

100-up price  
AT43USB370E-AC  
**€ 4.65**

100-up price  
AT43USB355E-AC  
**€ 3.50**

AT43DK370  
**€ 480.-**

# AT43USB3xx USB 2.0 Solutions: AVR-Based Controller and Embedded Host

from Atmel

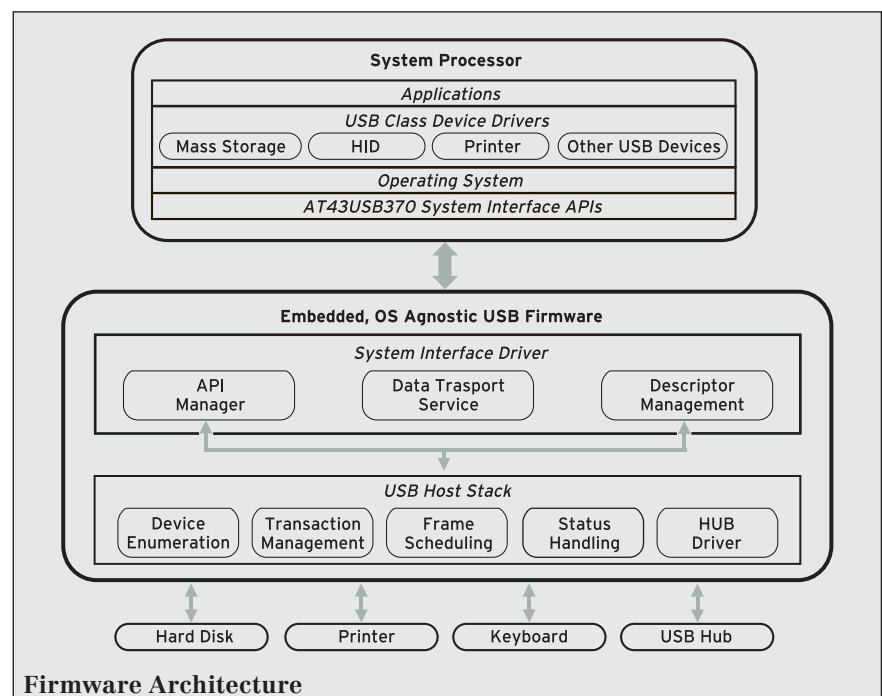
The AT43USB3xx family is Atmel's response to increasing demand for USB 2.0 compatible devices. The family is based on the successful AVR core and answers most design needs, as the small USB device can be embedded in the host system. One of the best choices for low-cost USB devices is the AT43USB351. With one 12-channel 10-bit A/D converter and one 2-channel 10-bit PWM, it can operate at low and full speed. In the hub arena, Atmel offer several solutions. The AT43USB320A, designed for monitor applications has 4 USB ports and one I<sup>2</sup>C controller and UART. For keyboard applications, the AT43USB326 and AT43USB325 offer 18 x 8 and 20 x 8 keyboard matrix, respectively, and 2 USB ports. The AT43USB355 and its low-cost version, the AT43USB353, has 2 ports, an A/D converter and a PWM controller. The most interesting product is the AT43USB370. This is the first device on the market capable of managing USB 2.0 host activities totally without system processor intervention. This processor is also the only USB host solution with enough on-chip intelligence to offload USB

device driver functionality from the system processor. It has a dual RISC-core architecture with embedded USB host stack, hub driver and basic building blocks of USB device drivers. Its 32-bit generic host processor interface allows it to interface with a wide variety of popular embedded processors. The DMA engine, along with dual RX and TX FIFO buffering, ensures maximum data throughput for all four USB transfer types (control, isochronous, bulk and interrupt). Application-specific device drivers can be built from a very small set of ANSI C compliant APIs (Application

Protocol Interface) encompassing the basic building blocks of all USB device classes. A complete development kit is available; the AT43DK370 comes with a reference design board featuring an ARM7<sup>®</sup> as system processor and in-circuit programming capability.

## Features

- Powerful AVR RISC MCU (12/24 Mips)
- Bus and self-powered operations
- Firmware compatible across device family
- Free USB library and application software



Jesus Teijeiro, EBV Madrid