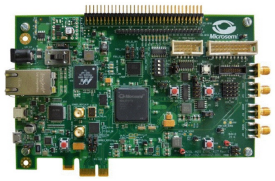
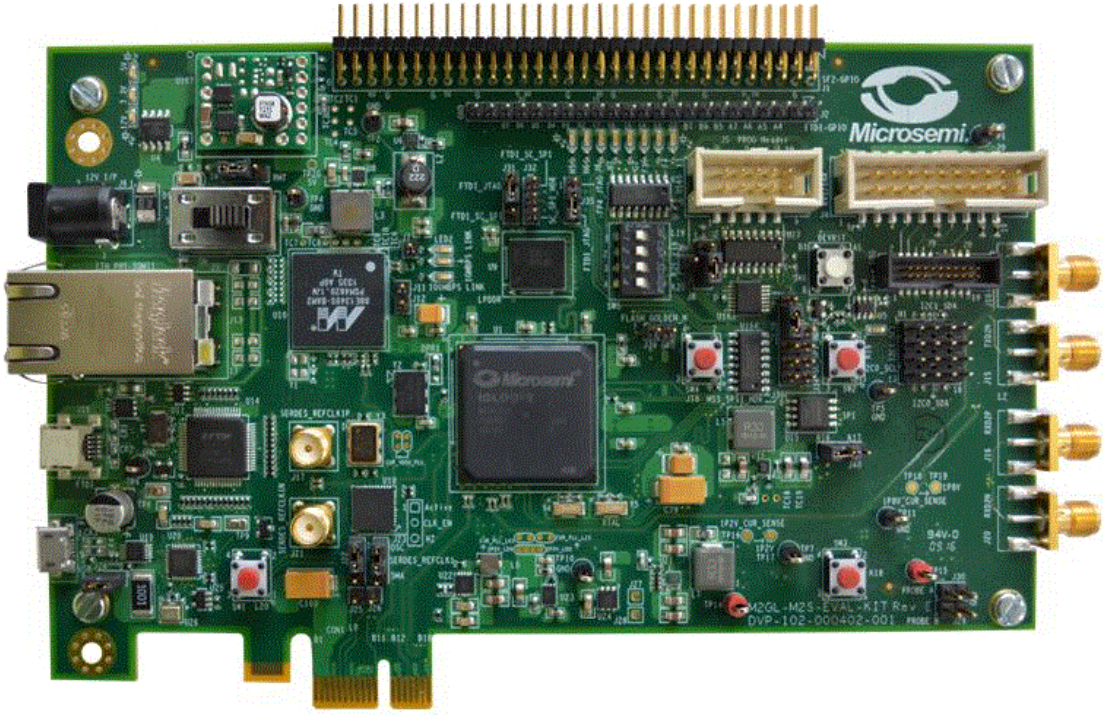


Microsemi ProASIC3/E Starter Kit User Guide

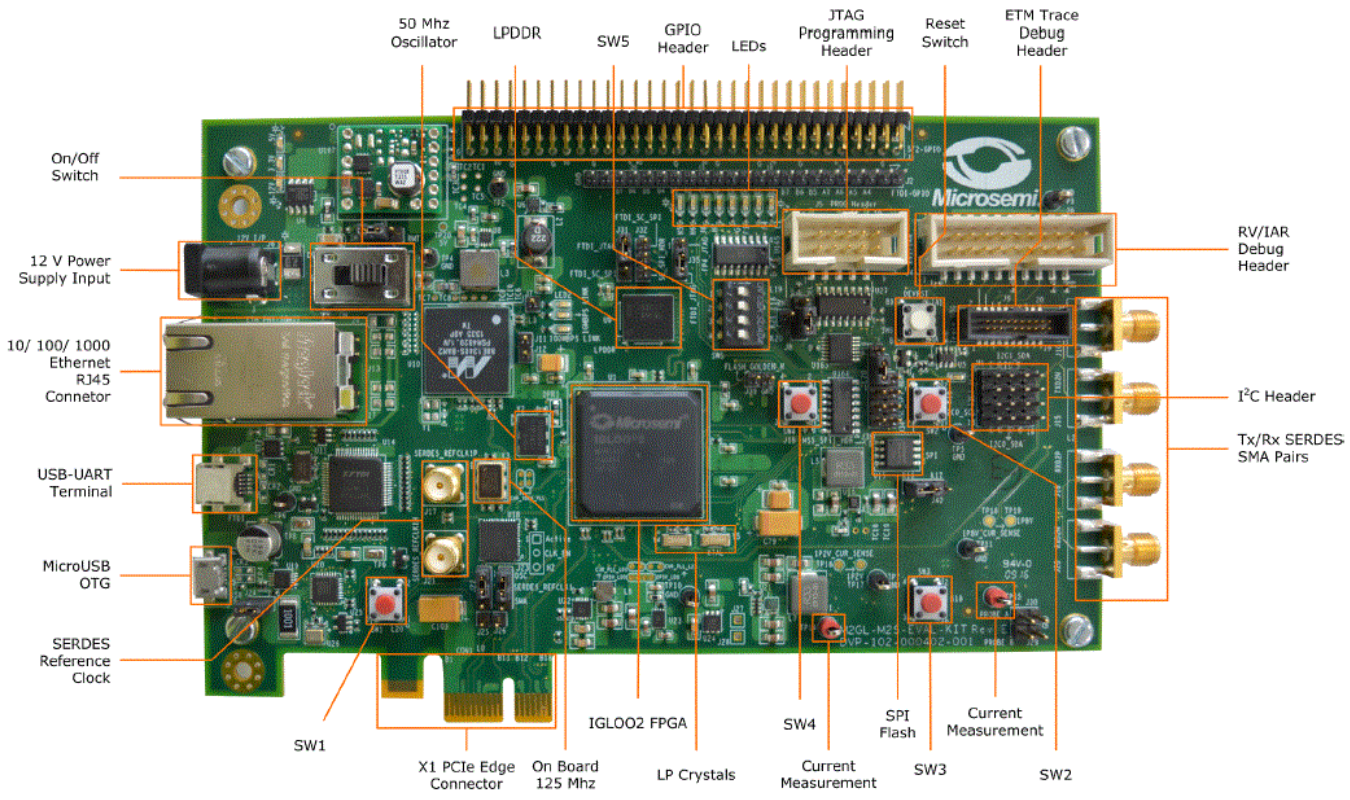
Contents

Microsemi M2GL-EVAL-KIT IGLOO2 FPGA Evaluation Kit



Kit Contents—M2GL-EVAL-KIT

- Quantity Description
- 1 IGLOO2 FPGA 12K LE M2GL010T-1FGG484 Evaluation Board
- 1 12 V, 2 A AC power adapter
- 1 FlashPro4 JTAG programmer
- 1 USB 2.0 A-Male to Mini-B cable
- 1 Quickstart card



Overview

The Microsemi IGLOO®2 FPGA Evaluation Kit makes it easier to develop embedded applications that involve motor control, system management, industrial automation, and high-speed serial I/O applications such as PCIe, SGMII, and user-customizable serial interfaces. The kit offers best-in-class feature integration coupled with the lowest power, proven security, and exceptional reliability. The board is also small form-factor PCIe-compliant, which allows quick prototyping and evaluation using any desktop PC or laptop with a PCIe slot. The kit enables you to:

- Develop and test PCI Express Gen2 x1 lane designs
- Test signal quality of the FPGA transceiver using the full-duplex SerDes SMA pairs
- Measure the low power consumption of the IGLOO2 FPGA
- Quickly create a working PCIe link with the included PCIe Control Plane Demo

Hardware Features

- 12K LE IGLOO2 FPGA in the FGG484 package (M2GL010T-1FGG484)
- 64 Mb SPI flash memory
- 512 Mb LPDDR
- PCI Express Gen2 x1 interface
- Four SMA connectors for testing the full-duplex SerDes channel
- RJ45 interface for 10/100/1000 Ethernet
- JTAG/SPI programming interface
- Headers for I2C, SPI, and GPIOs
- Push-button switches and LEDs for demo purposes
- Current measurement test points

Running the Demo

The IGLOO2 FPGA Evaluation Kit is shipped with the PCI Express Control Plane demo preloaded. Instructions on running the demo design are available in the IGLOO2 FPGA Evaluation Kit PCIe Control Plane Demo user guide. See the Documentation Resources section for more information.

Programming

The IGLOO2 FPGA Evaluation Kit comes with a FlashPro4 programmer. Embedded programming with the IGLOO2 FPGA Evaluation Kit is also available, and it is supported by the Libero SoC v11.4 SP1 or later.

Jumper Settings

Action	Results
Press SW1	Asynchronous clear for the whole design.
Press SW2	Up-down control for the 8-bit counter. Press and hold SW2 for down count when Count mode is selected using SW6.
Press SW3	Synchronous load for the 8-bit counter. Press SW3 for loading from the Hex switches.
Press SW4	Switching between manual clock (SW5) and 40 MHz oscillator clock.
Press SW5	Manual clock (very useful for simulation).
Press SW6	Select for DATA_BLOCK. It allows switching LED output between the counter and flashing data.
Change Hex Switch Setting (U13 and U14)	Changes the loaded data for the 8-bit counter.

Software and Licensing

Libero® SoC Design Suite offers high productivity with its comprehensive, easy-to-learn, easy-to-adopt development tools for designing with Microsemi's low power Flash FPGAs and SoC. The suite integrates industry standard Synopsys Synplify Pro® synthesis and Mentor Graphics ModelSim® simulation with best-in-class constraints management and debug capabilities.
Download the latest Libero SoC release
www.microsemi.com/products/fpga-soc/design-resources/design-software/libero-soc#downloads
Generate a Libero Silver license for your kit
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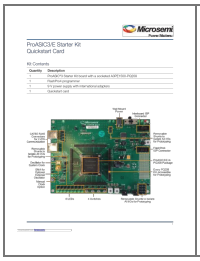
Documentation Resources

For more information about the IGLOO2 FPGA Evaluation Kit, including user's guides, tutorials, and design examples, see the documentation at www.microsemi.com/products/fpga-soc/design-resources/dev-kits/igloo2/igloo2-evaluation-kit#documentation.

Support

Technical support is available online at www.microsemi.com/soc/support and by email at soc_tech@microsemi.com
Microsemi sales offices, including representatives and distributors, are located worldwide. To find your local representative, go to www.microsemi.com/salescontacts

Documents / Resources

	Microsemi ProASIC3/E Starter Kit [pdf] User Guide ProASIC3 E, Starter Kit, ProASIC3 E Starter Kit

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