USB CONTROLLERS



# AT43DK320A

USB HUB Development Kit



The AT43DK320A development kit comes complete with everything you need to develop your full-featured USB application using AT43USB320A. It comes complete as a working hub with a programmable embedded USB function and up to four USB downstream ports. Any number of the downstream USB ports can be turned off (use of the hub is not required). USB source code for an embedded function and a USB library for the HUB are provided, thus relieving the user from the tedious task of developing such code on their own. Dedicate your time entirely to the application at hand! The AT43USB320A is based on the AT90S8515, Atmel's 8-bit RISC AVR® Microcontroller. You can use all of the development tools for the Atmel AVR microcontrollers, including C compilers, macro assemblers, program debuggers/simulators and in-circuit emulators. The kit features:

- Instant Prototyping
- Simple Coding in C
- Atmel-supplied USB Firmware Interface
- Reduced Design Cycle
- Reduced System Debugging



### USB



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The 64K x 16 Flash (AT49F1025) with a maximum access time of 55 ns configures the AT43USB320A as a compound device with up to four downstream ports and one embedded/ permanently attached port. The external downstream ports have individual overcurrent protection and power switching. The LEDs indicate the status of the external ports.

The AT43USB320A automatically resets as the board powers up.

There are three switches on the board. SW1 is used to disable/enable ports 1 and 2 and SW2 for ports 3 and 4. Therefore, SW1 and SW2 will allow AT43USB320A to be configured as a compound device or function only. SW3 is used to disable/enable the LED's status operation. The Flash already contains the code for USB hub, which occupies about 8K of code.

## Included in the AT43DK320A Development Kit:

- AVR Studio<sup>®</sup> and AVR Instruction Set
- AT43USB320A and AT90S8515 Datasheets
- Source Code for an Embedded Function and USB Hub Library Routines
- USB Hub Firmware Already
  Programmed In
- Bill of Materials
- Complete Schematics
- Gerber Files
- USB Cable

