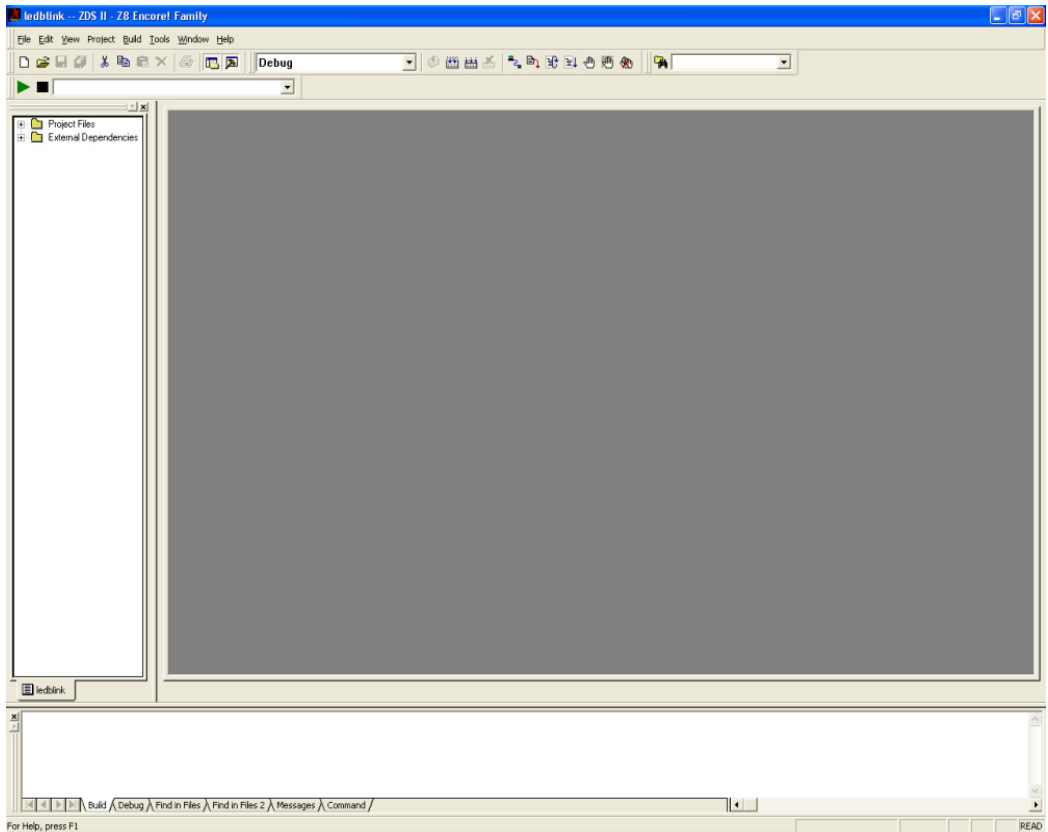





Figure 3. ZDS II Program Screen

9. Click the **Rebuild All** icon  to build the project.
10. Click the **Reset** icon  to connect and download the code to the development board.
11. Click **Go** icon  to start the program (see [Figure 4](#) on page 10).

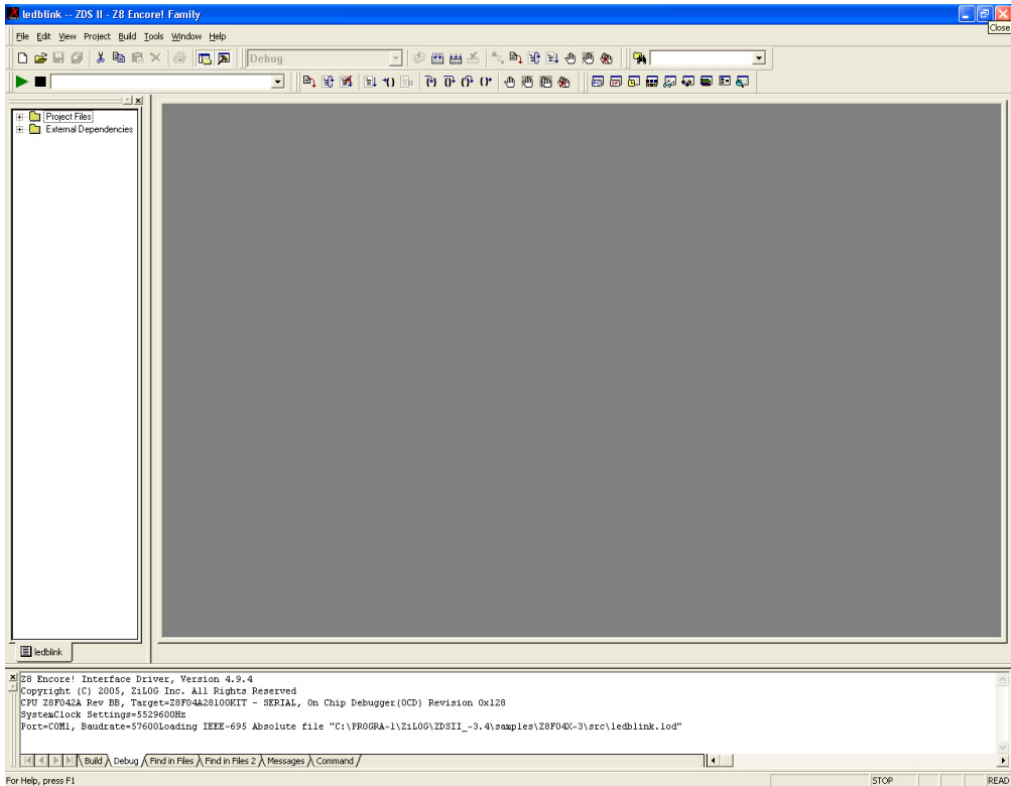


Figure 4. ZDS II Active Screen

12. The three LEDs on the development board blinks in sequence. If the LEDs do not blink, restart from [step 2](#) on page 8.
13. Press the **TEST** push button to change the sequence of the LEDs to blink in the opposite direction.

For more information on using ZDS II and building projects for the Z8 Encore!® development kit, refer to *ZDS II–Z8 Encore!® User Manual (UM0130)*.



Warning: DO NOT USE IN LIFE SUPPORT

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As used herein

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