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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



SmartFusion Development Kit

QSG0204 Quickstart Guide

Kit Contents – A2F500-DEV-KIT-2 (RoHS-compliant)

Quantity	Description
1	SmartFusion [®] Development board with A2F500M3G-FGG484ES
1	Low-cost programming stick (LCPS)
2	USB 2.0 A to mini-B Cable
1	5 V power supply with international adapters

Overview

The SmartFusion Development Kit offers a full-featured development board for SmartFusion customizable system-on-chip (cSoC) devices. These are the only devices that integrate an FPGA, ARM[®] Cortex[™]-M3 microcontroller, and programmable analog, offering full customization, IP protection, and ease-of-use.

The device contains on-chip flash and SRAM memory, as well as additional off-chip memory on the board. The board also contains LEDs, switches, and various features for extensive analog experimentation, including voltage rail monitoring, current POT, temperature diodes, and voltage sweeping using active bipolar prescalers (ABPS). Networking interfaces include Ethernet PHY, EtherCAT, CAN, UART, and RS485.

Jumpers and Switch Settings

Jumpers and switches are set during the manufacturing and test of the development board. To confirm settings, review the [“Running the Manufacturing Test”](#). Any jumper connectors not noted are open.

SW9 must be off (JTAGSEL = H) in order to program the SmartFusion device. SW9 remains in the off position for Libero[®] software and SoftConsole programming.

Factory Default	Factory Default	Factory Default
JP1: 1–2	JP12: 1–2	JP21: 1–2
JP2: 1–2	JP13: 1–2	JP22: 2–3
JP4: 1–3; 7–9	JP14: 1–2	JP23: 1–2
JP5: 1–2; 3–4	JP15: 1–2	JP24: 1–2
JP6: 2–3	JP16: 2–3	JP27: 1–2
J7: 2–3; 6–7; 10–11; 14–15	JP17: 2–3	JP28: 1–2
JP7: 1–2	JP18: 1–2	J32: 1–2; 3–4; 5–6
JP8: 3–4; 7–8; 11–12; 15–16	JP19: 2–3	–
JP11: 1–2	JP20: 1–2	–

For a full description and location of all jumpers, refer to the *SmartFusion Development Kit User's Guide*.

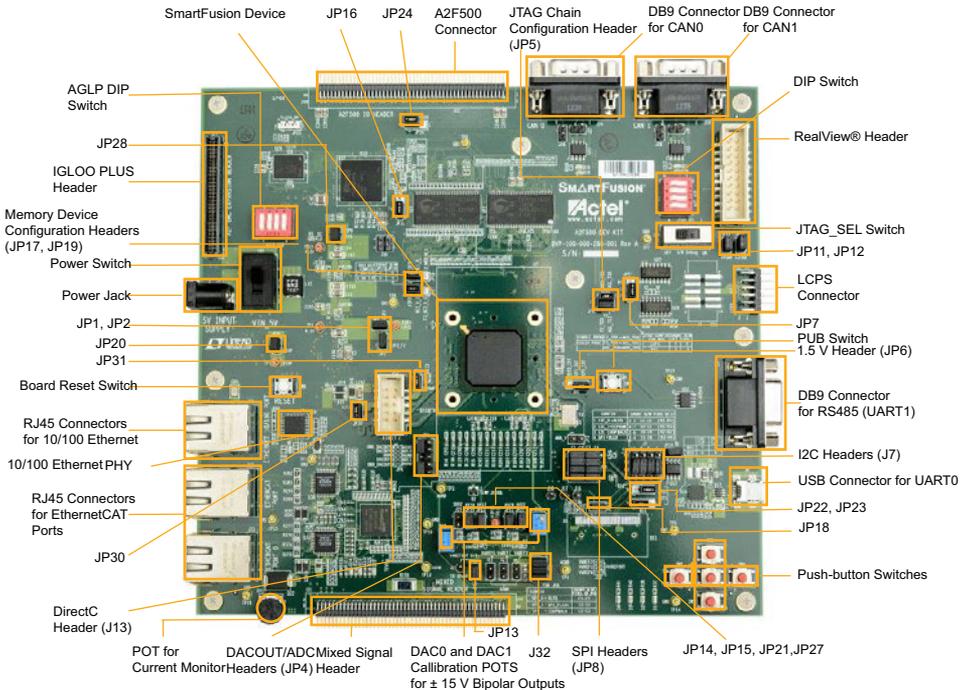
Running the Manufacturing Test

You can run the manufacturing test to verify the device and board connections. The manufacturing test files are available from the SmartFusion Development Kit page. Instructions on how to run the test are available in the *SmartFusion Development Kit User's Guide*.

Connecting the Board

Follow the steps below to connect the board:

1. Connect one of the USB cables from the PC to the USB connector on the board.
2. Connect the LCPS to the PC via a USB cable.
3. Connect the LCPS to the programming header on the board.
4. Connect the 5 V power supply to the board.



Software and Licensing

The SmartFusion Development Kit is supported by Libero[®] System-on-Chip (SoC) v10.0 or later, which includes a web install option. SoftConsole Software IDE and FlashPro are enabled by default in the web install; these software tools can be used for software design and debug. SmartFusion is also supported by Keil and IAR Systems, which can be installed separately. Refer to the *SmartFusion Development Kit User's Guide* for more information.

Software releases: www.microsemi.com/products/fpga-soc/design-resources/design-software/libero-soc

Keil and IAR information: www.microsemi.com/soc/products/smartfusion/ecosystem.aspx

Libero SoC v10.0 requires a valid Gold, Platinum, or Standalone Libero license.

If you need a new license, select FREE Libero SoC Gold license and request a new one from your Microsemi Customer Portal account. This license supports all tools for designing with the SmartFusion family and associated development kits.

License updates: www.microsemi.com/products/fpga-soc/design-resources/licensing

Documentation Resources

For further kit information, including user's guide, tutorial, and full design examples, refer to the SmartFusion Evaluation Kit page:

www.microsemi.com/products/fpga-soc/design-resources/dev-kits/smartfusion/smartfusion-development-kit

Technical Support and Contacts

Technical support is available online at www.microsemi.com/soc/support and by email at soc_tech@microsemi.com.

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