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Apple II Workstation Card: Product Information (2/97)

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TOPIC -----

This article describes the Apple II Workstation Card.

DISCUSSION -----

The Apple II Workstation Card provides an AppleTalk interface for the enhanced Apple IIe computer. It makes the Apple IIe an AppleTalk node on a LocalTalk network.

Hardware

The card has its own 65C02 processor, ROM, RAM, and a custom PAL chip. The card attaches to a connector module housing two Mini-8 serial ports. One of these ports supports AppleTalk, the other emulates a Super Serial Card.

The card can be installed in any Apple IIe slot except for slot 3 (the additional 64K of RAM on the Extended 80-Column card is assigned to slot 3, making it unavailable). Slot 7 is the usual choice for the Workstation Card.

The red and green LEDs indicate only that the card has passed an internal diagnostic, and do not indicate that the network interface is active.

The upper Mini-8 connector (PORT A) supports either the AppleTalk interface or a Super Serial interface. The lower Mini-8 connector (PORT B) supports only the serial interface.

Software

The Apple IIe Workstation Card contains AppleTalk code in ROM, code to allow printing over the network, printing at the workstation, and starting up over the network. The Apple IIe Workstation Card can start up either from a local disk, or remotely over the network from a startup server running on a file server.

Local Startup

When the workstation starts up from a local device, the card makes itself look like a Super Serial Card, with special ID bytes to indicate that it is actually an Apple II Workstation Card.

Network Startup

The card emulates a Disk II drive on power up to enable network startup, and, if in the highest number slot (normal practice) downloads the operating system from a network startup server, if available.

In addition, either of these other two methods can be used to start up over a network:

- Use the PR# command specifying the card's slot and hold down the Open Apple key while pressing Return. (Issuing the PR# command and pressing Return without pressing the Open Apple key causes printing to take place.)
- Using a BOOT call also causes the startup process to take place.

Printing Over the Network

The printing task begins when you issue a PR# command from the workstation. The application program sends print data out through the SSC entry points as defined by the PR# command. The card captures the stream of characters to be printed, because it appears to be a normal Super Serial Card in a slot and sends it to the selected printer or spooler.

Only ProDOS applications are supported on the network using the card. An important feature of the card is that it does not require the use of main memory, because most applications use all or almost all of Apple IIe memory (including "reserved" areas).

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