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Real mode

Introduction

Real mode as its name suggest is real, that means everything is real in it. The memory which is addressed is real i.e. it really exists at the addressed location. The real mode was put into the processors after 80286 so that they run programs of their predecessor and also for loading the operating system and switching into the Protected mode.

In real addressing mode the memory is addressed by 16bits of addresses. That is you can address at most (2^16=) 1 MB of physical memory.

Memory Structure

Linear Address Range	Memory Type	Use
0 - 3FF	Ram	Real-mode Interrupt Vector Table (IVT)
400 - 4FF	Ram	Bios Data Ares (BDA)
500 - 9FBFF	Ram	Free Memory (Below 1 MB) 630K
9FC00 - 9FFFF	Ram	Extended Bios Data Area (EBDA)
A0000 - BFFFF	Video Ram	VGA Frame buffer
C0000 - C7FFF	Rom	Video Bios 32K
C8000 - EFFFF	Nothing	
F0000 - FFFFF	Rom	Motherboard Bios 64K



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