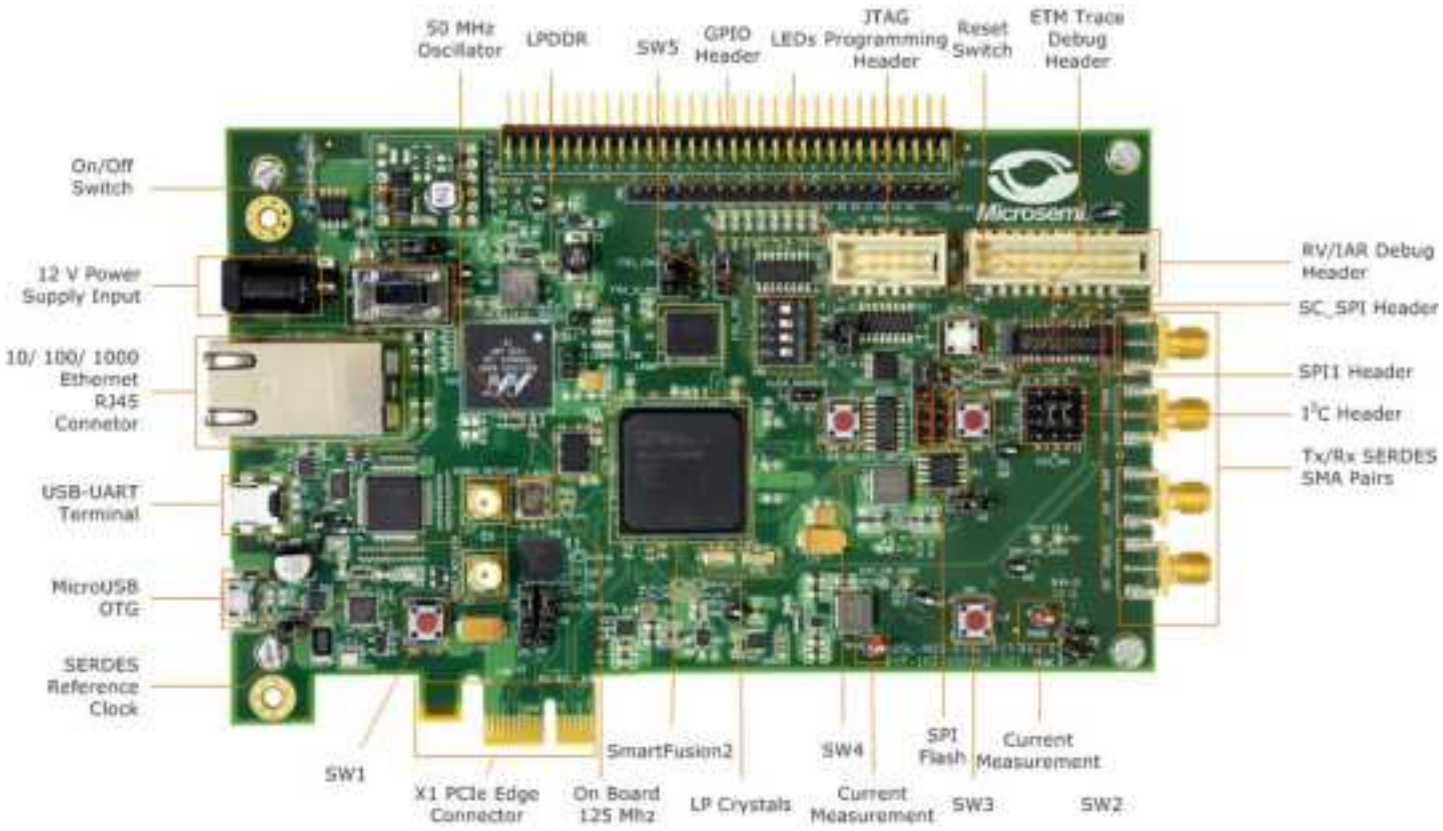
SmartFusion2 SoC FPGA Security Evaluation Kit Quickstart Card

Kit Contents—M2S090TS-EVAL-KIT

Quantity	Description
1	SmartFusion®2 system-on-chip (SoC) FPGA 90K LE M2S090TS-1FGG484 Evaluation Board
1	USB 2.0 A-Male to mini-B cable
1	12 V, 2 A AC power adapter
1	Quickstart card
1	Software ID letter for Libero Gold License
1	FlashPro4 programmer



Overview

Microsemi's SmartFusion2 Security Evaluation Kit makes it easy to develop secure embedded systems and provides the best-in-class solutions for both Design Security—when protecting your design IP is critical; and Data Security—when protecting application data is necessary. The kit provides a cost effective SoC field programmable gate array (FPGA) platform for developing SoC FPGA designs using Microsemi's SmartFusion2 SoC FPGAs, which integrates inherently reliable flash-based FPGA fabric, a 166 MHz ARM Cortex-M3 processor, advanced security processing accelerators, DSP blocks, SRAM, eNVM, and industry-required high-performance communication interfaces—all on a single chip.

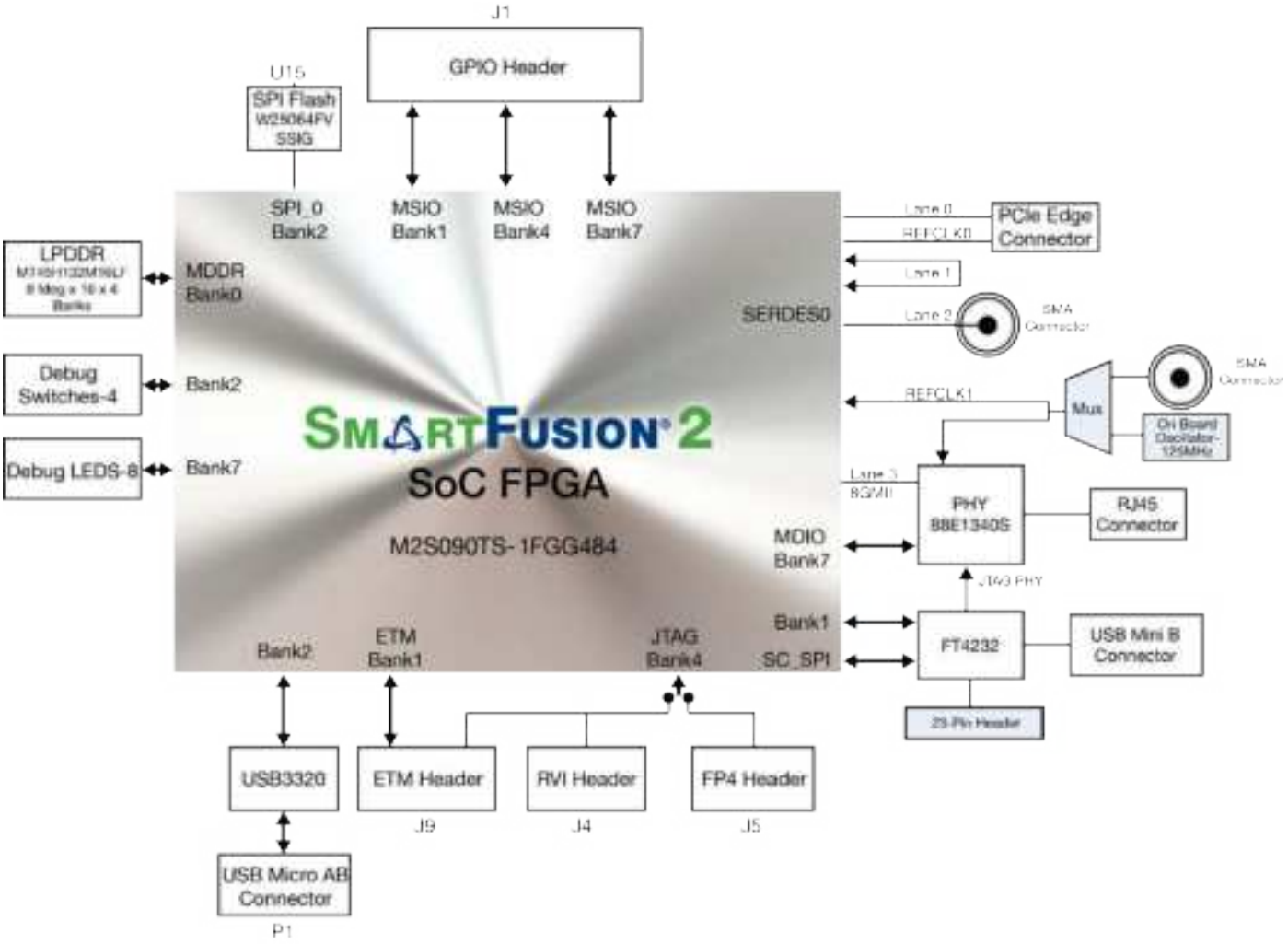
Hardware Features

This kit enables you to do the following:

- Evaluate the Data Security features of SmartFusion2 SoC FPGAs including:
  - Elliptic Curve Cryptography (ECC)
  - SRAM-PUF (Physically Unclonable Function)
  - Random Number Generator (RNG)
  - AES/SHA
  - Anti-Tamper
- Develop and test PCI Express Gen2 x1 lane designs
- Test the signal quality of the FPGA transceiver using full-duplex SERDES SMA Pairs
- Measure the low power consumption of the SmartFusion2 SoC FPGA
- Quickly create a working PCIe link with the included PCIe Control Plane Demo
- Program the FPGA device using FlashPro4, FlashPro5, or embedded FlashPro5 programmers

The board includes an RJ45 interface to 10/100/1000 Ethernet, 512 MB of LPDDR, 64 MB SPI Flash, and USB-UART connections, as well as I2C, SPI, and GPIO headers. The kit includes a 12 V power adapter but can also be powered through the PCIe edge connector. Also included is a free Gold license for the Libero SoC software toolset to enable FPGA development and to utilize the reference designs made available with the kit.

Evaluation Board Block Diagram



Software and Licensing

Libero® SoC Design Suite is required for designing with the SmartFusion2 SoC FPGA Security Evaluation Kit.

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

A Software ID letter enclosed with the kit contains Software ID and instructions on how to generate a Libero Gold license.

For further details on generating a Gold license please visit

www.microsemi.com/products/fpga-soc/design-resources/dev-kits/smartfusion2/sf2-evaluation-kit#licensing

Documentation Resources

For more information about the Smartfusion2 SoC FPGA Security Evaluation Kit, including user's guides, tutorials, and design examples, see the documentation at
www.microsemi.com/products/fpga-soc/design-resources/dev-kits/smartfusion2/sf2-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

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

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.

50200575-6/2.17