



Tech Info Library

Power Macintosh 9500: Pinouts (7/95)

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TOPIC -----

This article presents the pinouts for Power Macintosh 9500 series computers. These pinouts include: ADB, GeoPort, SCSI, a floppy disk drive, built-in Ethernet, high-quality 16-bit stereo sound, and various levels of monitor support depending on the model.

DISCUSSION -----

Apple Desktop Bus (ADB)

One connector is located on the back panel of Power Macintosh computers. It is a 4-pin mini-DIN socket.

Pin	Description
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1	Data; grounded by an open collector or pulled to +5 V through 470
2	Power on, fed by +5 V through 100 k ; connect to pin 4 to turn on the system
3	+5 V at 500 mA maximum drain; protected by a 1.25-A circuit breaker
4	Ground return

Ethernet

All models of Power Macintosh contain built-in Ethernet. The 9500's offer two types of connection.

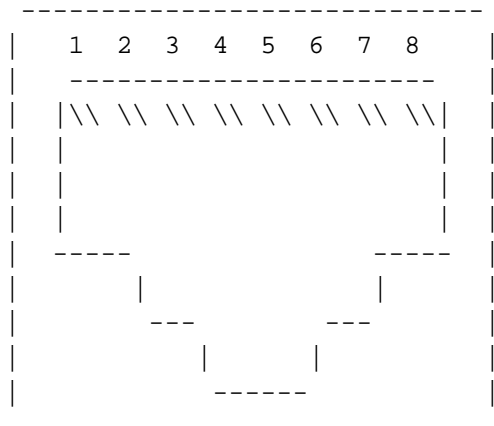
One AAUI-15 Ethernet connector

Pin	Description	Pin	Description
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1	+5 V	8	+5 V
2	DI+	9	DO+
3	DI-	10	DO-
4	Ground	11	Ground
5	CI+	12	No Connection
6	CI-	13	No Connection
7	+5 V	14	+5 V

And One 10Base-T Ethernet connector (NOTE: If both 10BASE-T and AAUI connectors are plugged in, the computer uses the 10BASE-T connector by default.)

The pin configurations for 10BASE-T are as follows:

RJ-45 Connector



Contact:	Signal:
1	TD+
2	TD-
3	RD+
4	Not Used by 10BASE-T
5	Not Used by 10BASE-T
6	RD-
7	Not Used by 10BASE-T
8	Not Used by 10BASE-T

Serial Ports

The back panel of all Power Macintosh models contain two I/O ports for serial telecommunication data. Both sockets accept 9-pin plugs allowing either port to be independently programmed for asynchronous or synchronous communication formats up to 9600 bps. This includes AppleTalk and the full range of Apple GeoPort protocols.

Pin	Name	Function
----	-----	-----
1	SCLK(out)	Reset pod or get pod attention
2	Sync(in)/SCLK(in)	Serial clock from pod (up to 920 Kbit/sec.)
3	TxD-	Transmit -
4	Gnd/shield	Ground
5	RxD-	Receive -
6	TxD+	Transmit +
7	Wakeup/TxHS	Wake up CPU or do DMA handshake
8	RxD+	Receive +
9	+5 V	Power to pod (350 mA maximum)

SCSI Connection

The SCSI interface in Power Macintosh computers exists in two forms: an internal 50-pin ribbon connector for internal devices and an external DB-25 connector for external devices.

Pin Number		Description	Pin Number		Description
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Internal	External		Internal	External	
1	7	Ground	2	8	/DATA0*
3	9	Ground	4	21	/DATA1
5	14	Ground	6	22	/DATA2
7	16	Ground	8	10	/DATA3
9	18	Ground	10	23	/DATA4
11	24	Ground	12	11	/DATA5
13		Ground	14	12	/DATA6
15		Ground	16	13	/DATA7
17		Ground	18	20	/DATAP
19		Ground	20		No connection
21		Ground	22		No connection
23		Ground	24		No connection
25		No connection	26	25	TERMPWR
27		Ground	28		No connection
29		Ground	30		No connection
31		Ground	32	17	/ATN
33		Ground	34		No connection
35		Ground	36	6	/BUSY
37		Ground	38	5	/ACK
39		Ground	40	4	/RST
41		Ground	42	2	/MSG
43		Ground	44	19	/SEL
45		Ground	46	15	/C/D
47		Ground	48	1	/REQ
49		Ground	50	3	/I/O

* A slash (/) before a signal name indicates that it is in the low state when active.

Floppy Disk Drive Connection

All Power Macintosh models contain one internal Apple superDrive floppy disk drive, which supports GCR and MFM formats for 1.44 MB disks.

Pin	Signal	Description	Pin	Signal	Description
---	-----	-----	---	-----	-----
1	GND	Ground	11	+5 V	+5 V
2	PH0	Phase 0 state control	12	SEL	Head select
3	GND	Ground	13	+12 V	+12 V
4	PH1	Phase 1 state control	14	/ENBL*	Drive enable
5	GND	Ground	15	+12 V	+12 V
6	PH2	Phase 2 state control	16	RD	Read data
7	GND	Ground	17	+12 V	+12 V
8	PH3	Phase 3 register write strobe	18	WR	Write data

9	NC	No connection	19	+12 V	+12 V
10	/WRREQ	Write data request	20	NC	No connection

* A slash (/) before a signal name indicates that it is in the low state when active.

Monitor Support

The Power Macintosh 9500/120 includes an accelerated display card based on the mach64 graphics accelerator from ATI Technologies, Inc.

Pin	Description	Pin	Description
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1	Red ground	9	Blue video signal
2	Red video signal	10	Monitor sense 2
3	Composite synchronization	11	Synchronization ground
4	Monitor sense 0	12	Vertical synchronization
5	Green video signal	13	Blue ground
6	Green ground	14	Horizontal synchronization ground
7	Monitor sense 1	15	Horizontal synchronization
8	No connection		

The Power Macintosh 9500/132 requires a third-party (non-Apple) graphics accelerator for display support.

Sound I/O

All Power Macintosh computers contain external stereo 3.5mm jacks for sound I/O, connected through amplifiers to the AWAC chip.

Panel label	Description
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Audio In	8 k impedance, 2 V rms maximum, 22.5 dB gain available
Audio Line Out	37 impedance, 0.9 V rms maximum, attenuated -22,5 dB (crosstalk degrades from -80 to -32 dB when the audio output is connected to 32 headphones)

Support Information Services
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