

The video circuitry for your computer is included on the main logic board. This circuitry features:

- IBM VGA compatibility plus support for 16-color, 1024 x 768 graphics; 256-color, 800 x 600 graphics; and 256-color, 640 x 480 graphics.
- A minimum of 512KB of video memory (RAM).
- Support for upgrading to 1MB of video memory (for computer models with 512KB video memory)
- With 1MB memory option: support for 16.8-million color, 640 x 480 graphics; 32K-color, 800 x 600 graphics; 16-color, 1280 x 1024 interlaced graphics; 256-color, 1024 x 768 non-interlaced graphics; and bit block transfer (BITBLT) for enhanced video performance with Windows and hardware cursor applications
- Support for 132-column text by 25 rows and by 43 rows.
- Compatibility with VGA analog monochrome and color, fixed- and multiple-frequency monitors (including 8514/A-compatible monitors).

In its default mode, the video supports most software designed for the EGA and/or VGA standard. You must use a VGA analog color or monochrome monitor. The video circuitry is also compatible with software written for these video standards:

- VGA (Video Graphics Array)
- VESA (Video Electronics Standard Association)
- MCGA (Multi-Color Graphics Array)
- EGA (Enhanced Graphics Adapter)
- CGA (Color/Graphics Adapter)
- MDA (Monochrome Display Adapter)

The CLMODE.EXE video utility provided with your computer system enables you to specify the type of monitor attached and change modes to optimize video performance with certain MS-DOS applications. The SETRES video utility lets you specify video information for Windows applications. The available modes are listed in "Super Video Modes" and "Standard Video Modes."

MAXIMUM Simultaneous Colors

The maximum number of simultaneous colors available with a screen resolution depends on your monitor, application support for the video mode set, and the amount of video memory available. Refer to your monitor and application documentation to determine mode and color support. Refer to the following table to check the maximum number of colors available with the 512KB and 1MB video RAM configurations:

Video Memory Installed*	Maximum Number of Simultaneous Colors			
	1280x1024	1024x768	800x600	640x480
512KB	Unavailable	16	256	256
1MB	16	256	64K	16.8 million
*Your computer has a minimum of 512KB of video memory. To upgrade to 1MB of memory, refer to "Installing Video Memory".				

Monitor Connection

Connect a VGA analog monitor to the video connector on the back of the computer. For an illustration, see "Setting Up Your System" in the "Getting Started " section.

If you install an 8514/A-compatible expansion adapter, use a 26-pin pass-through cable to connect the adapter to the VGA Feature connector of the main logic board. Refer to "Main Logic Board Layout" in the "Installing Optional Hardware" section to locate the VGA Feature connector. Contact your computer dealer for the required cable.

Memory Considerations

The SVGA circuitry uses RAM within the A0000-BFFFF range for video memory and uses RAM within the C0000-C7FFF range for the extended video BIOS. These memory locations are used by standard VGA circuitry. If you install an EMS (Expanded Memory Specification) adapter or other device that is configured to use these memory locations, a "memory conflict" can result. Memory conflicts are errors caused when more than one device attempts to use the same memory location.

The SVGA circuitry uses memory locations B0000-B7FFF for monochrome mapping. If you are running EMS software that uses this memory range, either reconfigure the EMS driver or do not set the video for monochrome mapping.

Refer to your device documentation for information about reconfiguring a device to use memory locations other than those used by the SVGA circuitry.

For an EMS adapter, you can usually designate the exclusions when starting the EMS driver. Consult your device documentation to determine the memory locations used.

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