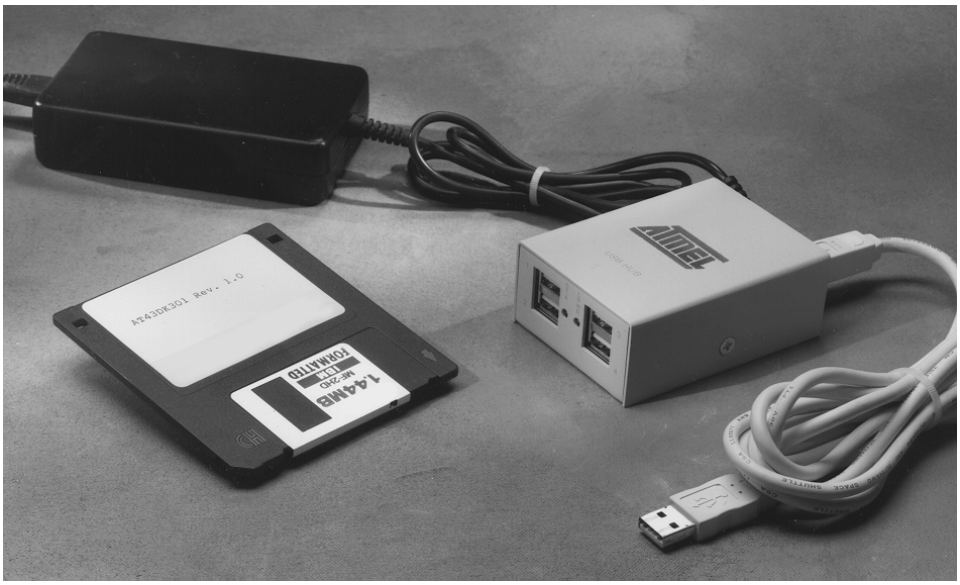
Features

- **Instant Prototype With the AT43301 Low-Cost Hub Controller Chip**
- **Reduce Design Cycle**
- **Reduce System Debugging**
- **Simplify Component Selection**
- **Avoid Typical Design Problems**

Overview

The AT43DK301 comes with everything designers need to develop a low-cost, self- and bus-powered USB Hub. To eliminate typical prototyping hassles, a fully populated stand-alone hub is included. Designers can take the stand-alone hub from the box to the system to see the operation of the AT43301 hub controller chip. The application note explains the component selection and resolves typical problems for the designer.



Low-Cost USB Hub Development Kit

AT43DK301

Rev. 1186A–10/98

Stand-alone Hub

The hub may immediately be plugged into any USB system. The only requirements are that the system has an operational USB port and that the system has the USB drivers enabled on the operating system.

When connecting the hub, connect the power supply to the hub. The bus powered portion of the controller will configure without the power supply, but if devices are to be attached to the downstream ports, the power supply is required. Next, connect the upstream port to the USB connector on the computer. Windows will flash a “New Hardware Found” box indicating the “Atmel USB Hub” was detected and automatically load the generic USB hub drivers. Downstream devices can then be used on the configured hub.

> Tip: For your system, make sure USB is enabled in the BIOS. This may typically be done during the boot-up process by going into the CMOS setup and checking the Plug-N-Play settings.
>
> To determine if USB is properly enabled, go into the “Control Panel” and click on the “System” icon. Under the Device Manager USB will be listed if setup properly.

Documentation

The application note covers the latest information detailing how to design a USB hub with the AT43301 chip. Explanations of component selection, USB hub requirements, and design insights will assist designers in smoothly integrating a USB hub onto existing or new designs.

By understanding the reference design, layout and component selection may be optimized for specific design constraints.

Included:

- Application Note
- Reference Design Schematics
- Bill of Materials
- AT43301 Data Sheet
- Self- and Bus-Powered USB Hub
- USB Cable
- Power Supply

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