Basic Architecture

The 6502 microprocessor is a relatively simple 8 bit CPU with only a few internal registers capable of addressing at most 64Kb of memory via its 16 bit address bus. The processor is little endian and expects addresses to be stored in memory least significant byte first.

The first 256 byte page of memory ($0000-$00FF) is referred to as 'Zero Page' and is the focus of a number of special addressing modes that result in shorter (and quicker) instructions or allow indirect access to the memory. The second page of memory ($0100-$01FF) is reserved for the system stack and which cannot be relocated.

The only other reserved locations in the memory map are the very last 6 bytes of memory $FFFA to $FFFF which must be programmed with the addresses of the non-maskable interrupt handler ($FFFA/B), the power on reset location ($FFFC/D) and the BRK/interrupt request handler ($FFFE/F) respectively.

The 6502 does not have any special support of hardware devices so they must be mapped to regions of memory in order to exchange data with the hardware latches.

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