



General Memory Map

Overview of the general memory—layout of PC/XT/AT while operating.

Address	Name / Description
0000:0000	Interrupt vector table: 256 4-byte addresses
0040:0000	ROM-BIOS data area.
0050:0000	DOS data area.
xxxx:0000	DOS low-level BIOS code (read from IO.SYS on boot disk)
xxxx:0000	DOS interrupt handlers, including INT 21H (IBMDOS.COM)
xxxx:0000	DOS buffers, data areas, and installed device drivers
xxxx:0000	resident portion of COMMAND.COM includes handlers for INT 22H , INT 23H and INT 24H
xxxx:0000	TSR-style programs and data
xxxx:0000	Currently-executing application program (.COM or .EXE program) Programs initially own all of memory up to 640K (a000:0000) or whatever is the memory-ceiling in the PC.
xxxx:0000	Transient portion of COMMAND.COM. Command processor, internal commands, etc. Gets reloaded if any program overwrites this area
xxxx:0000	Extended BIOS Data Area on PS/2 (highest memory below 640K)
a000:0000	On 386+ CPUs, addresses from a000:0 to f000:0 that are not through occupied by ROM are available as UMBs when supported by
e000:ffff	EMM386.EXE or other memory-management software
a000:0000	EGA and VGA memory for certain video modes
b000:0000	MDA display adapter video memory (also Hercules & clones)
b800:0000	CGA video memory (also Hercules page 2)
c800:0000	External ROM code. ROM-BIOS looks here (in 2K-block increments) through for code to be executed at boot time. Such ROMs usually install

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e000:0000   う a device handler (e.g., hard disk or EGA BIOS): see ROM-Scan  
also       う Physical paging addresses for EMS expanded memory.  
e000:0000   う AT motherboard ROM modules in 64K-block increments.  
through     う See ROM-Scan  
e000:ffff   う  
f600:0000   う ROM-resident BASIC interpreter (ancient IBM-logoed PC only)  
fe00:0000   う ROM-BIOS: POST, boot code, interrupt handlers, the whole banana  
f000:fff0   う JMP instruction to first opcode to execute on power up or reset  
f000:fff5   う BIOS release date (in ASCII)  
f000:fffe   う IBM PC identification code. See BIOS Data Area (end of table)  
ffff:0000   う This is the High Memory Area, available to 286+ computers.  
through     う It is the first 64K (less 16 bytes) of extended^ memory, but is  
ffff:fff0   う set up to be accessible while in real mode.  
           ㊦Above 1M㊧
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Area above 1 MB is extended [^](#) memory available to AT-class computers via BIOS function [INT 15H](#) and (when HIMEM.SYS or other XMS provider is installed) [XMS Services](#). The CPU is switched into protected mode to make this memory accessible. See also: [About DPMI](#).

Extended memory is currently used by DOS only for RAM-disk, disk caching, and by a few DOS TSRs.

Windows, OS/2, Xenix, and other operating systems or control programs may use this area for multitasking or general-purpose memory.

See Also: [BIOS Data Area](#)
[EGA/VGA Data Areas](#)
[I/O Port Map](#)

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