TITLE

Macintosh: Monitor and Video Chart (3 of 4)

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TOPIC

This article provides a list of Apple Macintosh systems and the monitor and video options each can use.

Related Articles:

- **Macintosh: Monitors and Video Chart (1 of 4)**, article #11131
- **Macintosh: Monitors and Video Chart (2 of 4)**, article #15878
- **Macintosh: Monitors and Video Chart (4 of 4)**, article #15881

DISCUSSION

Monitor Specification Chart

Specifications	16-in Color ***	Portrait Display	21-in Monochrome *	MS 14 *** MS 15 *** MS 17 *** MS 20 *** 1710AV *** 1710 *** 1705 *** 832 x 624	MS 17 ** MS 20 ** 1710AV ** 1710 ** 1705 ** 1024 x768
Part Number	M1044LL/A	M0404	M0402	M3935LL/B M3089LL M2611LL M2612LL M3323LL M3322LL M4434LL	M2611LL M2612LL M3323LL M3322LL M4434LL
Resolution (pixels)	832 x 624	640 x 870	1152 x 870	832 x 624	1024 x 768
Power Frequency (HZ)	47-63	47-63	47-63	47-63	47-63
Power Voltage (VAC)	90-270	90-270	85-270	90-132 198-260	90-132 198-260
Vertical Refresh	75 Hz	75 Hz	75 Hz	75 Hz	74.93 Hz
Horizontal Refresh	50 kHz	68.9 kHz	68.7 kHz	49.73 kHz	60.24 kHz
Dots Per Inch (DPI)	70	80	77	69-79	69-79
Dot Pitch	0.26 mm	N/A	N/A	0.31 mm	0.31 mm

* The 21-in. Monochrome display requires the DB-15 to DB-25 cable (590-0615) on all Macintosh computers with built-in video or with graphic cards using the standard DB-15 connector.

** All of these monitors display the same video depth at this resolution (1024 x 768), so only one column is listed in the chart for all monitors.

*** All of these monitors display the same video depth at this resolution (832 x 624), so only one column is listed in the chart for all monitors.

LC Family

LC	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
LC, LC II	256K 512K	N/A N/A	N/A N/A	N/A N/A	N/A N/A
LC III	512K 768K	256 C (1) 256 C (1)	16 G 256 G	N/A N/A	N/A N/A
LC 475	512K 1MB	256 C 32,768 C	16 G 256 G	16 G 256 G	16 G 256 G
LC 630 (2, 3)	--	256 C	N/A	N/A	N/A

C = Number of Colors
G = Number of Grays

(1) Requires Display adapter to use Multiple Scan Displays at this resolution.

(2) The Macintosh 630 family computers can use larger monitors such as the Multiple Scan 17 and Multiple Scan 20 however the maximum resolution on these monitors is 832x624, and at this resolution, they cannot support the TV/Video System.

(3) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Performa Family

Performa	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
400, 405, 410, 430	256K 512K	N/A N/A	N/A N/A	N/A N/A	N/A N/A
450, 460, 466, 467	512K 768K	256 C (1) 256 C (1)	16 G 256 G	N/A N/A	N/A N/A
475, 476	512K 1MB	256 C 32,768 C	16 G 256 G	16 G 256 G	16 C 256 C
550, 560, 575, 577, 578	--	N/A	N/A	N/A	N/A
600, 600CD	512K 1MB	N/A N/A	N/A N/A	N/A N/A	N/A N/A
630 series (2, 3)	--	256 C	N/A	N/A	N/A
6200	--	256 C	N/A	N/A	N/A
6300	--	256 C	N/A	N/A	N/A
6400	1 MB	256 C	N/A	N/A	N/A
Mac TV	--	N/A	N/A	N/A	N/A

C = Number of Colors
G = Number of Grays

(1) Requires display adapter to use Multiple Scan Displays at this resolution.

(2) The Macintosh 630 family computers can use larger monitors such as the Multiple Scan 17 and Multiple Scan 20. However, the maximum resolution on these monitors is 832x624, and at this resolution, they cannot support the TV/Video System.

(3) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

Macintosh II Family

Macintosh	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
IIsi	--	N/A	16 G	N/A	N/A
IIci	--	N/A	16 G	N/A	N/A
IIvi, IIvx	512K 1MB	N/A N/A	N/A N/A	N/A N/A	N/A N/A
II, IIx, IIcx, IIfx	--	No built-in video and requires a video card.			

G = Number of Grays

Centris/Quadra Family

Centris/Quadra	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
605, 610, 650	512K 1MB	256 C 32,768 C	16 G 256 G	16 G 256 G	16 C 256 C
630 Family (1, 2)	--	256 C	N/A	N/A	N/A
660AV (3)	1MB	32,768 C	256 G	256 G	256 G
700	512K 1MB 2MB	256 C 256 C 16.7M C	16 G 256 G 256 G	16 G 256 G 256 G	N/A N/A N/A
800	512K 1MB	256 C 256 C	16 G 256 G	16 G 256 G	16 C 256 C
840AV (3)	1MB 2MB	32,768 C 16.7M C	256 G 256 G	256 G 256 G	256 C 32,768 C
900	1MB 2MB	256 C 16.7M C	256 G 256 G	256 G 256 G	N/A N/A
950	1MB 2MB	256 C 16.7M C	256 G 256 G	256 G 256 G	256 C 256 C

C = Number of Colors
G = Number of Grays

(1) The following computers are in the Macintosh 630 family: Performa 630, Performa 635, Performa 636, Performa 637, Performa 638, LC 630, and Quadra 630.

(2) The Macintosh 630 family computers can use larger monitors such as the Multiple Scan 17 and Multiple Scan 20 however the maximum resolution on these monitors is 832x624, and at this resolution, they cannot support the TV/Video System.

(3) For the AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

Power Macintosh Family

Power Macintosh	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
4400	1MB 2MB 4MB	256 C 32,768 C 16.7M C	N/A N/A N/A	N/A N/A N/A	256 C 32,768 C 16.7M C
5400 (2)	1MB	256 C	N/A	N/A	N/A
6100 6100AV (1)	HDI45* 2MB	256 C 16.7M C	256 G 256 G	N/A 256 G	N/A 32,768 C
6500 (3, 4)	2MB 2MB 2MB	16.7M C 32,768 C 16.7M C	N/A	N/A	32,768 C
7100 7100AV (1)	HDI45* 1MB 2MB 2MB	256 C 32,768 C 16.7M C 16.7M C	256 G 256 G 256 G 256 G	N/A 256 G 256 G 256 G	N/A 256 C 32,768 C 32,768 C
7200	1MB 2MB 4MB	32,768 C 16.7M C 16.7M C	256 G 256 G 256 G	256 G 256 G 256 G	256 C 32,768 C 16.7M C
7300	2MB 4MB	16.7M C 16.7M C	N/A N/A	256 G 256 G	32,768 C 16.7M C
7500	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
7600	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
8100 8100AV (1)	HDI45* 2MB 4MB 2MB	256 C 16.7M C 16.7M C 16.7M C	256 G 256 G 256 G 256 GC	N/A 256 G 256 G 256 G	N/A 32,768 C 16.7M C 32,768 C
8500	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
8600	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
9500/120	2MB 4MB	16.7M C 16.7M C	256 G 256 G	256 G 256 G	32,768 C 16.7M C
9600	4MB	16.7M C	256 G	256 G	16.7M C
G3 systems	See Tech Info Library article 30250, titled "**Power Macintosh G3 & G3 All-in-one: Video RAM Upgrade**"				

C = Number of Colors
G = Number of Grays
* = HDI-45 port makes use of 640K of internal DRAM memory.

(1) For the Power Macintosh AV computers, pixel and viewable color numbers are for computer graphics only. When video is enabled, VRAM is split evenly between graphics and video.

(2) This is a built-in 15-in display.

(3) 16-bit only supported at 1024 x 768.

(4) 16" supported at 832 x 624 only.

PowerBook Family

PowerBook	VRAM	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
160, 165, 165c 180, 180c	--	256 C (1)	256 G	N/A	N/A

190 Series	--	256 C	256 G	N/A	N/A
500 Series	--	256 C	256 G	N/A	N/A
5300 Series	--	256 C	256 G	N/A	N/A
1400 Series	--	256 C	256 G	N/A	N/A
3400 Series	--	256 C	N/A	N/A	256 C
G3	--	16.7M C	N/A	N/A	32,768 C
Duo Dock	512K 1MB	256 C 32,768 C (2)	256 G 256 G	N/A N/A	N/A N/A
MiniDock	512K	256 C	16 G	N/A	N/A
Duo Dock II	--	32,768 C	256 G	256 G	256 C

C = Number of Colors
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(1) Requires display adapter to use Multiple Scan Displays at this resolution.

(2) The Duo Dock requires a video adapter to change resolutions unless System 7.5 is installed.

3400 Notes:
1) The computer does not provide a display with 2 bits per pixel.

2) An SVGA monitor's display resolution will be 640 by 480 pixels. The user can switch to a higher resolution by using the Monitors control panel or the control strip. The resolution set by the user will be used the next time the computer is started up.

3) If the external monitor can display 800 by 600 pixels at 60 Hz, the PowerBook 3400 computer can display simultaneously on both the external monitor and the flat panel display. This mode of display, called Simulscan, provides the same information on both displays.

Display Cards

Display Card	16-in Color Multi-Scan 15, 17, 20 (832 x 624)	Portrait Display	21-in Monochrome	Multi-Scan 17 and 20 (1024 x 768)
Macintosh II	N/A	N/A	N/A	N/A
2-Page Mono Card	N/A	N/A	4 G	N/A
Portrait	N/A	4 G	N/A	N/A
Mono	N/A	N/A	N/A	N/A
High-Res Card (2)	N/A	N/A	N/A	N/A
Ext High-Res Card	N/A	N/A	N/A	N/A
4*8 (3)	256 C (1, 4)	256 C	256 C	256 C
8*24	16.7M C (1, 5)	16.7M C	16.7M C	16.7M C
8*24GC	16.7M C (1, 5)	16.7M C	16.7M C	16.7M C
Display Card 24 AC	16.7M C	16.7M C	16.7M C	16.7M C

C = Number of Colors
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(1) Requires Display adapter to use Multiple Scan Displays at this resolution.

(2) Can be upgraded with eight (8) Mac II Video Expansion RAM chips for 256 grays/colors.

(3) The 4*8 can be upgraded to a 8*24 by adding two (2) VRAM SIMMs.

(4) Available with rev. B ROM.

(5) Available with rev. B card.

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