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Classic R-Series Platforms

Video Subsystem

The SVGA video subsystem supports backward software compatibility with MDA, CGA, Hercules Graphics, EGA, and VGA video standards. The Classic R standard configuration includes 512 KB of Video DRAM, allowing resolutions up to 1024 x 768 x 16 colors or 800 x 600 x 256 colors. The video memory can be increased to a total of 1 MB by adding four 256 KB x 4 fast page mode 70 ns DRAMs to the four DIP sockets on the system board to support resolutions of 1280 x 1024 x 16 colors or 1024 x 768 x 256 colors. The Classic R-Plus systems come standard with 1 MB of Video DRAM. The Display RAM is paged into 128 KB of RAM located between A0000H and BFFFFH.

VIDEO CONNECTORS

A standard PS/2 15-pin analog VGA connector is provided on the system back panel. A VESA compliant 8514/A feature connector is located on the baseboard. The 8514/A interface typically is used as a VGA pass-through when an auxiliary video subsystem is installed in one of the expansion slots, such as an 8514/A compatible video card or DVI board.

VIDEO DRIVERS AND UTILITIES

Video drivers and utilities for DOS and Windows 3.1 are shipped with the Classic R-Series system. Included on the diskette are enhanced mode drivers for common MS-DOS software applications such as AutoCAD, AutoDesk, AutoShade, AutoSketch, GEM/3, Lotus 123, Microsoft Word, WordPerfect, WordStar, and Ventura Publisher. These drivers come in a compressed form and are extracted by using an installation utility provided on the diskette. The Video drivers for Windows 3.1 include a utility called SetRES which allows the user to change the screen resolution, number of colors, and large or small fonts while in Windows. After the new options have been selected, the user can choose to immediately restart Windows or have the new options take place the next time Windows is started. Video drivers for SCO and Interactive UNIX should be obtained from the respective UNIX vendor. Video drivers also are available for downloading from iPAN, the electronic bulletin board service of IntelTechDirect™.

VIDEO DRAM

The Classic R systems can be upgraded to 1 MB of video DRAM by installing four 70 ns 256 K x 4 page mode DIP DRAM components into socket locations U22, U25, U28, and U34. The following table lists several vendors and their part numbers.

<i>Vendor</i>	<i>Part Number</i>
Texas Instruments	TMS44C256-70N
Siemens	HYB514256B-70
Toshiba	TC514256AP-70
NEC	uPD424256

Sampling of Video DRAM Component Vendors

VIDEO MODES

<i>Setup Option/Horiz. Freq. (kHz)</i>	<i>Monitor Examples</i>	<i>Horiz. (kHz)</i>	<i>Vert. (Hz)</i>	<i>Resolutions</i>
31.5	IBM 8512, 8513, 8503	31.5	60	640x480
31.5 & 35.5	IBM 8514, 8515	31.5 35.5	60 43.5 - interlaced	640x480 1024x768
31.5 - 35.2	NEC 2A	31.5 35.2	60 56 43.5 - interlaced	640x480 800x600
31.5 - 35.5	NEC II	31.5 35.2 35.5	60 56 43.5 - interlaced	640x480 800x600 1024x768
31.5 - 37.8	NEC 3D	31.5 37.8 37.8	60 or 72 60 43.5 - interlaced	640x480 800x600 1024x768
31.5 - 48	Sony CPD-1304, NEC 3FGx, Nanao 9065S, 9070U	31.5 48.0 48.0 48.0	60 or 72 72 60 Non-interlaced 43.5 - interlaced	640x480 800x600 1024x768 1280x1024
31.5 - 56	NEC 4D, 4FG, Nanao T240i	31.5 48.0 56.0 48.0	60 or 72 72 70 Non-interlaced 43.5 - interlaced	640x480 800x600 1024x768 1280x1024
31.5 - 64	NEC 5D, 5FG, 6FG Nanao T550i, T560i, T560i, T660i, F550i F750i	31.5 48.0 58.3 48.0	60 or 72 72 72 Non-interlaced 43.5 - interlaced	640x480 800x600 1024x768 1280x1024

TITLE:	Classic R-Series Video Subsystem
INTEL REF:	R_TPS6F.doc
PRODUCT:	Classic R-Series
DATE/VER:	10/12/93, Ver. 3.0
RELATED:	Overview, Board Level Features, System Level Features, User-Installable Upgrades, Jumpers/Connectors
KEYWORDS:	Video Memory, Resolutions, Monitors