Z8F3224 ZMOTION® Development Kit

Quick Start Guide

QS009701-1021

Introduction

This document acquaints users with Zilog's Z8F3224 ZMOTION Development Kit (part number ZMOTIONL400ZCOG) and provides instructions on setting up and using the kit to demonstrate its basic operation. The following topics are covered:

Kit Contents

The Z8F3224 ZMOTION Development Kit includes the following components:

- Z8F3224 ZMOTION Development Board
- Encore Smart Cable (Debugger)
- USB Cable – type A/B
- Selection of Lenses
  - ZCWM05GIV1
  - ZNCL11
  - ZNCL926
  - ZNCL10IL (installed)
  - ZNCL3B
  - ZNCL10R
  - ZNCL10S

Figure 1. ZMOTIONL400 Development Kit Contents

Getting Started

The Z8F3224 ZMOTION Development Kit provides a quick and easy way to evaluate Zilog's ZMOTION motion detection solution and begin development of your own project. The kit comes with several lens options and two ZMOTION MCU's configured to support "Low Power" and "Normal Power" operating modes.

To provide a quick way to get the kit up and running, the ZMOTION MCU's are programmed with the ZM_LP_Basic (Low Power) and ZM_NP_Basic (Normal Power) projects using the ZRE200GE pyroelectric sensor and the NCL10IL lens. It is possible to observe the basic operation of the kit by installing the lens and then applying power.

For more in-depth information about using this development kit and to learn more about downloading the related software projects and documentation, refer to the Z8F3224 ZMOTION Development Kit User Manual (UM0295).

Normal Power MCU

1. Place SW4 (Active MCU Selection) in the NP position.
2. Connect the USB Port (P1) to a PC using a USB-A Male-to-Mini B cable to supply power to the board. The power LED D4 should light-up.
3. While the MCU waits for PIR stability, LED D3 will flash on and off.
4. When the PIR becomes stable, LED D3 will stop flashing.
5. Make a movement in front of the sensor (for example, walk around or wave hand at least 1 ft/30 cm away). Each time motion is detected, LED D3 will blink, indicating that motion was detected.

Low Power MCU

1. Place SW4 (Active MCU Selection) in the LP position.
2. Connect the USB Port (P1) to a PC using a USB-A Male-to-Mini B cable to supply power to the board. The power LED D4 should light up.
3. LEDs D1 and D2 should flash alternately while the MCU waits for PIR stability, indicating that the MCU is functioning.
4. When the PIR becomes stable, LEDs D1 and D2 will stop flashing.
5. Make a movement in front of the sensor (for example, walk around or wave hand at least 1 ft/30 cm away). Each time motion is detected, LED D1 will blink. D2 demonstrates that the analog wake up circuit detects motion, while D1 indicates that ZMO-TION validated the motion event.

Figure 2 displays the Z8F3224 ZMOTION Development Board.

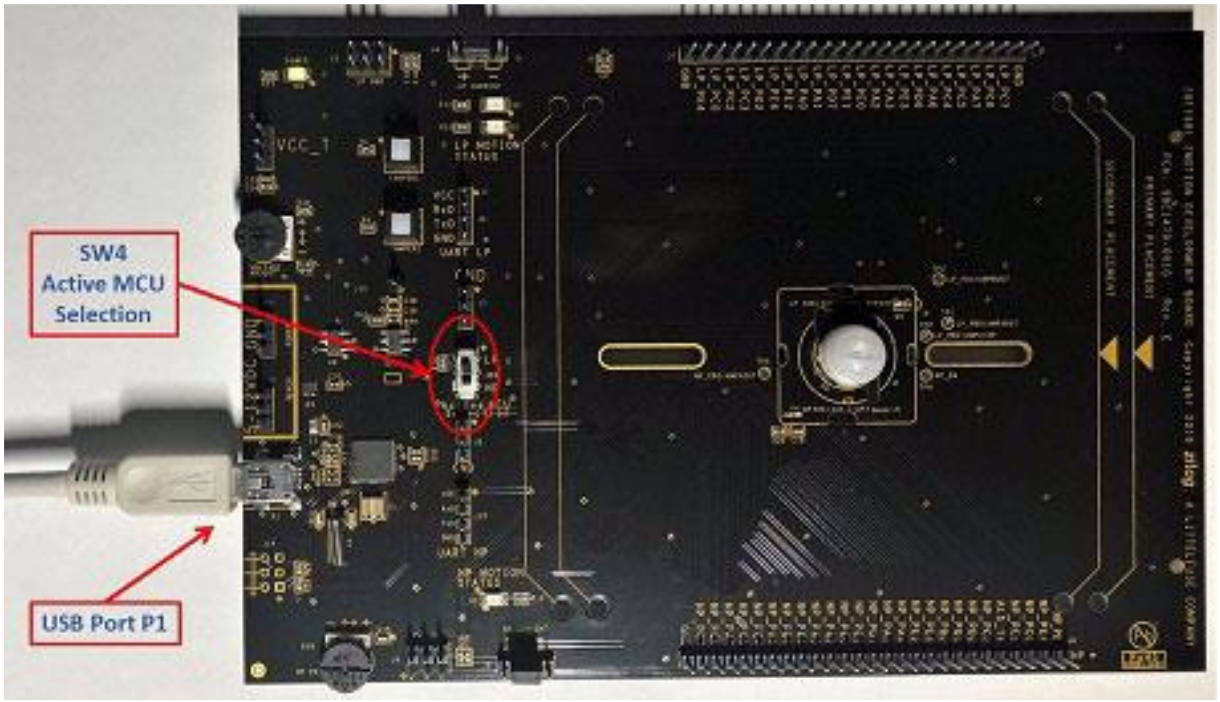

Figure 2. Z8F3224 ZMOTION Development Board

Lens Mounting Options

The ZMOTION Development Board supports two lens mounting options; these are listed in Table 1.

Table 1. Lens Mounting Options

Lens Mounting Style	Lens Supported
PIR Sensor Clip On	ZNCL10IL, ZNCL926, ZNCL10R, ZNCL3B, ZNCL10S
Circuit Board Clip In	ZCWM05GIV1, ZNCL11

Reference Documentation

Refer to the documentation in Table 2 for additional information about Zilog's Z8F3224 Series and ZMOTION products.

Table 2. ZMOTION Documentation

Document Number	Description
UM0295	Z8F3224 ZMOTION Development Kit User Manual
UM0275	ZMOTION Engine Library User Manual
UM0294	Encore! Smart Cable User Manual
PB0264	ZMOTION PIR Lenses Product Brief
PB0263	ZMOTION PIR Sensors Product Brief
PB0258	ZMOTION MCU Product Brief
PS0381	Z8 Encore XP F3224 Series Product Specification
PS0294	Z8 Encore XP F6482 Series Product Specification
ZMOTIONL400ZCOG_1.0	ZMOTION Library installation file. Also includes documentation, sample projects and reference schematics. Version must be 1.0 or later.

Revision History

Each instance in this document's revision history reflects a change from its previous edition. For more details, refer to the corresponding page(s) or appropriate links furnished in the table below.

Date	Revision Level	Description	Page
October 2021	01	Original issue.	All

Customer Support

To share comments, get your technical questions answered, or report issues you may be experiencing with our products, please visit Zilog's Technical Support page at support.zilog.com.

To learn more about this product, find additional documentation, or to discover other facets about Zilog product offerings, please visit the Zilog Knowledge Base.

This publication is subject to replacement by a later edition. To determine whether a later edition exists, please visit the Zilog website at www.zilog.com.