Off-line Writer User Manual

Release Version B

Off-line Writer User Manual

Lumissil Off-line Writer can help customers program Lumissil MCU flash during the product mass production stage. Customers can use this device with USB power to connect with customer's MCU board via SPI for flash programming without PC.

1. Hardware Introduction

1.1 Hardware Configuration

PWR: 5V power supply from the mini-USB connector (Do not turn on the power of the Target Board during flash programming.)
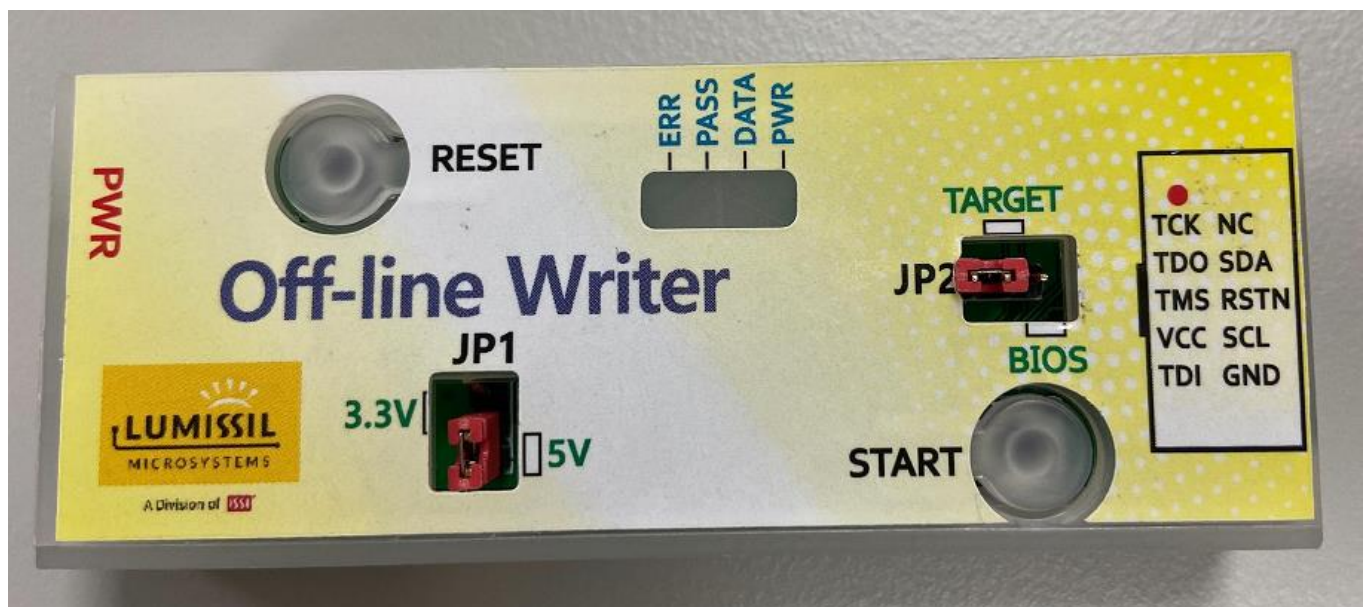
JP1: Two Power selections: 5V (bottom switch), 3.3V (top switch) (Depend on the MCU ISP interface power requirement of the target board)

JP2: Update Selections: TARGET (left switch), BIOS for Off-line Writer (right switch)

START: Start key

RESET: Reset key

ISP Connector: Writer Mode & ISP mode connector

1.2   The definition of PWR/DATA/PASS/ERR LED

1. PWR LED on/ ERR red LED off/ PASS green LED on:
   Off-line Writer is ready for operation after power-up.

2. PASS green LED blinking: The burning process is in
   progress.

3. PASS green LED on and DATA blue LED on: The
   burning process is completed correctly.

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Rev. B, 10/21/2022

1.3   What does the ERR LED mean

1. ERR red LED on: The execution of ISP command failed.
2. ERR red LED blinking: BurningTimes counter has reached the programming counter limit setting.
3. ERR red LED on and PASS green LED blinking: Main memory download/verify failed.
4. ERR red LED on and PASS green LED on: IFB download/verify failed.
5. If ERR red LED is still on after 10 seconds after Off-line Writer is powered on, please try to press the "**RESET**" button to reset the device for usage.

2. Load burning code to Off-line Writer for Target

2.1 Off-line Writer connection with EzISP board

Below is hardware setup for Off-line Writer and EzISP connection.
EzISP USB port is connected to the PC USB port.
JP2 is set at **BIOS** mode.

### 2.2 Program code to Off-line Writer via EzISP

The Off-line Writer LED indicator is as below figure. PWR LED will be on and ERR LED will be in red color when the device power is on. After 7~10 seconds, ERR red LED will be off and PASS green LED will be on. Now Off-line writer is ready for operation.

When burning code to Off-line Writer via EzISP is in process, PASS LED will be green blinking and will turn stable green once burn-in completes successfully. Meanwhile, DATA blue LED will be in stable blue color to indicate burn-in completion successfully. ERR LED will be in red color when there is an error occurred.
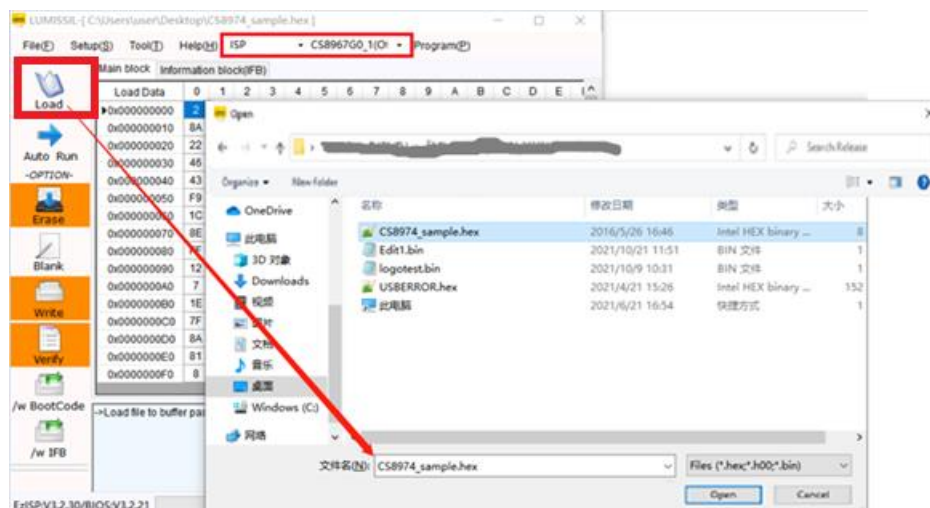

Below are four steps to program code to Off-line Writer via EzISP

Off-line Writer User Manual

Step 1: Run EzISP v3.2.x or later version. Select Off-line Writer device name **CS8967G0_1(off)** and **ISP** Mode as below figure.
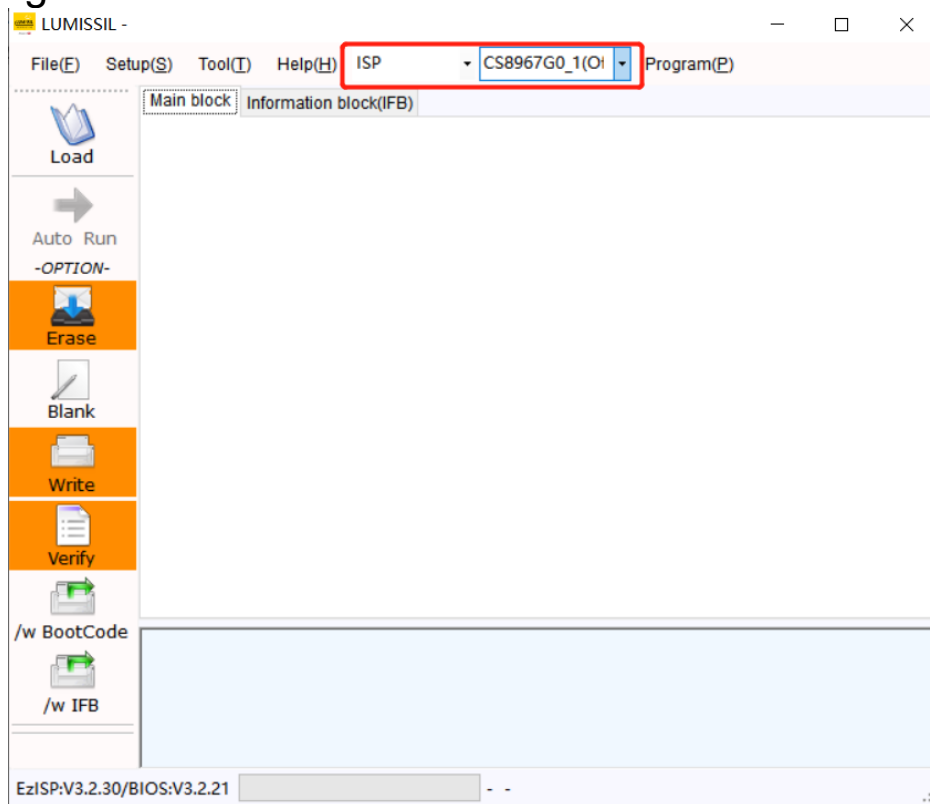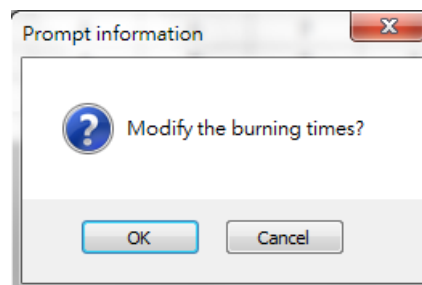

Step 2: Load the burning code file as below. Press " **Load**" and select the burning hex file and click "**Open**"


Step 3: Load burning code file for IFB as below if necessary. If it is not necessary, please skip this step.

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Rev. B, 10/21/2022
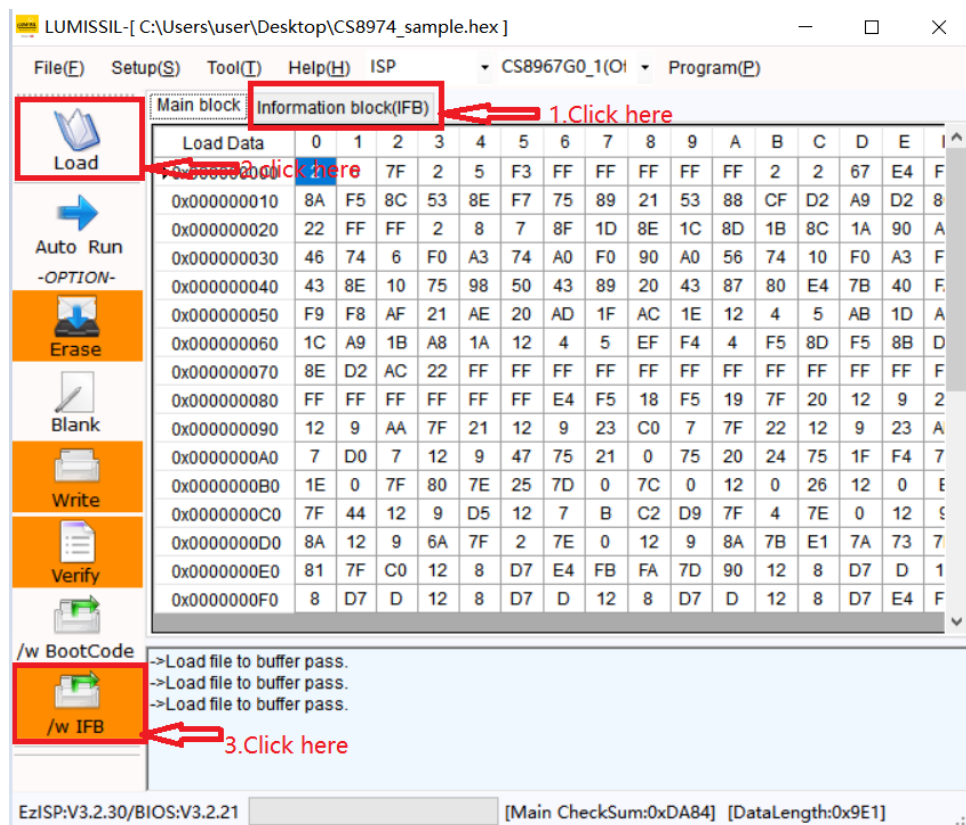
Step 4: Check **Erase**, **Write**, **Verify**, and press "**Auto Run**". There pops out the below dialog box.

If you do not need to modify the parameters, press "**Cancel**" or close the window by clicking the x at the right top in the above figure. Press "**OK**" and there pops out below window.

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Rev. B, 10/21/2022
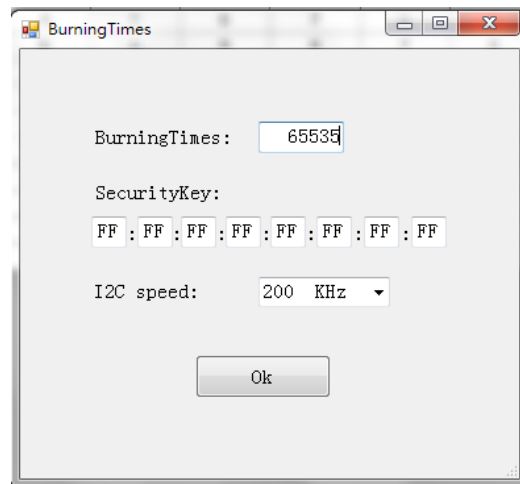
BurningTimes: Set the burning times between 1~65535. This setting will limit the programming count of Off-line Writer.

SecurityKey: Set the security code that you want to choose for the target board.

I2C speed: Set the communication speed between the Off-line Writer and the target board.

At this point, EzISP will start communication with the Off-line Writer for ISP commands, and "**Handshake Error!**" message as below figure might pop out. In the case "**Handshake Error!**" message pops out, **press the "RESET" button of Off-line Writer within five seconds to retry.**

After Off-line Writer is successfully programmed, users can refer to Chapter 3 to program the target boards with the Off-line Writer without EzISP connecting to the PC.

Off-line Writer User Manual

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Rev. B, 10/21/2022

3. Use Off-line Writer to program Target boards

After the burning code is loaded to Off-line Writer, users can program target devices without PC and the burning counter will depend on the BurningTimes setting in Step 4 of .

3.1 Hardware Connection

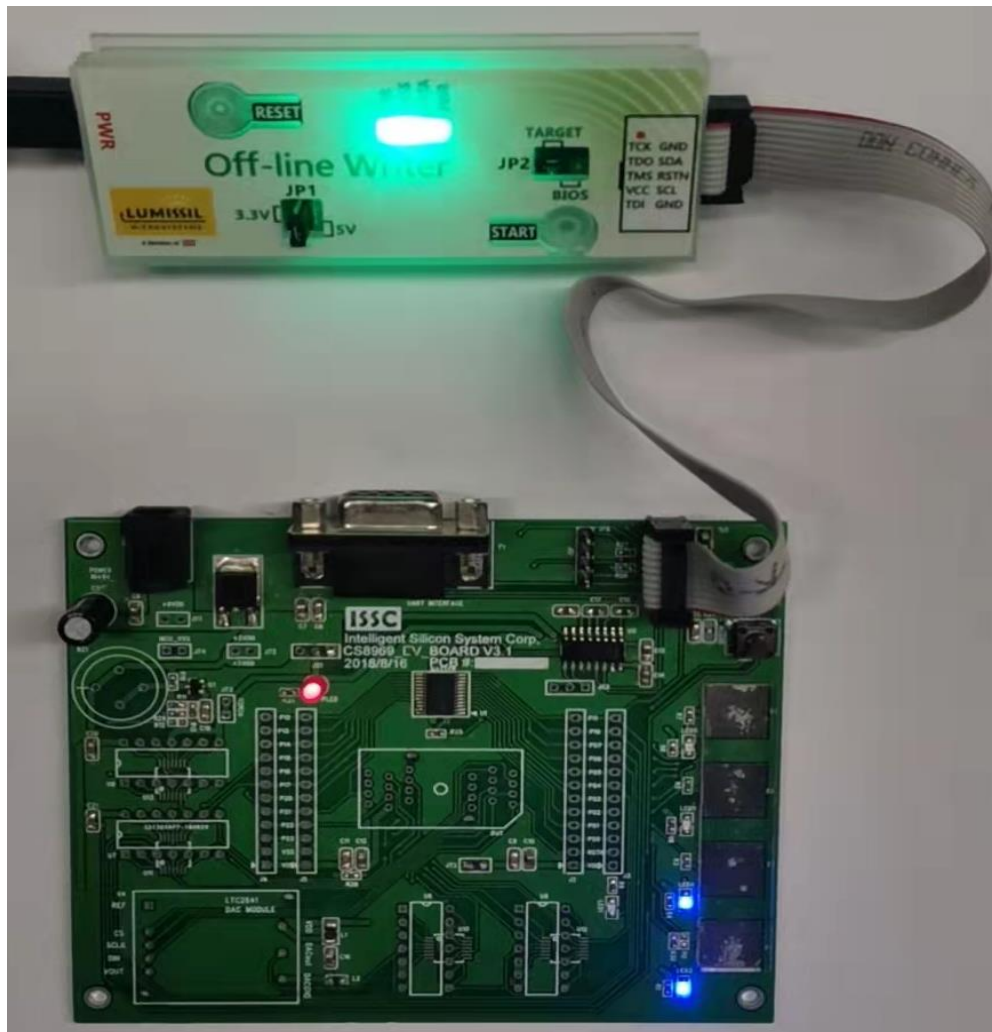JP1: Choose 3.3V or 5V Power. The selection depends on the MCU ISP interface power requirement of the target board.

JP2: Choose "**TARGET**" or "**BIOS**" mode. Choose **TARGET** mode to program target boards.
 TARGET: Program target boards.
 BIOS: Load burn-in code to Off-line Writer.

The ISP connector pins are defined as follows:

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Rev. B, 10/21/2022

Note: Users need to reserve SDA / SCL (P1.4 / P1.5 or P1.2 / P1.3) pins of the target board MCU for connection with ISP connector.

3.2 Burning program to Target board

Step 1: After confirming the connection setup is correct, connect the USB power supply and the PWR LED will be on and ERR LED will be in red color.

Step 2: After 7-10 seconds, the PASS green LED will be on and the ERR LED will be off. Now the Off-line Writer is ready for operation.

Step 3: Press "**START**" button and the burning process starts with the PASS green LED blinking.

Step 4: The program is burned correctly with the PASS green LED on and DATA blue LED on.

3.5 Supported part number list

Below is our Off-line Writer MCU-supported list so far. Please contact us if you can't find your interested Lumissil MCU parts.

IS31CS8974, IS32CS8974, IS31CS8975-16P, IS32CS8975-16P, IS31CS8969, IS32CS8969, IS31CS893, IS32CS8973,

IS31CS5523, IS31CS5514, IS31CS5110, IS32CS5110,
IS31CS5111, IS32CS5111, IS31CS8964, IS31SE5117,
IS32SE5117, ISSE5118, IS32SE5118, IS31SE5120, IS32SE5120

REVISION HISTORY

Revision	Detailed Information	Date
A	First Formal Release	2022.07.28
B	1. Change EzISP version format from 3.2.xx to 3.2.x 2. Move Section 3.3 The definition of PWR/DATA/PASS/ERR LED to Section 1.2 3. Move Section 3.4 The ERR LED status when there is an error to Section 1.3 What does ERR LED mean? 4. Add parts IS31SE5117, IS32SE5117, ISSE5118, IS32SE5118, IS31SE5120 and IS32SE5120 into Off-line Writer support list.	2022.10.21

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