Introduction

The DC-310 series has two adapters: **DC-310U**, an *Ultra-SCSI* adapter based on the Symbios Logic SYM53C860 SCSI Chip, and **DC-310**, a *Fast SCSI-2* adapter based on SYM53C810 SCSI Chip. Designed to provide a low cost, easy to implement SCSI solution, this adapter utilises the built-in Symbios Logic SCSI BIOS (SDMS BIOS version 4.x) on supported mainboards, such as Tekram P5 VX/TX and P6/Pentium_II series.

Fully Plug & Play and PCI 2.1 compliant, enhanced SCSI features include *Disconnect/Reconnect*, *Scatter/Gather*, and *Tag Queuing* to greatly improve overall system performance, particularly under multitasking environments.

Jumper-less hardware design, *Active SCSI Bus Termination,* and *32-bit PCI DMA Bus Mastering* are a few more of the advanced features built-in to the DC-310 series adapters, providing the best performance and ease of use possible.

Checklist

- This manual
- Symbios SDMS 4.1 driver diskettes (3)
- 50-pin internal SCSI cable

Disk #	Installation
Disk1: 1. DOS 2. OS2	1. \DOS\DOS.TXT (for both DOS & Win 3.1) 2. \OS2\OS2.TXT
Disk2: 1. Win95 2. NT 3.5x/4.x	1. \WIN95\WIN95.TXT 2. \WINNT\8XXNT.TXT
Disk3: 1. NetWare 2. DOS Utilities	1. \NETWARE\DDFS\NET_DDFS.TXT 2. ASPIFMT.EXE CONFIG.EXE
• Drivers for SCO Unix 5.0 and UnixWare 2.x are available via our website at http://www.tekram.com	

Specification

SCSI Performance	
SCSI Chip:	• Symbios SYM53C860 (DC-310U) or SYM53C810 (DC-310)
SCSI devices:	• Max: 7
SCSI bus transfers:	• DC-310U => Async: 7MB/sec & Sync: 20MB/sec • DC-310 => Async: 5MB/sec & Sync: 10MB/sec
Bus master data transfers:	• 132MB/sec (at 33MHz) • 80-byte DMA FIFO for 2/4/8/16 dwords burst across PCI bus

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PCI Integration	• Full 32-bit PCI DMA bus master
	• Jumper-less design
	• Active SCSI bus termination (* DC-310: optional)
	∗ Termination is required for both ends of a SCSI bus.
	∗ DC-310U: Need to do nothing for the termination on the DC-310U, since it's equipped a pair of Active Terminators on U1B & U2B.
	∗ DC-310: (Same to DC-310U if a pair of active terminators are installed on the U1B & U2B). If it's Passive Terminators, which are resistor arrays, used on RP1/RP2/RP3, you'll need to remove them if the DC-310 is not located at one end of the SCSI bus. White dot on the resistor array must point to the small box while installed.
Reliability	SYMTolerANT technology with:
	• Active negation of SCSI Data, Parity, Request, and Acknowledge signals for improved fast SCSI transfer rates.
	• Input signal filtering on SCSI receivers improves data integrity, even in noisy cabling environments.
Drivers & Utilities	• DOS, Win3.1, Win95, NT 3.5/4.x, NetWare 3.12/4.x, SCO 3.2v4.2/5.0, UnixWare 2.x., OS/2 Warp
	• BIOS (& Flash utility), Installation, Low Level Format.
Mainboard BIOS Support	**Adapter Setup** 1. SYM53C860 Adapter Setup S - SCAM Support .... On P - Parity .... Enabled I - Host Adapter ID .... 7 O - Scan Order .... Low to High (0..Max) F1 .. Help. F2 .. Restore Default Setup. ESC .. Exit this menu. **Device Setup** 1. SYM53C860 Dev0 N/A Setup R - Sync Rate (Mega Bytes/sec) ..... 20 Mb/sec W - Width (bits) .... 8 D - Disconnect .... On T - Read Write I/O Timeout (secs) ... 10 S - Scan for Device at Boot Time ... Yes L - Scan for SCSI LUNs .... Yes Q - Queue Tags .... Enabled F1 .. Help. F2 .. Restore Default Setup. ESC .. Exit this menu.

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Adapter Utilities Menu

When you select a host adapter from the main menu, the following screen is displayed:

- **Adapter Setup**: views and changes the selected adapter settings.

SCAM Support - SCAM (SCSI Configured AutoMatically) is the SCSI Plug and Play protocol supported by this Symbios BIOS version 4.X.

Parity - The Symbios host adapters always generate parity, but some SCSI devices do not. So you are offered the option of disabling parity checking.

Note: When disabling parity checking, it is also necessary to disable disconnects for all devices, as parity checking for the reselection phase is not disabled. If a device does not generate parity, and it disconnects, the I/O never completes because the reselection never completes.

Host SCSI ID - It's not suggested to change your host adapter SCSI ID (default: 7), as this gives it the highest priority on the SCSI bus. However, if you have two adapters on the same SCSI bus, you should give one of them a currently unassigned ID to avoid duplication of SCSI IDs.

Scan Order - This option allows you to tell the host adapter BIOS and your device drivers to scan the SCSI bus from low to high (o to max) SCSI ID, or from high to low (max to 0) SCSI ID. If you have more than one device on the SCSI bus, changing the scan order changes the order in which drive letters are assigned by the system.

- **Device Selections**: views and changes settings for the devices attached to the selected adapter.

The above menu provides information about individual SCSI devices attached to the selected host adapter, and the adapter itself. To make changes to these settings select a device from this display and press <Enter> to bring up the individual **Device Setup** menu.

Device Setup Menu

When you select a specific device from the Device Selection menu, your computer displays the following Device Setup menu. The settings in this menu effect individual SCSI devices attached to the selected host adapter. Changes made from this menu do cause the system to reboot upon exit from the SCSI Configuration utility.

Sync Rate (Mega Bytes/sec) - Defines the maximum transfer rate the host adapter attempts to negotiate. The host adapter and a SCSI device must agree to a rate they can both handle.

Width (bits) - Sets the maximum data width the host adapter attempts to negotiate. The host adapter and a SCSI device must agree to a width they can both handle. Only host adapters that can do 16 bit data transfers have this option enabled.

Disconnect - SCSI devices have the ability to disconnect from the bus during an I/O transfer. This option tells the host adapter whether or not to allow a device to disconnect. Some devices run faster with disconnects *enabled* (mostly newer devices), while some run faster with disconnects *disabled* (mostly older devices).

Read Write I/O Timeout (secs) - This option sets the time the host adapter waits for a read, write, verify, or seek command to complete before trying the I/O transfer again. Since this provides a safeguard allowing the system to recover if an I/O operation fails, it is recommended that you always set the time-out to a value greater than zero (no time-out).

Scan for Device at Boot Time - When there is a device you do not wish to make available to the system, set this option to *No* for that device. Also, on a bus with only a few devices attached, you can speed up boot time by changing this setting to *No* for unused SCSI IDs.

Scan for SCSI LUNs - You can set this option to *No* if you have problems with a device that responds to all LUNs whether they are occupied or not.

Queue Tags - If your device driver can issue queue tags, this option allows you to enable or disable the issuing of queue tags during I/O requests.

FCC NOTICE

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interface to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Move the equipment away from the receiver
- Plug the equipment into an outlet on a circuit different from that to which the receiver is connected

Consult the dealer or an experienced radio/television technician for additional suggestions.

Only equipment certified to comply with Class B should be attached to this equipment, and must have shielded interface cables.

The FCC requires the user to be notified that any change or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the user's authority to operate such equipment.

Each DC-310U/DC-310 is equipped with an FCC compliance label which shows only the FCC Identification number: FCC ID: KHADC310.

This device complies with Part 15 of the FCC rule. Operation is subjected to the following two conditions:

1. this device may not cause harmful interference and
2. this device must accept any interference received, including interference that may cause undesired operation.

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