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PolarFire® Evaluation Kit

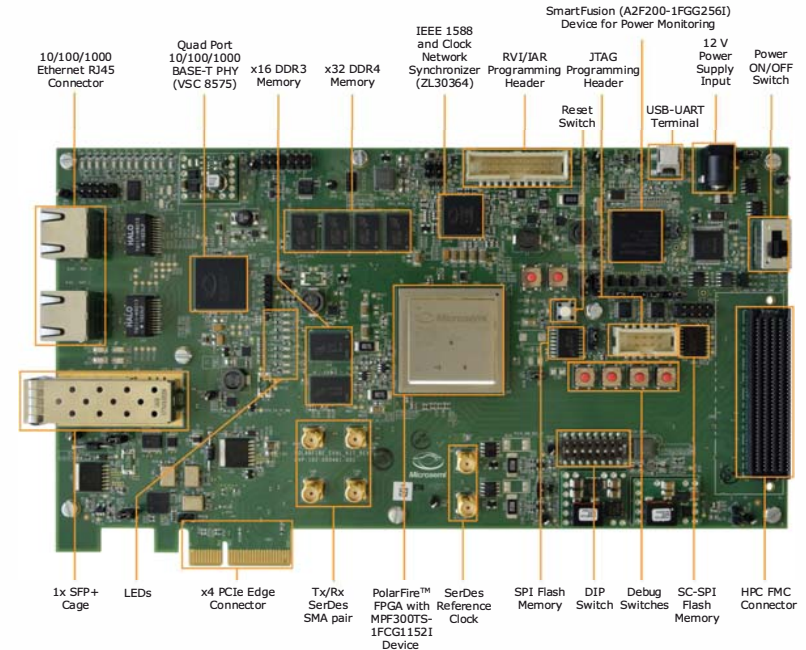
Quick Start Guide

TABLE 1: KIT CONTENTS—MPF300-EVAL-KIT

Quantity	Description
1	PolarFire FPGA with 300K LE MPF300TS-1FCG1152I Evaluation Board
1	USB 2.0A to Mini-B cable
1	12V, 5A AC power adapter and cord
1	Quickstart card

Note: The onboard DDR3 part was changed on the PolarFire Evaluation kit starting from the Revision E of the kit. If the revision on your PolarFire Evaluation Kit is Rev E or later, please refer to [PCN #21009](#) for further information.

FIGURE 1: MPF300-EVAL-KIT



Hardware Features

- 300 K LE PolarFire FPGA in an FCG1152 package (MPF300TS-1FCG1152I)
- 1 x SFP+ cage
- IEEE 1588 PLL
- SMA connectors for testing of full-duplex 12.7 Gbps SerDes channel
- 4 GB DDR4 x32
- 1 GB DDR3L x8

- PCI Express (x4) edge connector
- 2x RJ45 for 10/100/1000 Ethernet using SGMII on GPIO
- Dual 10/100/1000BASE-T PHY (VSC8575)
- SATA interface
- Power management unit for 1V or 1.05V PolarFire FPGA core voltage
- USB to UART Interface
- Embedded programming and debugging using SPI and JTAG
- On-board power monitoring
- 2x 1 GB SPI flash memory

Programming

Microchip's PolarFire Evaluation Kit provides feasible programmability using an on-board embedded FlashPro5 programmer.

The board can also be programmed with standalone FlashPro6/5/4 hardware.

IAP programming and debug support is also provided on the board.

See [Documentation Resources](#) for more information about programming procedures.

Jumper Settings

The PolarFire Evaluation Kit comes with the following default jumper settings.

TABLE 2: JUMPER SETTINGS

Jumper	Pin	Factory Default
J18, J19, J20, J21, and J22	2-3	Shorted
J17	1-2	Open

See [Documentation Resources](#) for full details about jumper settings.

Running the Demo

The PolarFire Evaluation Board comes with a preprogrammed JESD204B standalone demo design. The demo operates in loopback mode to establish a standalone JESD interface demo that does not require analog-to-digital (ADC) or digital-to-analog converters (DAC) by looping data between the TX and RX IP cores for JESD204B.

In order to run the demo, install the JESD204B_GUI application and set up the board as outlined in the following steps. For detailed instructions, refer to [DG0755](#) (*PolarFire FPGA JESD204B Standalone Interface Demo Guide*).

1. Connect the power supply cable to the J9 connector on the board.
2. Connect the USB cable from the host PC to the J5 connector (FTDI port) on the board.

3. Power on the board using the SW3 slide switch.



Software and Licensing

Download the latest Libero SoC PolarFire release <https://www.microsemi.com/product-directory/design-resources/1750-libero-soc#downloads>

Generate your free silver license at <https://soc.microsemi.com/portal/default.aspx?r=1>

Documentation Resources

For more information about the PolarFire Evaluation Kit, including schematics and user's guides, <https://www.microsemi.com/existing-parts/parts/150789#resources>

Support

Request technical support at <https://soc.microsemi.com/Portal/Default.aspx>

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