



MPS

6509MICROPROCESSOR WITH
MEMORY MANAGEMENT

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DESCRIPTION

The 6509 is a low-cost microprocessor capable of solving a broad range of small systems and memory management problems at minimum cost to the user.

A memory management system allows for up to One Mega-Byte of memory for ease in down loading languages, operating systems or other data.

The Three-State sixteen-bit Address Bus allows Direct Memory Accessing (DMA) and multi-processor systems sharing a common memory while the Four-bit Extended Address Register allows for up to one Mega-byte of data storage.

The internal processor architecture is identical to the MOS Technology 6502 to provide software compatibility.

FEATURES OF THE 6509

- Memory management
- On board clock logic
- Addressable memory range of up to 1 M. bytes
- Single +5 volt supply
- N channel, silicon gate, depletion load technology
- Eight bit parallel processing
- 56 Instructions
- Decimal and binary arithmetic
- Thirteen addressing modes
- True indexing capability
- Programmable stack pointer
- Variable length stack
- Interrupt capability
- 8 Bit Bi-Directional Data Bus
- Program Addressable memory range of up to 65K bytes
- Direct memory access capability
- Bus compatible with M6800
- Pipeline architecture
- 1 MHz, 2 MHz and 3 MHz operation
- Use with any type or speed memory

PIN CONFIGURATION

READY	1	40	ϕ_0 IN
$\overline{IRQ}$	2	39	RESET
SYNC	3	38	ϕ_2 OUT
$\overline{NMI}$	4	37	R/W
AEC	5	36	D0
VDD	6	35	D1
A0	7	34	D2
A1	8	33	D3
A2	9	32	D4
A3	10	31	D5
A4	11	30	D6
A5	12	29	D7
A6	13	28	S.O.
A7	14	27	P0
A8	15	26	P1
A9	16	25	P2
A10	17	24	P3
A11	18	23	A15
A12	19	22	A14
A13	20	21	VSS