Fast SCSI

Product Overview

Product Brief

ASC3030
ASB3922
ASB3925

The Fast SCSI solution from AdvanSys has high performance and affordability built-in. Our ASC3030 is a single-chip, highly integrated Fast SCSI controller designed specifically for interfacing the Peripheral Component Interconnect (PCI) bus to the SCSI bus. We use a patented architecture utilizing an application specific RISC engine and integrated memory to yield high performance yet cost effective Fast SCSI products.

ASC3030 FAST SCSI CHIP

Product Highlights

All handshakes with the SCSI peripheral devices are managed by an advanced Reduced Instruction Set Computing (RISC) engine. Through PCI bus mastering, the ASC3030 transfers data between the SCSI devices and the main system memory at the maximum possible speed of the PCI bus (bursts to 133 MB/s) with no intervention from the host CPU.

Multi-threading capability allows the ASC3030 to process up to 20 data requests simultaneously to minimize SCSI bus idle time. For SCSI-1 devices, there can only be one outstanding request on each device. For SCSI-2 devices with multiple outstanding requests (queuing of multiple commands), the ASC3030 provides an I/O throughput several times that of a single-threaded SCSI chip.

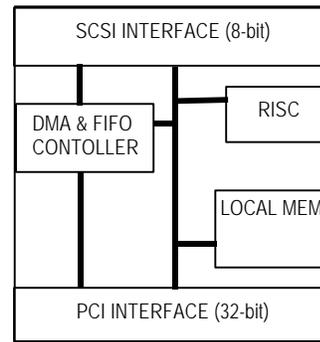| FEATURE	BENEFITS
128-pin PQFP package	Makes for more economical board layout
Polarity of SCSI Terminator Enable is programmable	Allowing for multiple terminator vendors
Power management: the RISC/SCSI circuitry clock can be shut off	Reduce power consumption
Auto-termination	Automatic configuration of SCSI bus termination without user intervention
User-configuration command line options	Fine tuning parameters to maximize performance based on system configuration
Tagged command queuing	To increase performance in multi-tasking environments; devices are allowed to reorder command for maximum efficiency
Multi-threaded drivers	Optimizes performance for symmetric multiprocessing operating systems
Boot Manager	Lets user specify the boot device by Target ID
Fault resilience	Handles error conditions, abort commands, resets bus, and retries pending commands with no data loss.

ASC3030 Architecture

Technical Specifications
- 128-pin chip
- One channel: 8-bit Fast SCSI-1 & 2
- 10 MB/sec @ 8-bit data bus
- Clock from PCI bus
- Parity protected data path from PCI to SCSI bus
- Supports target mode
- Bus Master DMA
- Support for up to 64K x 8 ROM/Flash

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+-------------------------------------------+
|           SCSI INTERFACE (8-bit)          |
|                                           |
|  +-------------+         +-----------+    |
|  | DMA & FIFO  |         |   RISC    |    |
|  | CONTOLLER   |         +-----------+    |
|  +-------------+                          |
|                         +-----------+     |
|                         | LOCAL MEM |     |
|                         +-----------+     |
|                                           |
|          PCI INTERFACE (32-bit)           |
+-------------------------------------------+
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Hardware and Software Compatibility
- Supports all PCI bus equipped x 86 and Power PC platforms
- Compatibility: DOS, Windows, Windows 95/98, Windows NT, Novell Netware, OS/2 Warp, SCO, UNIX, Linux, Unixware and Solaris.

PCI FAST SCSI ADAPTER BOARD
Product Highlights

The AdvanSys Fast SCSI Host Adapter with high performance and low cost is an excellent solution for your PC Desktop SCSI needs. With no jumpers to set, Plug and Play makes installation a breeze! Add up to seven SCSI peripherals such as Fast SCSI hard drives, CD-Recordable drives, CD-Rewriteable drives, removable hard drives (Iomega or SyQuest), tape drives, MO drives, printers and scanners and your multimedia desktop is ready to go!

Based on our own ACS3030 chip technology the AdvanSys Fast SCSI Host Adapters ensure a high level of integration and superior reliability. Featuring data transfer rates of up to 10MB/sec., our Bus Master and RISC technology allows large blocks of data to be processed with minimum CPU utilization.

AdvanSys builds its host adapters to the highest level of quality standards in ISO-9002 Certified Facilities. To ensure both software and hardware compatibility, AdvanSys Fast SCSI Host Adapters undergo extensive testing with all types of host systems, operating systems, and SCSI peripherals.

FEATURE	BENEFITS
Based on AdvanSys ASC3030 chip	Compatibility designed-in
SCSI Management Software	SuperSCSI™ for Win 95/98
	CharisMac™ for Macintosh
Plug-and-Play	Ease of installation
Connect up to seven devices	Ability to connect seven peripheral devices with one card
High performance I/O	True multitasking SCSI Bus Master
	32-bit embedded RISC processor
	Local memory architecture for highest performance
	High performance scatter/gather
	Multiple host adapter support
	Tagged command queuing
	ASPI interface support
	Allows PCI interrupt sharing
	Multiple LUNS for SCSI ID
	Disconnect/reconnect support
	Target initiated negotiation
	Zero wait state PCI transfers
	Up to 64 byte PCI burst size, maximize PCI data transfer rate
	ROM bootable CDs supported

Technical Specifications

PC Bus Type:	32-bit PCI Bus
Interface Transfer Method:	Bus Master DMA
Data Transfer Rate:	10 MB/sec.
Device Protocols:	SCSI-1, SCSI-2, Fast SCSI
Device Support:	Up to 7 SCSI devices
Host Bus Data Transfer Rate:	Up to 133 MB/sec. (burst mode)
SCSI Transfer Rate:	Up to 10MB/sec. SCSI synchronous data rate
	Up to 3 MB/sec. SCSI asynchronous data rate
Electrical Terminations:	Single-ended
Operating Temperatures:	0°C (32°F) to 55°C (131°F)
Storage Temperatures:	-40°C (-40°F) to 75°C (167°F)
Relative Humidity:	10% to 95% non-condensing

OS Compatibility

- DOS (version 6.0 and greater)
- Windows (version 3.1 and greater)
- Windows for Work Groups (version 3.11)
- Windows 95/98, Windows NT (version 3.51, 4.0)
- Novell Netware (version 3.12, 4.1 and greater)
- OS/2 WARP (version 3.0 , 4.0)
- SCO Open Server (version 5.0 and greater)
- Interactive UNIX (version 4.0 and greater)
- UnixWare (version 2.0 and greater)
- Linux (version 1.2 and greater)
- Solaris (version 2.5 and greater)
- Mac OS (version 7.5 and greater)

Adapter Board Configurations and Kits

Adapter Board	External Connector	Internal Connector	Active/Pass Termination	BIOS	Bootable	OEM/ Bulk	SI Kit	Brown Box	Retail Kit
ABP3922-00	25 pin Sub D	50 pin Std	Active	ROM	Yes	Yes	Yes	Yes	Yes
ABP3922-01	25 pin Sub D	50 pin Std	Active	No	No	Yes			
ABP3925-00	50 pin HD	50 pin Std	Active	Flash	Yes	Yes	Yes	Yes	Yes
ABP3925-01	50 pin HD	50 pin Std	Active	No	No	Yes			
ABP3925-03	NA	50 pin Std	Passive	No	No	Yes			

Adapter Board Kit Contents

OEM/Bulk:	Adapter board and anti-static bag only
SI (Integrator) Kit:	Adapter board, installation diskette and quick install guide in a brown box
Brown Box Kit:	Adapter board, SuperSCSI CD, 50 pin internal SCSI cable in a brown box
Retail Box Kit:	Adapter Board, SuperSCSI CD, 50 pin internal SCSI cable in a brown box with a retail sleeve, shrink wrapped

SCSI MANAGEMENT SOFTWARE ™

SuperSCSI for Win 95/98

In SuperSCSI, AdvanSys uses its experience gained from supporting SCSI products in the retail, VAR and OEM channels to create advanced SCSI management software. It includes:

SuperInstall – SuperInstall is intelligent software designed to check the host operating system and automatically install the right set of drivers. It supports all levels of users with speedy, error-free system setup, software and driver installation, and a diagnostic program to ensure all the necessary software is in place and ready to go.

SuperView – With SuperView users see how SCSI devices are organized and functioning. At the click of a mouse, users also see driver registration in the Device Manager, the IRQ assignments, or explanations of Windows 95/98 error codes. SuperView includes information on everything in the SCSI tree, from error messages to details about specific SCSI devices.

CharisMac Software For Macintosh

The AdvanSys SuperSCSI software offers a suite of CharisMac utilities including; CharisMac Anubis™ Utility software which allows users to format, initialize, partition and install Macintosh device drivers and test media for defects; and CharisMac CD AutoCache CD-ROM acceleration software, a universal CD-ROM device driver and caching utility.

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