

Software and Licensing

The SmartFusion2 SoC FPGA Security Evaluation Kit is supported by the Libero SoC v11.4 or later, which includes a web install option. SoftConsole Software and FlashPro are enabled by default in the web install; these software tools can be used for software design and debug. Refer to the SmartFusion2 SoC FPGA Security Evaluation Kit User Guide for more information at:

<http://www.microsemi.com/products/fpga-soc/design-resources/dev-kits/smartfusion2/sf2-evaluation-kit#documentation>

The SmartFusion2 SoC FPGA Security Evaluation Kit comes with a free one year Platinum License. To receive the Platinum License, please go to the license request page:

<http://www.microsemi.com/form/47-libero-platinum-1-year-license-for-smartfusion2-security-evaluation-kit>

Access code: M2S090TSEvalKit237

Programming

The SmartFusion2 SoC FPGA Security Evaluation Kit comes with a FlashPro4 programmer. Embedded programming with the SmartFusion2 SoC FPGA Security Evaluation Kit is also available, and it is supported by the Libero SoC v11.4 SP1 or later.

Documentation Resources

For more information about the kit, including user's guide, tutorial, and full design examples, refer to the SmartFusion2 Security Evaluation Kit page at:

<http://www.microsemi.com/products/fpga-soc/design-resources/dev-kits/smartfusion2/sf2-evaluation-kit>

As new demos and tutorials become available, they will be posted on the SmartFusion2 Security Evaluation Kit web page.

Technical Support and Contacts

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 visit www.microsemi.com/soc/company/contact.

SmartFusion2 SoC FPGA Security Evaluation Kit

QSC0575 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	Libero® System-on-Chip (SoC) Platinum software one year 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.

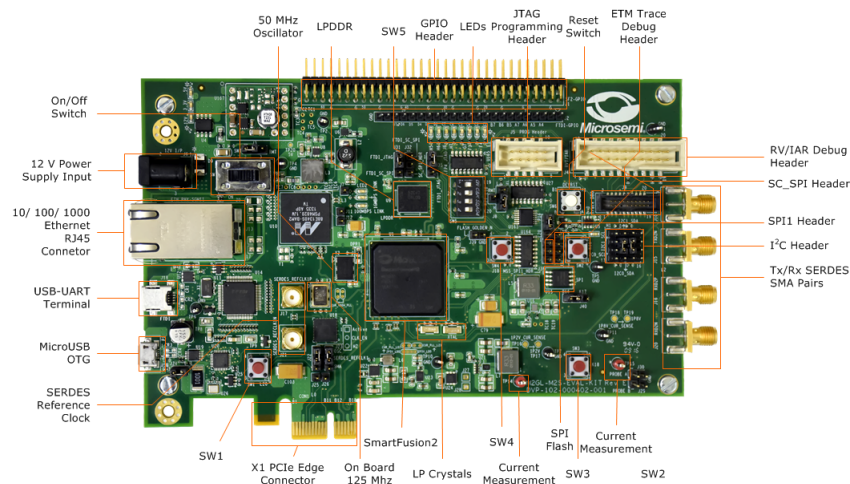
In addition, the SmartFusion2 Security Evaluation Kit comes with a large 90 K LE device to make it easy to develop transceiver I/O-based FPGA designs to build PCI Express and Gigabit Ethernet-based systems and also have room for large IP blocks to complement the design. The board is also small form-factor PCIe compliant, which will allow quick prototyping and evaluation using any desktop PC or laptop with a PCIe slot.

The kit enables you to:

- 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 Platinum License** for the Libero SoC software tool-set to enable FPGA development and to utilize the reference designs made available with the kit.

Evaluation Board Call Out



Evaluation Board Block Diagram

