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MICROCHIP MPF300T-1FCG484E PolarFire Splash Kit

Specifications

- **Kit Contents:** MPF300 Splash Kit Board with MPF300T-1FCG484E device, 12V

power pack/AC adapter, USB 2.0A-male to Mini-B, Quickstart card

- **Programming:** FPGA programmability using an on-board embedded FlashPro5 programmer, standalone FlashPro4/5 hardware compatible
- **Features:** IAP programming and debug support, default jumper settings
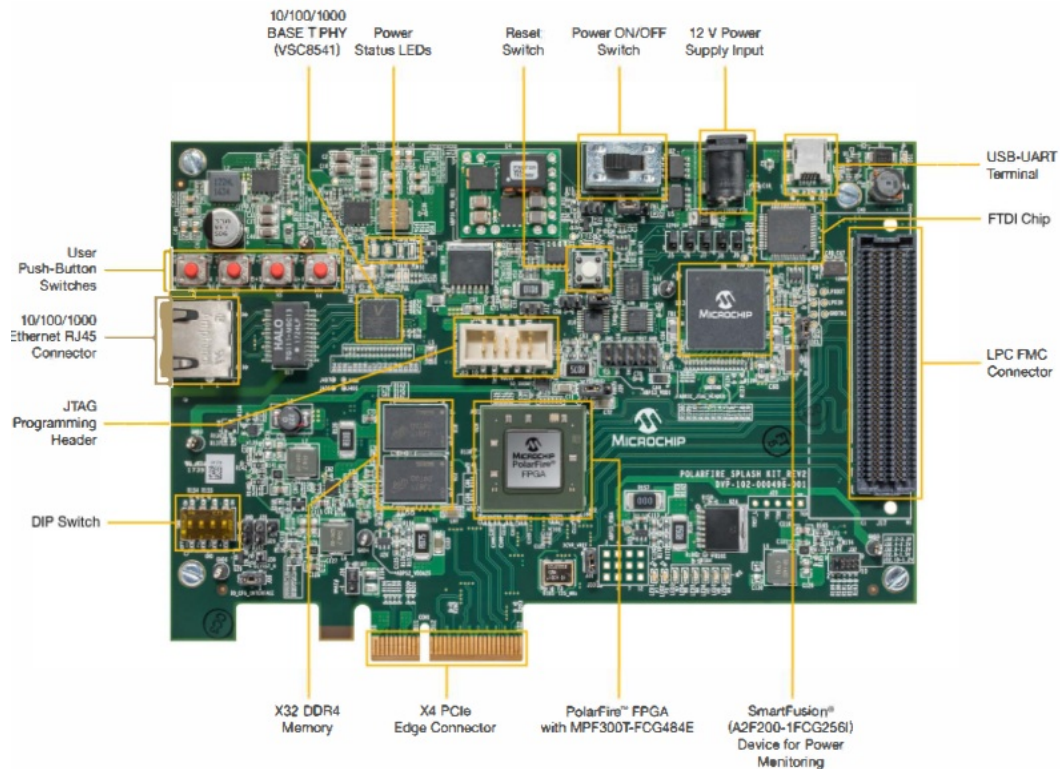
Product Usage Instructions

Introduction

Microchip's PolarFire Splash Kit is a general-purpose hardware platform for evaluating the lowest power, cost-optimised, non-volatile PolarFire FPGAs. This kit has a 300K LE PolarFire FPGA, which integrates reliable non-volatile FPGA fabric, 12.7 Gbps transceivers, 1.6 Gbps I/Os, best-in-class performance, hardened security IP, and crypto processors. The silicon features power optimisation with the lowest static power for 28 nm non-volatile FPGAs, in its low power mode; integrated DDR PHY, PCIe endpoint/ root port, and crypto processor hard IPs.

Table 1. Kit Contents—MPF300-Splash-Kit

Quantity	Description
1	PolarFire Splash Kit Board with MPF300T-1FCG484E device
1	12V power pack/AC adapter
1	USB 2.0A-male to Mini-B
1	Quickstart card

Figure 1. MPF300 Splash Kit Call-Out

Design Applications

- Industrial automation
- Wireless access networks and cellular infrastructure
- FMC expansion
- High-speed I/O
- Imaging and video
- Security
- Power measurement

Hardware Features

- 300K LE PolarFire FPGA in an FCG484 package (MPF300T-1FCG484E)
- PCI Express (x4) edge connector
- FMC connector (LPC)
- x32 LPDDR4
- On-board power monitoring
- RJ45 interface for 10/100/1000 Ethernet using SGMII on GPIO
- USB for UART interface and programming
- 1 Gb SPI Flash memory
- JTAG and SPI programming interface

Programming

- Microchip's PolarFire Splash Kit provides FPGA programmability using an onboard embedded FlashPro5 programmer.
- The board can also be programmed with standalone FlashPro4/5 hardware (not included with the kit).
- IAP programming and debug support are also provided on the board.
- For more information about programming procedures, see www.microsemi.com/existing-parts/parts/ 150866#resources.

Jumper Settings

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

Table 2. Jumper Settings

Jumper	Pin	Factory Default
J5, J6, J7, J8, and J9	2-3	Closed
J4, J11, and J32	1-2	Closed

Running the Demo

- The PolarFire Splash Board comes with a preprogrammed JESD204B standalone demo design.

The following steps set up the PolarFire Splash Kit Board to run the JESD204B demo.

1. Connect the power supply cable to the J2 connector on the board.
2. Connect the USB cable from the host PC to the J1 connector (FTDI port) on the board.
3. Power on the board using the SW1 slide switch.

The following LEDs glow when the board is completely powered up and the demo design is running.

- Power supply LEDs: LED1 to LED6
- Demo LEDs: DS1, DS3, DS4, DS5, DS6, and D5

Software and Licensing

- Libero® SoC PolarFire Design Suite offers high productivity with its comprehensive, easy-to-learn, easy-to-adopt development tools for designing with Microchip's PolarFire FPGAs. 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 PolarFire release www.microsemi.com/products/fpga-soc/design-resources/design-software/libero-soc-polarfire#downloads. Your Kit will work witha Silver License.

Documentation Resources

For more information about the PolarFire Splash Kit, including user guides, tutorials, and design examples, see the documentation at www.microsemi.com/existing-parts/parts/150866#resources

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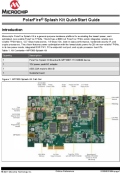| San Jose, CA	Tel: 86-29-8833-7252	Minh	Tel: 40-21-407-87-50
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FAQs

Q: Where can I find programming procedures for the PolarFire Splash Kit?

A: Programming procedures can be found at www.microsemi.com/existing-parts/parts/150866#resources.

Q: How do I set up the PolarFire Splash Board to run the JESD204B demo?

A: Follow these steps: Connect power supply cable to J2, connect USB cable to J1 (FTDI port), and power on using SW1 switch.

Documents / Resources

[MICROCHIP MPF300T-1FCG484E PolarFire Splash Kit](#) [[pdf](#)] User Guide MPF300T-1FCG484E, MPF300T-1FCG484E PolarFire Splash Kit, PolarFire Splash Kit, Splash Kit

References

- [User Manual](#)

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