

# SmartFusion Development Kit Quickstart Card

## Kit Contents – A2F500-DEV-KIT (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

Actel's SmartFusion Development Kit offers a full-featured development board for SmartFusion intelligent mixed-signal FPGAs. These are the only devices that integrate an FPGA, ARM® Cortex™-M3, 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 can communicate via Ethernet and HyperTerminal. The board also contains LEDs, switches, OLED, and 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® Integrated Design Environment (IDE) 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
JP7: 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	–

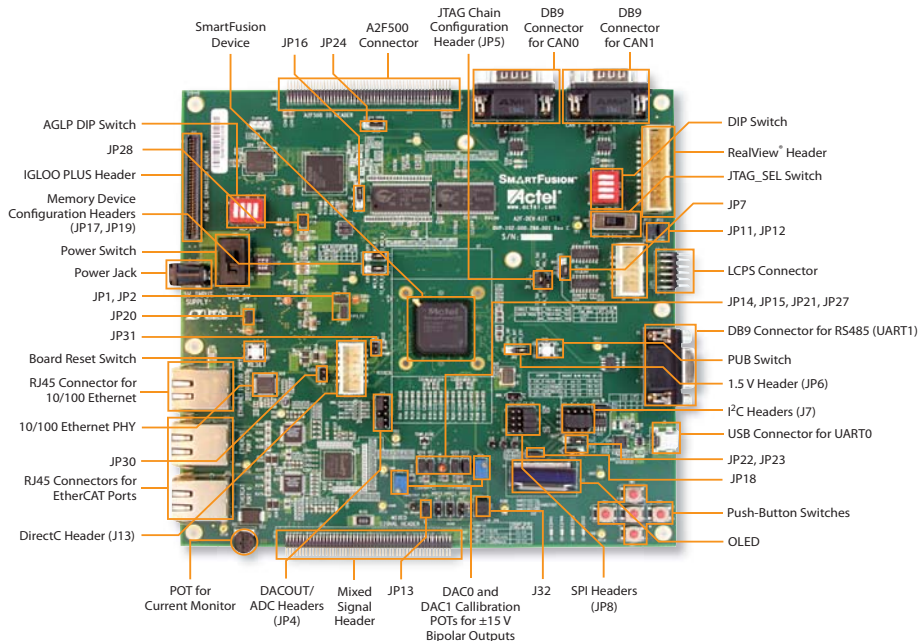
For a full description and location of all jumpers, refer to the *SmartFusion Development Kit User's Guide*.

## 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.

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## 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*.

## Software and Licensing

The A2F500 SmartFusion device requires Libero IDE v9.0 SP1 or newer software. Libero IDE includes all tools necessary to create SmartFusion and other Actel FPGA designs. You can download the latest software from the Software releases page:

Software releases: [www.actel.com/download/software/libero/default.aspx](http://www.actel.com/download/software/libero/default.aspx)

Libero IDE v9.0 requires a valid Gold, Platinum, or Standalone Libero IDE v9.0 license. If you are an active Libero IDE user, check your Actel Portal account for an updated license. The license must have "FEATURE ACTEL\_(EVAL/VISTA/SUMMIT) actlmgdr 9.0 (FUTURE DATE)..." visible in the license file. If you do not have a Libero license, you can register for a free Libero Eval or Gold license from your Actel Customer Portal account or contact your local distributor or Actel Representative to purchase an Actel Libero Platinum or Libero Standalone (SA) license.

License updates: [www.actel.com/Portal/default.aspx?r=1](http://www.actel.com/Portal/default.aspx?r=1)

## Documentation Resources

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

Documentation: [www.actel.com/products/hardware/devkits\\_boards/smartfusion\\_dev.aspx](http://www.actel.com/products/hardware/devkits_boards/smartfusion_dev.aspx)

## Technical Support and Contacts

Technical support is available online at [www.actel.com/support](http://www.actel.com/support), by email at [tech@actel.com](mailto:tech@actel.com), or by phone:

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