

AT91CAP7A-STK® Starter Kit
for CAP Customizable Microcontroller

The CAP™ Starter Kit is the ideal vehicle for low-cost, no-risk evaluation of the customization capabilities of Atmel's CAP microcontroller. It is intended to familiarize the user with the CAP concept and architecture, and is an ideal vehicle for students of electronic engineering to consolidate their knowledge of system-on-chip design, both hardware and software.

CAP comprises a microcontroller-based system-on-chip with ARM® processor, memories, peripherals and standard interfaces, together with a Metal Programmable (MP) Block for application-specific functions. The CAP Starter Kit facilitates the mapping of application-specific IP blocks into its FPGA that emulates the functionality of the CAP MP Block, while at the same time providing a development platform for software for the ARM processor. This enables the hardware and software of simple applications, or modules of more complex applications, to be tested at close to operational speed.



CAP Starter Kit Board

The AT91CAP7A-STK Starter Kit is built on a single PCB, including:

- AT91CAP7E ARM7TDMI®-Based Microcontroller System-On-Chip
- 64M Bytes SDRAM Memory, 3.3V
- 256M Bytes NAND Flash, 3.3V
- Altera® Cyclone® II EP2C8F256C7N (256BGA)
- Altera Configuration PROM -EPCS4SI8N
- 40-Lead Extension Connector (x3) for I/O Access
- 2.8 inch TFT Color LCD
- Two Serial Ports (One Connected to the CAP7 Debug Unit)
- One USB 2.0 Full Speed Device Port
- Mini Joy Stick
- Four Analog Inputs
- Light Sensor
- Temperature Sensor
- Voltage Potentiometer
- Voltage Regulators (1.2V, 2.5V and 3.3V)
- Access Points for CAP7 Power Measurements
- Eight LED's Four Push Buttons
- JTAG ICE Connector (CAP7)
- JTAG ISP Connector (FPGA)
- POR Circuit for FPGA
- POR Circuit for CAP7
- 50 MHz OSC

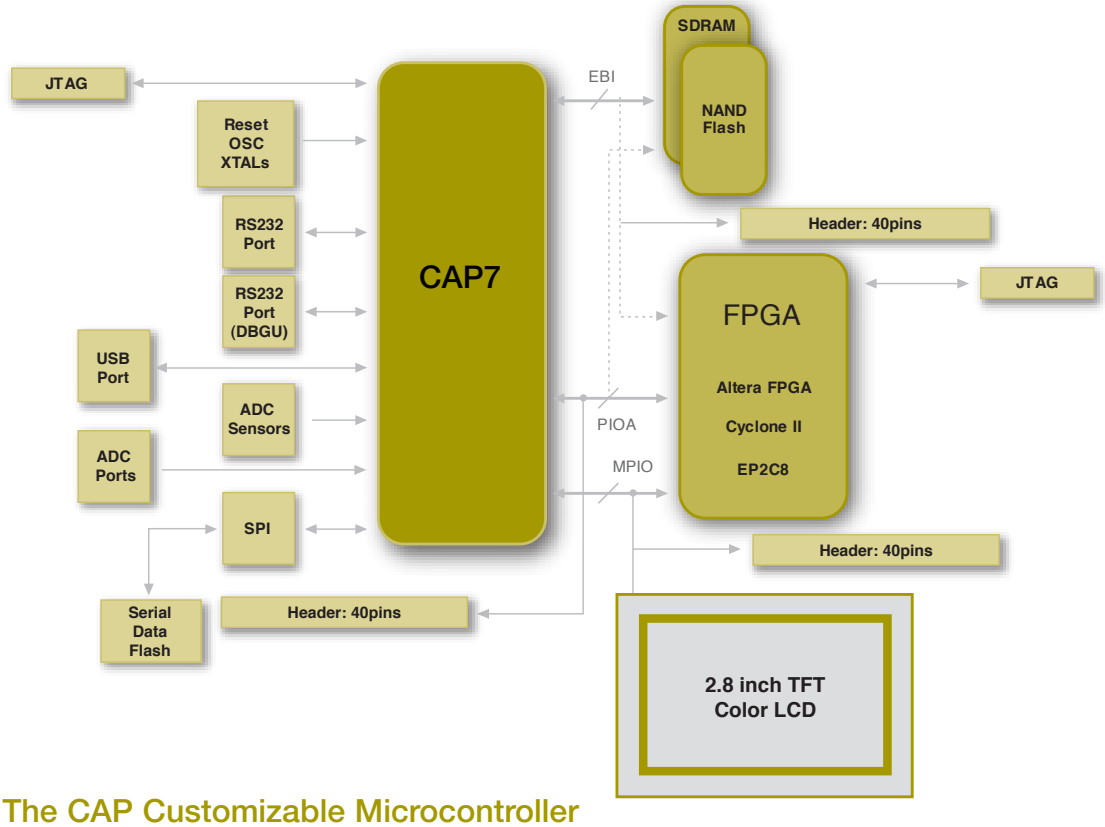


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CAP Starter Kit Development Tools

The CAP Starter Kit is supplied with an essential set of development tools in order to get started immediately. These include:

- Instructions for downloading IAR™ KickStart version of IAR Embedded Workbench® for ARM
- Instructions for downloading Altera's free Quartus® 2 Web Edition tools for FPGA programming
- The CAP7 Starter Kit Standalone Board
- A CD for documentation and software, including everything a user needs to evaluate the CAP7 products, including software development tools and FPGA development tools
- The board power supply with adaptors for Europe, United Kingdom, China and the United States
- A set of communication cables, including cables for USB and serial ports



The CAP Customizable Microcontroller

Atmel's CAP is an ARM microcontroller-based system-on-chip with fast local memory, a wide range of industry standard peripherals and interfaces, and a Metal Programmable (MP) Block that allows the designer to add custom logic. By combining the performance, density and low power consumption of the fixed portion of the device with the flexibility of the MP Block, CAP enables application-specific products to be developed in a fraction of the time and at a fraction of the cost of standard-cell ASICs, but at a unit price close to that of standard cell devices. CAP also offers superior performance, smaller form factor and lower power consumption at a unit price significantly lower than an MCU-plus-FPGA combination for the same functionality.

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