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Part Number: M2S090TS-EVAL-KIT

SmartFusion2 Security Evaluation Kit ☆

Hardware Feature Overview

- 90K LE SmartFusion2 SoC FPGA in the FGG484 package (M2S090TS-FGG484)
- 64 Mb SPI Flash memory
- 512 Mb LPDDR
- PCI Express Gen2 x1 interface
- Four SMA connector for testing of full-duplex

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USD/unit: $705.91

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Package Contents

- SmartFusion2 SoC FPGA 90K LE M2S090TS-FGG484
- 12V Wall-Mounted Power Supply
- FlashPro4 JTAG programmer
- USB 2.0 A male to mini-B cable for UART/power interface (up to 1A) to PC
- Software ID letter for 1-year Libero Gold License
- Quickstart Card

Overview

SmartFusion®2 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 FPGA platform for developing cost-optimized SoC FPGA designs using Microchip's SmartFusion2 System-on-Chip (SoC) FPGAs, which integrates inherently reliable flash-based FPGA fabric, a 166 MHz ARM®Cortex®-M3 processor, advanced data security features, 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 90K 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

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 supply but can also be powered through the PCIe edge connector.

All Application Notes

Documentation

Title ⇅		
M2S090TS-EVAL-KIT_QuickStart_Guide	⬇ Download	☆
SmartFusion2 Security Evaluation Kit Schematics	⬇ Download	☆

M2S090TS-EVAL-KIT_Board_Files		⬇ Download	☆
UG0594: SmartFusion2 SoC FPGA Security Evaluation Kit User Guide		⬇ Download	☆
M2S090TS-EVAL-KIT_Statement_of_Volatility_(SoV)		⬇ Download	☆
DG0636: Implementing Auto Update and Programming Recovery Features (Using Ethernet Interface) for SmartFusion2 Devices Demo Guide		⬇ Download	☆
TU0546: SoftConsole v4.0 and Libero SoC v11.7 Tutorial		⬇ Download	☆
DG0568: Interfacing SmartFusion2 SoC FPGA with External LPDDR Memory through MDDR Controller - Libero SoC v11.6 Demo Guide		⬇ Download	☆
CN17012		⬇ Download	☆

Application Notes

Title ⇕	Date	Document Category
SmartFusion2 Flash*Freeze Entry and Exit - With SoftConsole Application Note	10 Aug 2016	Application Notes

Additional Resources

Licensing

SmartFusion®2 Security Evaluation Kit (M2S090TS-EVAL-KIT) require a Libero Gold license. Please refer **CN17012** to read more about new licensing options.

Microchip is including a 1 year Libero Gold node locked license for Windows OS free with the kit purchase.

Please refer to one of the below options to generate a license for your kit. If you have received an updated kit there will be a letter with Software ID included, for prior kits we provide an alternative method to request the license to cover existing inventory in stocks with distributors.

If you have received a Software ID letter with your kit, please follow the steps below to generate a Gold license for your kit.

1. Follow this link to go to the licensing page to register your Software ID
2. If you are a new user you will be directed to create a Customer Portal Account. Returning users please use your credentials to Login.
3. In the field marked Software ID for purchased products, please enter the Software ID mentioned in the Software ID letter which was shipped with the kit.
4. Once you have submitted the request, you will get the license file within 1 hour.

If you did not receive a Software ID letter, please follow the below steps to generate a Gold license as per the new licensing options.

1. An access code is mentioned on the last page of Quickstart card which was supplied in the M2S150-ADV-DEV-KIT shipped to you. Please use it to claim a license.
2. Now, claim a free 1-year Libero Gold license using the following link: Claim License.
3. Once you have submitted the details, Microchip will respond to the email ID provided by you. It may take up to 2-3 working days.

This Kit is **ROHS** Compliant!
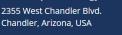
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