Z8 Encore! XP® Family of Microcontrollers Development Kits

QS004303-0205

Quick Start Guide

Introduction

This Quick Start Guide describes how to set up your Z8 Encore! XP® Development Kit and start using it to build designs and applications.

Kit Contents

Hardware

- One of the following:
  - Z8 Encore! XP® 4K Series Development Board
  - Z8 Encore! XP® 4K Series 8-Pin Development Board
  - Z8 Encore! XP® F08xA Series Development Board
- Smart Cable for PC to Z8 Encore!® Development Board (DB9 to six-pin male)
- (Z8F04A08100KIT development kits only) USB Smart Cable for PC to Z8 Encore!® Development Board and driver CD-ROM
- Universal 5V power supply

Software (on CD-ROM)

- ZDS II–Z8 Encore!® IDE with ANSI C-Compiler
- Sample code
- Acrobat Reader install program
- Document browser

Documentation

- Registration Card
- Z8 Encore! technical documentation (on CD-ROM)
  - Development Kit User Manual
  - ZDS II–IDE User Manual
  - eZ8 CPU User Manual
  - Product Specification

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Requirements

Table 1 lists the system requirements for running ZDSII.

Table 1. ZDSII System Requirements

Recommended Configuration	Minimum Configuration
• PC running MS Windows XP Professional, SP1 • Pentium III/500 MHz or higher processor • 128 MB RAM • 110 MB hard disk space • Super VGA video adapter • CD-ROM drive • Ethernet port • One or more RS-232 communications ports	• PC running MS Windows 98SE/WinNT 4.0–SP6/Win2000–SP3/WinXP Professional–SP1 • Pentium II/233 MHz processor • 96 MB RAM • 25 MB hard disk space (documentation not installed) • Super VGA video adapter • CD-ROM drive • Ethernet port • One or more RS-232 communications ports

Setting up the Development Board

The PC communicates with the Z8 Encore! development board using the serial port of the PC or, in the case of the Z8F04A08100KIT kit, the USB port of the PC. The Z8 Encore! serial Smart Cable and USB Smart Cable convert the RS-232 signals into the 3.3V bidirectional open-drain signal needed to communicate with the on-chip debugger.

⚠ **Caution:** Always use a grounding strap to prevent damage resulting from electrostatic discharge (ESD).

1. For initial setup, make sure jumper JP4, DIS IRDA, is IN (shunt installed). See the appropriate *Z8 Encore! XP® Development Kit User Manual* (UM0166 for the XP 4K Series kit, UM0187 for the XP 4K Series Z8F04A08100KIT kit, UM0186 for the XP F08xA Series kit) for detailed jumper descriptions.

2. *For the Z8F04A08100KIT XP 4K Series 8-pin kit only.* To run the Z8F04A08100KIT in demo mode, ensure the jumpers are set as follows: J3 1-2, J4 OUT, J5 1-2, J6 1-2, J7 OUT, J8 1-2, J9 1-2, J10 1-2, J11 OUT. For complete details on jumper settings for

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this kit, refer to the *Z8F04A08100KIT Z8 Encore! XP™ 4K Series User Manual*, UM0187.

▶ **Note:** Steps 3 and 4 below refer to installing the serial Z8 Encore! Smart Cable. For instructions on installing the Z8 Encore! USB Smart Cable, refer to the *USB Smart Cable User Manual*, UM0181, on the CD-ROM included with the development kit.

⚠ **Caution:** Do not connect the power supply to the development board before connecting a Z8 Encore! Smart Cable to both the host PC and development board.

3. Connect the serial port of the PC to the Z8 Encore! Smart Cable DB-9 female connector.

4. Connect the Z8 Encore! Smart Cable to development board pin header P2.

5. Connect the power supply to the development board at J1, then to an electrical outlet (Figure 1 on page 4).

Connecting 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.

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.

4. Plug the power supply into an electrical outlet.

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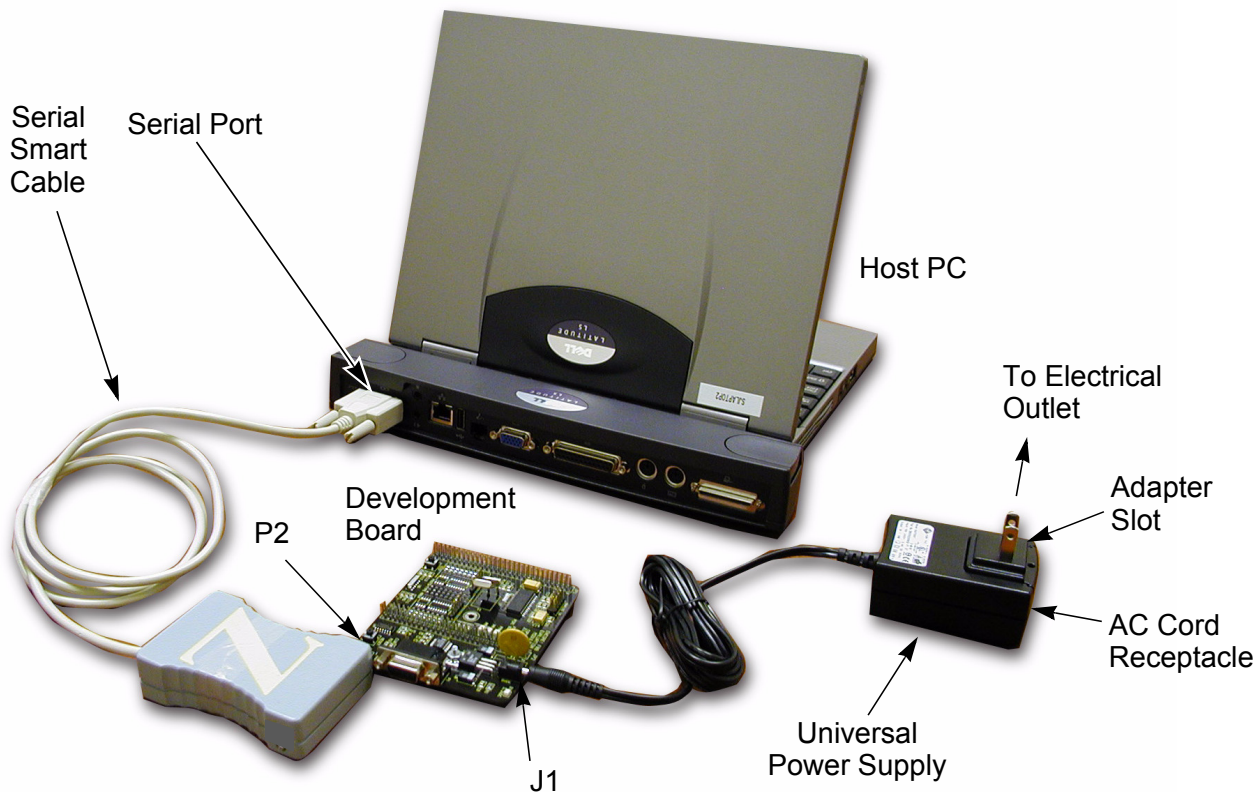
Figure 1. Development Board External Connections
(Serial Z8 Encore! Smart Cable shown)

For convenience, 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.

Installing the ZDSII–Z8 Encore!® Software

Perform the following steps to install the software tools:

1. Load the ZDSII CD into the CD-ROM drive of the host PC. The CD launches *DemoShield* automatically and provides a menu to install the product and documentation.

2. Select INSTALL PRODUCTS, and then INSTALL ZDSII to display the Installation Wizard.

3. Click Next to continue with the installation. The License Agreement appears.

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4. Select Yes to accept the agreement and proceed with the installation.

5. After selecting Yes, the Choose Destination Location screen appears. Follow the directions on the screen and choose whether to install ZDSII in the default location or in some other folder. Click Next.

    Unless you select a different location, the software is installed in:

    ```
    C:\Program Files\ZiLOG\ZDSII_Z8Encore_<version>\
    ```

6. The Select Program folder screen appears. Follow the directions on the screen and click Next.

    Unless you select a different location, the program is located in the Start menu under

    ```
    Programs → ZiLOG ZDSII Z8 Encore! <version> ZDSII Z8 Encore!
    <version>
    ```

7. After selecting Next, the Register Your Software screen appears. Follow the instructions on the screen to complete the software registration.

8. When the installation is complete, a screen appears reminding you to register the development kit online. To register, visit http://support.zilog.com/support/ and enter your ZiLOG Support user name and password, or select Create Account if you do not have one. After logging in, select Register New Products.

    Registered users can submit technical questions online and check status of their questions by logging in and clicking the Support Requests menu.

Getting Started Using ZDSII

Perform the following procedure to open and use the ledBlink.zdsproj sample project.

> **Note:** These procedures reference the

1. Connect the development board to the host PC's serial communications port using the Smart Cable, as described on page 2.

2. Apply power to the development board.

3. Run the ZDSII software. By default, the ZDSII program is located in the Start menu under:

    ```
    Programs → ZiLOG ZDSII Z8 Encore! <version> → ZDSII Z8 Encore!
    <version>
    ```

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

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5. Browse to the `Samples` folder, located by default in:

    `c:\Program Files\ZiLOG\ZDSII_Z8Encore_<version>\Samples\`

6. In the `Samples` folder, select the `Z8Fxxxx_ledBlink` folder, then the `src` folder, to access the `ledBlink.zdsproj` project file.

> ➤ **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 `Z8Fxxxx_ledBlink_asm` folder.

7. Select the `ledblink.zdsproj` file and click Open. The initial ZDSII program screen opens (see Figure 2 on page 6).

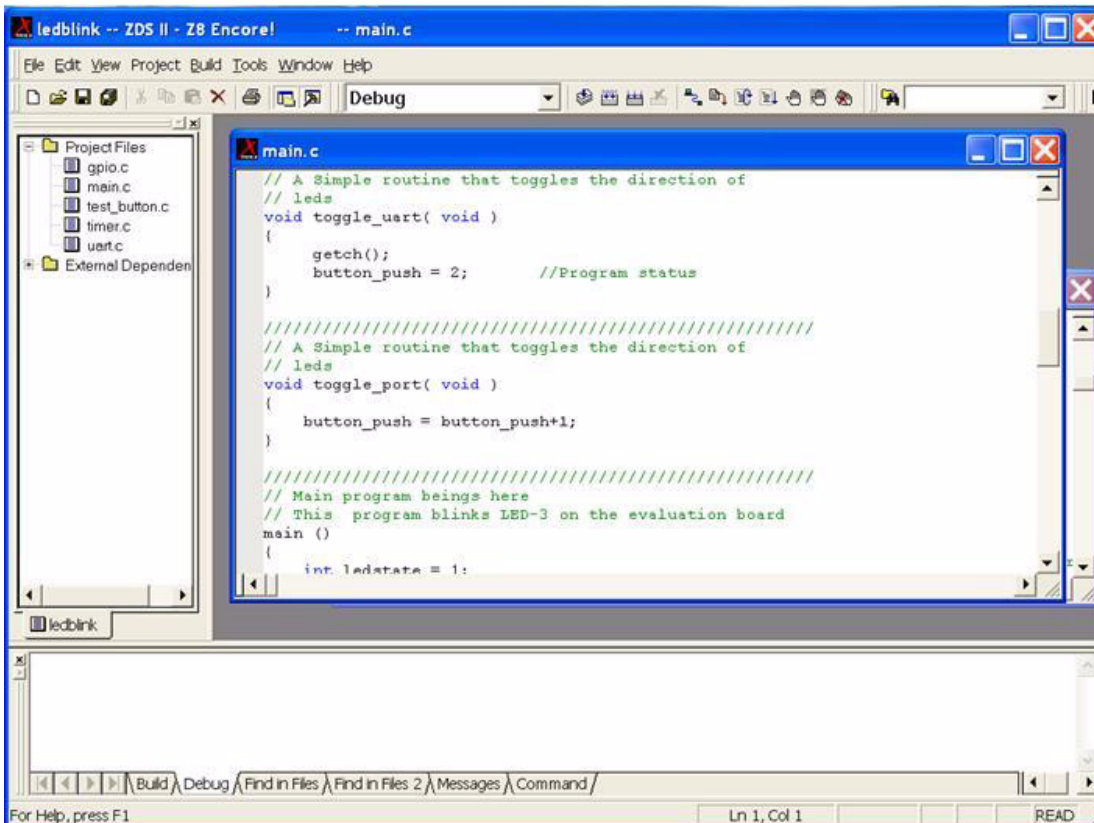> ➤ **Note:** The following figures are for reference only. You may have a newer version of the software.


Figure 2. ZDSII Opening Screen

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8. Click the Rebuild All icon to build the project. Wait for the build to complete.

Rebuild All Icon

9. Click the Reset icon to connect and download the code to the development board.

Reset Icon

10. Click Go to start the program. The screen changes as illustrated in Figure 3 on page 7.

Go Icon
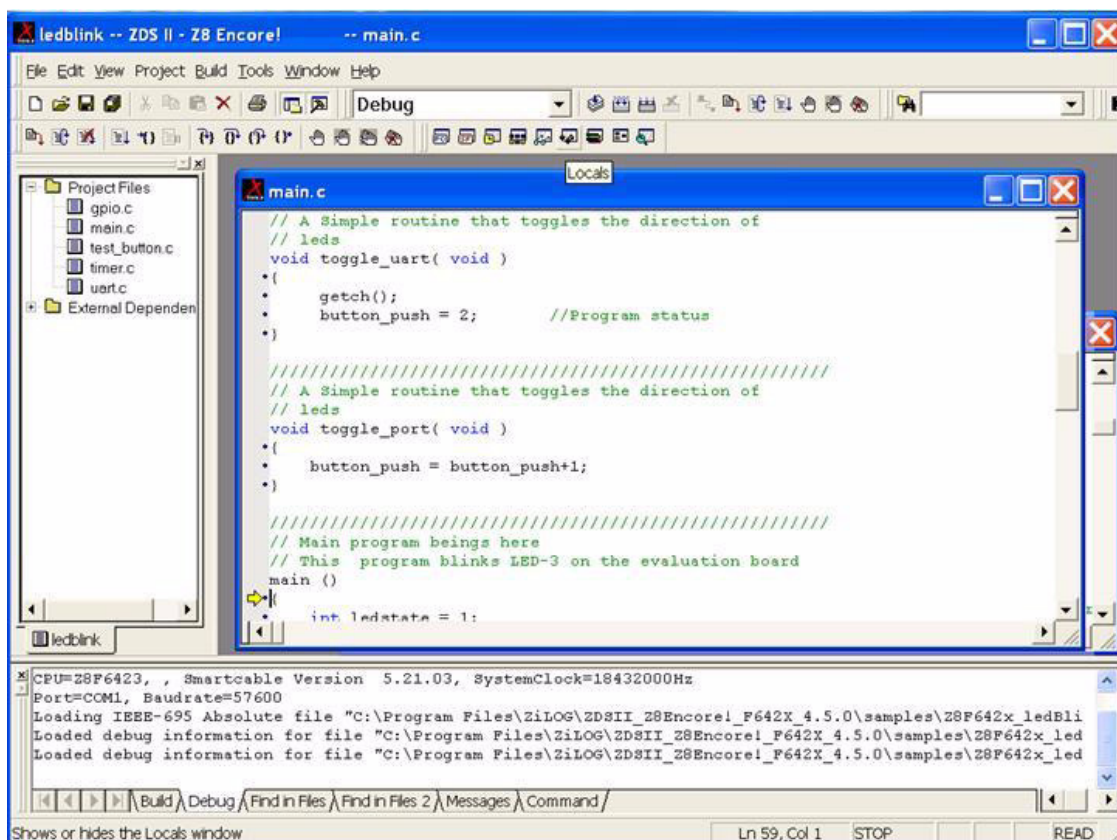
Figure 3. ZDSII Active Screen

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11. The three LEDs on the development board begin blinking in sequence. If the LEDs do not blink, start over from Step 3 on page 5.

▶ **Note:** (Z8F04A08100KIT development kits only) LED D2/PA0 is shared with the DBG pin when the board is in debug mode. The LED will therefore not be fully illuminated.

12. Press the TEST pushbutton to change the sequence of the LEDs to blink in the opposite direction.

For more information about using ZDSII and building projects for your Z8 Encore!® development kit, refer to the *ZiLOG Developer Studio II–Z8 Encore!® User Manual (UM0130)*.

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