

FLA16/64M-AX Users Manual [Ver 2.0]

Introduction

Thank you very much for purchasing FlashLink FLA16/64M-AX (FLA). This FLA is a configuration module for SRAM based FPGA from Altera or Xilinx products. It mounts 16/64 Mbit of configuration ROM space by applying the FLASH memory.

This FLA can be directly inserted into an Altera Passive-Serial (PS) connector for ByteBlasterMV on the user circuit board. As to Xilinx devices, user board should prepare 10pin header that each of Slave-Serial (SS) configuration signal is assigned for FLA.

To program and/or verify to the FLASH memory on FLA, exclusive software transfers data between Host-PC and FLA via ByteBlasterMV or ParallelCable3 that is connected to the programming connector of FLA.

Reference documents

Please refer to the technical document listed below when user board is designed for FLA.

Doc No	Document Name
FL-AN01	User board design for FlashLink
FL-DS02A	FlashLink Type-A Data Sheet

Documents can be downloaded from URL below.

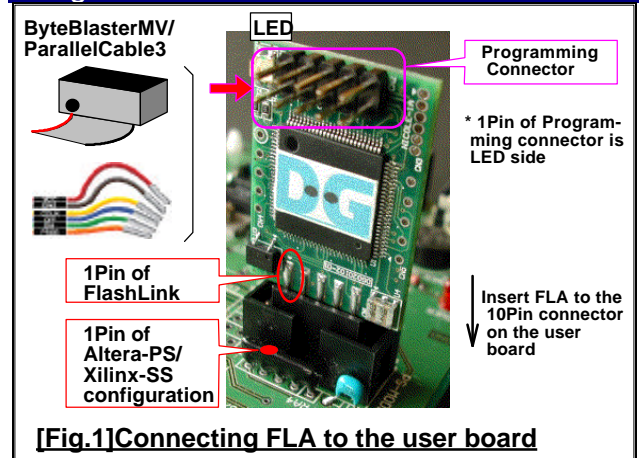
<http://www.dgway.com/products/FlashLink>

Notice of the application

Please observe the following notices.

- [1] FLA fits with the 10pin connector of Altera-PS or Xilinx-SS, don't connect with the JTAG port.
- [2] When FLA is inserted to or extracted from the user board, keep the power supply off to the FLA. (Also power off when ByteBlasterMV / ParallelCable3 is inserted to or extracted from the programming connector on FLA.)
- [3] The voltage of the power supply to FLA would be +3.3V (± 10%). **If the voltage is +5V, FLA will be damaged.**
- [4] When program or verify operation is executed to FLA by the exclusive software, do not task the software, access to the GuardKey of the parallel port, such as Max+Plas2 or Quartus etc.

Usage



1. Connecting with User Board

Insert FLA to the 10pin connector on user board so that each 1PIN position is aligned. (See fig1.) Refer to the data sheet (FL-DS02A) for detail of each configuration pin assignment.

When user board is powered-up, FLA automatically executes power-on-configuration to the FPGA device by Altera-PS or Xilinx-SS mode.

This FLA also supports Altera/Xilinx mixed configuration, see application note (FL-AN01) for more detail.

2. Program / Verify operation

- [1] At first, download the exclusive software from the following URL. Password and User-ID (they are labeled on this manual) are required to download the software.
URL: <http://www.dgway.com/FlashLink>
- [2] Insert FLA to the 10pin header on the user board and connect ByteBlasterMV / ParallelCable3 with the Programming Connector on the FLA. (See FL-DS02A for pin connection of ParallelCable3.)
- [3] Supply +3.3V power to the FLA from user board and check that software recognizes FLA. (Execute some menu such as "BlankCheck.")
- [4] To execute write or verify by the software, refer to the software manual. (Software manual can be downloaded from the same URL as above.)

LED Lighting

The lighting of BI-Color LED on FLA is shown table below. When exclusive software is in operation, LED lighting status might be different. (Refer to the software manual.)

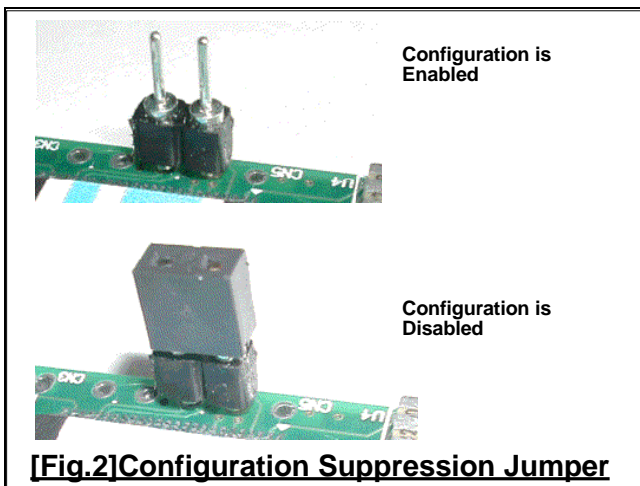
Color	Configuration status
Green	Success (CONF_DONE/DONE=H)
Red	Failure (all 4 times retry have been failed.)
Orange	Configuration is in progress
None	Power off

- When the FLASH memory on FLA is blank, LED lights orange color.

Configuration Suppression Jumper Pin

FLA is equipped with a configuration suppression jumper pin that inhibits both power-on-configuration and software configuration.

Insert a jumper socket to the jumper pin as shown fig2 below when configuration to the user board should be inhibited.



Specification

- Size: L40mm x W23mm x H5mm
- Weight: 10gram
- Supply Power Voltage: +3.3V (+10%/-10%)
- Current consumption (Typical data)
 - Configuration/programming state: 85mA
 - Idle state: 80mA
- Configuration data capacity
 - 16Mbit type: 16,252,928bit
 - 64Mbit type: 66,584,576bit
- User data capacity:
 - 64Kbytes (including System area)
- Configuration speed: 16Mbit/sec
- Power supply supervisor function
 - 400msec power-up delay before start configuration
- Configuration error retry function:
 - Automatic retry until 4 times configuration error
- Supported device:
 - Altera Device:
 - Stratix, Mercury, Apex2, Apex20KE/KC/K, ACEX1K, FLEX10KE/KB/KA
 - Xilinx Device:
 - Virtex2Pro, Virtex2, VlrtextE, Virtex, Spartan2E, Spartan2
 - I/O Voltage must be +3.3V.
 - Flex10K(Vccint=5V), Spartan(Vccint=5V), SpartanXL(Vccint=3.3V) is not supported
- Programming environment:
 - Exclusive software + ByteBlasterMV
 - Exclusive software + ParallelCable3

Exemption from responsibility

Notwithstanding any damages that any devices or parts on user board might incur for any reason whatsoever, DesignGateway Co.,Ltd. shall be exempted from any responsibility for the above damage. Any guarantee for any functional, electrical, physical quality of FLA is lapsed whenever any reconstruction is made to FLA.

Inquiry

URL: <http://www.dgway.com>
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