2500 SX/20 (250-4077) Memory Manager

Faxback Doc. # 1191

EMM386 is an expanded memory manager driver included with MS-DOS 5.0. Refer to MS-DOS 5.0 Help or to the MS-DOS 5.0 User's Guide and Reference for information on installing and using EMM386. The MS-DOS 5.0 documentation is available at Radio Shack stores. Some memory management terms are defined below:

BASE RAM--The memory below 640KB that MS-DOS and all MS-DOS applications use. Also referred to as conventional memory.

SHADOW RAM--The 384KB of memory from 640KB to 1024KB (1MB). this memory can be used to remap the system ROM BIOS and BIOS extensions (video BIOS, SCSI BIOS, and such) to faster DRAM. Shadowing the BIOS increases the system performance. However, some expansion adapters and application programs might not operate properly if BIOS shadowing is enabled.

EXPANDED MEMORY--Expanded memory was developed to overcome the memory limitations of earlier microprocessors. By swapping blocks of data in and out of an area between 640KB and 1MB, called the page frame, applications can access more data than conventional memory can hold. Expanded memory is grouped in 16KB blocks called pages. Four pages, called a frame, can be swapped in and out of the page frame. Using expanded memory required the installation of an expanded memory manager such as EMM386.

EXTENDED MEMORY--Linear (continuous) memory above 1 MB. Extended memory is memory above 1 MB that can be directly addressed by 90286, 386SX, and i486 microprocessors. Some MS-DOS applications can use extended memory. Extended memory is often used for software disk caches, RAM disks, and software print spoolers. Himem is an extended memory manager driver that is included with MS-DOS 5.0. Refer to MS-DOS 5.0 Help for more information about Himem.

The following diagram shows base RAM, shadow RAM, and extended memory:

Extended Memory (Up to 15MB)	Up to 16MB (16384KB)
Shadow RAM (384KB) Base RAM (640KB)	1024KB (1MB) 640KB
	OKB