



# Tech Info Library

## Apple II SCSI Card: Product Description (11/96)

Revised: 11/21/96  
Security: Everyone

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Article Created: 20 October 1996  
Article Reviewed/Updated: 15 November 1996

TOPIC -----

This article contains the technical specifications for the Apple II SCSI card.

DISCUSSION -----

Technical Specifications  
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Hardware  
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Provides an electrical interface between external SCSI devices and the CPU.

Provides the address and control lines required by the Apple II's microprocessor for accessing and controlling the SCSI chip and Smartport firmware.

Provides other circuitry to interface the 5380 IC with the Apple II CPU control signals.

NCR 5380 SCSI IC  
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Implements SCSI bus (5380 data sheet in Chapter 2 of the Hardware Technical Reference manual).

On board RAM  
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8 banks of 1K, accessed with special logic circuits. Used for status of devices at SCSI bus initialization (including the status of the Apple II SCSI card itself)

On Board ROM

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8 banks of 1K, accessed with special logic circuits and used for storing Smartport firmware

Interface

-----  
25-pin SCSI connector

Input/Output

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Parallel transmission, two modes for data i/o operations  
- PDMA (pseudo-DMA), default  
- Block Move only supported by 65816 CPUs and must be enabled by the application  
- Maximum storage area under ProDOS: 32 megabytes

Firmware

-----  
Smartport program converts the microprocessor commands or calls issued by CPU to a format compatible with external SCSI devices

Issues calls to the microprocessor to give it the status of the external SCSI devices and allow the CPU to control their operation

Commands supported: STATUS, READ BLOCK, WRITE BLOCK, FORMAT, CONTROL, INIT, OPEN, CLOSE, READ, WRITE

Boot capability with Autostart ROM when you install the card in the slot with highest priority, which may depend on the operating environment

When Smartport does not find the SCSI device capable of starting up the system, Smartport returns control to the environment of the Apple II and the startup search continues through lower-priority slots.

Electrical

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Voltage requirement: 4.75 to 5.25 volts DC  
Power consumption in milliamps (ma)  
Standby: 340 ma  
Operating: 390 ma

Environmental

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Ambient temperature: 50 to 104 deg F (10 to 40 deg C)  
Relative humidity: 20 to 95 percent (non condensing)

### System Requirements

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Apple IIGS, Apple IIe or Apple II Plus

Apple II SCSI Card

Apple SCSI System Cable

One or more SCSI-compatible peripherals, can be a high-speed printer interface

### Daisy chaining

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Apple II with the SCSI card in slot 5 and ONLY a serial printer or modem card in slot 2.

- Running ProDOS 1.2: 4 external devices
- Running ProDOS 16: 7 external devices

### Additional SCSI system components as required

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Cable Terminator

Peripheral Cables

Cable Extenders (Maximum total length of cables: 20 feet (6.5 meters)).

Read the manual for the Apple SCSI Cable System before trying to connect any SCSI devices.

### Article Change History

15 Nov 1996 - Reviewed for technical accuracy, revised formatting.

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Tech Info Library Article Number:2075