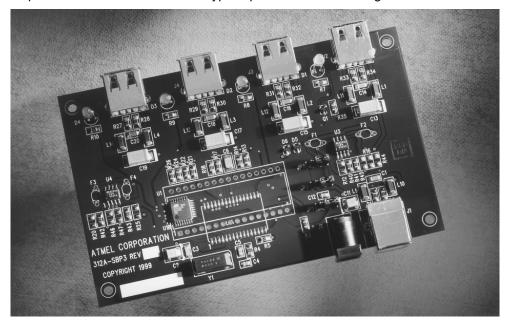
#### **Features**

- Instant Prototype With the AT43312A Hub Controller
- Reduce Design Cycle
- Reduce System Debugging
- Simplify Component Selection
- Avoid Typical Design Problems

# **Overview**

The AT43DK312A comes with everything designers need to develop a full-featured 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 AT43312A hub controller chip. An application note explains the component selection and resolves typical problems for the designer.





# USB Hub Development Kit

# **AT43DK312A**







# 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.

The bus-powered portion of the controller will configure without the power supply attached. However, the power supply must be connected if the devices are to be attached to the downstream ports. 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. USB check tests or downstream devices can then be used on the configured hub.

# **Documentation**

The application note covers the latest information detailing how to design a USB hub with the AT43312A chip. Expla-

nations 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
- AT43312A Datasheet
- Bus- or Self-powered Operation (Jumper Selectable)
- USB Cable
- Power Supply



# **Atmel Headquarters**

Corporate Headquarters 2325 Orchard Parkway San Jose, CA 95131 TEL (408) 441-0311 FAX (408) 487-2600

#### Europe

Atmel U.K., Ltd.
Coliseum Business Centre
Riverside Way
Camberley, Surrey GU15 3YL
England
TEL (44) 1276-686-677
FAX (44) 1276-686-697

#### Asia

Atmel Asia, Ltd. Room 1219 Chinachem Golden Plaza 77 Mody Road Tsimhatsui East Kowloon Hong Kong TEL (852) 2721-9778 FAX (852) 2722-1369

#### Japan

Atmel Japan K.K. 9F, Tonetsu Shinkawa Bldg. 1-24-8 Shinkawa Chuo-ku, Tokyo 104-0033 Japan TEL (81) 3-3523-3551 FAX (81) 3-3523-7581

# **Atmel Operations**

Atmel Colorado Springs 1150 E. Cheyenne Mtn. Blvd. Colorado Springs, CO 80906 TEL (719) 576-3300 FAX (719) 540-1759

Atmel Rousset
Zone Industrielle
13106 Rousset Cedex
France
TEL (33) 4-4253-6000
FAX (33) 4-4253-6001

Fax-on-Demand North America: 1-(800) 292-8635 International: 1-(408) 441-0732

e-mail literature@atmel.com

Web Site http://www.atmel.com

*BBS* 1-(408) 436-4309

#### © Atmel Corporation 2000.

Atmel Corporation makes no warranty for the use of its products, other than those expressly contained in the Company's standard warranty which is detailed in Atmel's Terms and Conditions located on the Company's web site. The Company assumes no responsibility for any errors which may appear in this document, reserves the right to change devices or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein. No licenses to patents or other intellectual property of Atmel are granted by the Company in connection with the sale of Atmel products, expressly or by implication. Atmel's products are not authorized for use as critical components in life support devices or systems.

Marks bearing ® and/or ™ are registered trademarks and trademarks of Atmel Corporation.