Tech Info Library

Dual-Channel Asynchronous SCSI Interface: An Overview (2/97)

Revised: 2/24/97
Security: Everyone

Dual-Channel Asynchronous SCSI Interface: An Overview (2/97)

==========

Article Created: 27 November 1995
Article Reviewed/Updated: 24 February 1997

TOPIC ----------

This article provides a general overview of the dual-channel asynchronous SCSI interface included in some Macintosh computers.

For specific information about the implementation of dual-channel SCSI or Fast-SCSI in different Macintosh computers, see these related Tech Info articles:

"Power Mac 7500,7600,8500,9500 Series: SCSI-2 Compliance"
"Power Macintosh: SCSI Termination Explained"
"Macintosh: Compatibility with SCSI-2 Devices"
"SCSI Manager 4.3: Compatibility and Features"
"Technical Specifications" for each Macintosh computer.

DISCUSSION ----------

Computers with dual-channel asynchronous SCSI have a single SCSI controller responsible for the entire I/O subsystem. This primary I/O controller chip manages SCSI communications through dual SCSI controllers: a controller for the internal SCSI bus and a second controller chip for an external SCSI connection and an additional internal connection. This second SCSI controller also manages Ethernet and serialcommunications. In the Power Macintosh 7300, 7500, 7600, 8500, 8600, 9500, and 9600 computers, the internal SCSI bus controller provides Fast SCSI communications up to 10 MB per second.

Because there are actually two separate SCSI buses, both are capable of handling seven devices. So, theoretically, you could have 13 devices attached to the computer. (Note that the theoretical limit is not 14 because the computer will always be one of the devices). However, space limitations prohibit the connection of that many separate devices.

With only one internal connector, the internal SCSI bus will be particularly

limited by the amount of available space inside the computer. For the other SCSI bus, you also are limited by space for internal devices, but the external devices are only limited by SCSI ID numbers.

Different computer models may have distinct standard configurations of the SCSI buses. For example, on the Power Macintosh 9500 series, the internal CD-ROM drive and the internal hard drive are both attached to the Fast (internal) SCSI bus, but on the Power Macintosh 8100 series, only the internal hard drive is attached to the internal SCSI bus; the CD-ROM drive is on the other SCSI bus.

Article Change History:
24 Feb 1997 - Added new computers.
22 Jul 1996 - Modified title of reference article.
26 Jun 1996 - Added additional computer.

Tech Info Library Article Number:18931