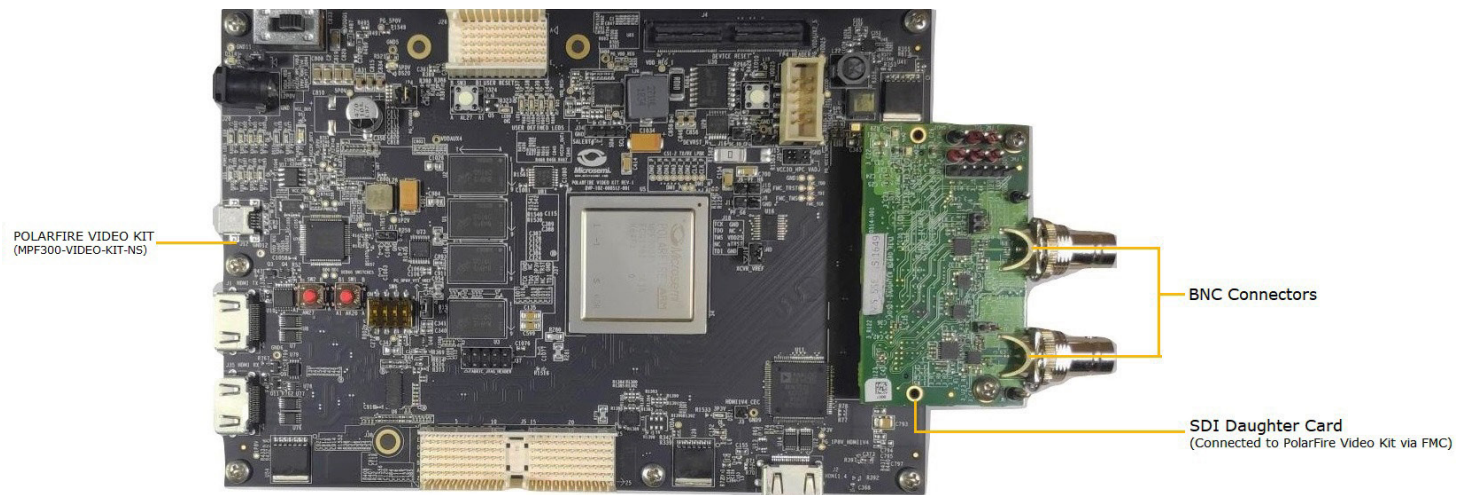


SDI FMC Daughter Card Quickstart Card

Kit Contents—VIDEO-DC-SDI

Quantity	Description
1	SDI FMC Board (VIDEO-DC-SDI)
1	Coaxial BNC to BNC Male to Male
1	Quickstart card

Overview



Microchip's Serial Digital Interface (SDI) solution is a 2-board solution, supports HD/3G/6G/12G rates and is compliant with the SMPTE standards. The board is equipped with BNC connectors and the necessary clocking circuitry to facilitate hassle-free evaluation of the solution.

Microchip's SDI FMC daughter card is the hardware evaluation platform for evaluating and testing the SDI protocol. The daughter card works with the PolarFire Video Kit, which features the PolarFire FPGA device. You need to buy the daughter card separately to evaluate the SDI solution. The kit is purposely built for effortless prototyping of popular imaging and video protocols including MIPI CSI-2 TX, MIPI CSI-2 RX, HDMI 1.4 TX, HDMI2.0, DSI, and HD/3G/6G/12G SDI. With a 300K logic element (LE) PolarFire FPGA with DDR4 and SPI-flash, the kit is ideally suited for mid-bandwidth imaging and video applications.

Hardware Features

- 6G/12G SDI support
- On board 148.5 MHz Oscillator
- Equalizer on RX path
- Driver and Re-clocker on TX path

Programming

Microchip's PolarFire Video Kit must be programmed prior to using the SDI FMC Daughter Card. A programming file (.stp) is available at <https://www.microsemi.com/existing-parts/parts/150888>.

See the documentation resources at <https://www.microsemi.com/existing-parts/parts/150747#resources> for more information about programming procedures.

Running the Demo Design

To run the demo, set up the board as outlined in the following steps. For detailed instructions, see the DG0889: PolarFire FPGA SDI Demo Guide.

Setting Up the Board

The following steps set up the PolarFire Video Kit (MPF300-VIDEO-KIT-NS) to run this demo.

1. Connect the FMC connector **3-J4** on SDI board to the FMC connector and **J14** on the PolarFire Video kit.
2. Connect the **TX(3_J1)** and **RX(3_J1)** BNC connectors on the SDI board using a BNC cable.
3. Insert the dual camera module into **J38** on the PolarFire Video Kit.

Note: Ensure to remove the camera lens caps.

4. Connect the **12 V** power supply to connector **J20** on the PolarFire Video Kit.
5. Connect a HDMI monitor cable to the **J1** connector on the PolarFire Video kit.
6. Power **ON** the PolarFire Video Kit by sliding **SW4** to the **ON** position.
7. A color-bar pattern or a camera image is displayed on the HDMI monitor.

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 release

<https://www.microsemi.com/product-directory/design-resources/1750-libero-soc>

A Gold license is required to program the PolarFire Video Kit. A Software ID letter enclosed with the kit contains Software ID and instructions on how to generate this license. For more information, see <https://www.microsemi.com/existing-parts/parts/150747#overview>.

Documentation Resources

For more information about the SDI FMC daughter card, including schematics and user's guides, see the documentation at <https://www.microsemi.com/existing-parts/parts/150888#resources>.

Support

For Technical support, log a case at our portal, <https://soc.microsemi.com/Portal/Default.aspx>.

Microchip sales offices, including representatives and distributors, are located worldwide.

To find your local representative, go to <http://www.microsemi.com/salescontacts>.



Microsemi Corporate Headquarters
One Enterprise, Aliso Viejo, CA 92656 USA
Within the USA: +1 (800) 713-4113
Outside the USA: +1 (949) 380-6100
Fax: +1 (949) 215-4996
Email: sales.support@microsemi.com
www.microsemi.com

©2019 Microsemi Corporation. All rights reserved.
Microsemi and the Microsemi logo are registered trademarks of Microsemi Corporation. All other trademarks and service marks are the property of their respective owners.

Microsemi Corporation (Nasdaq: MSCC) offers a comprehensive portfolio of semiconductor and system solutions for aerospace & defense, communications, data center and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs and ASICs; power management products; timing and synchronization devices and precise time solutions, setting the world's standard for time; voice processing devices; RF solutions; discrete components; enterprise storage and communication solutions, security technologies and scalable anti-tamper products; Ethernet solutions; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, California and has approximately 4,800 employees globally. Learn more at www.microsemi.com.

Microsemi makes no warranty, representation, or guarantee regarding the information contained herein or the suitability of its products and services for any particular purpose, nor does Microsemi assume any liability whatsoever arising out of the application or use of any product or circuit. The products sold hereunder and any other products sold by Microsemi have been subject to limited testing and should not be used in conjunction with mission-critical equipment or applications. Any performance specifications are believed to be reliable but are not verified, and Buyer must conduct and complete all performance and other testing of the products, alone and together with, or installed in, any end-products. Buyer shall not rely on any data and performance specifications or parameters provided by Microsemi. It is the Buyer's responsibility to independently determine suitability of any products and to test and verify the same. The information provided by Microsemi hereunder is provided "as is, where is" and with all faults, and the entire risk associated with such information is entirely with the Buyer. Microsemi does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other IP rights, whether with regard to such information itself or anything described by such information. Information provided in this document is proprietary to Microsemi, and Microsemi reserves the right to make any changes to the information in this document or to any products and services at any time without notice.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Microchip:](#)

[VIDEO-DC-SDI](#)