Technology Trade-Offs

Features	HMOS	CMOS	HCMOS
Internal Bus Speed	0.1–1.0 MHz	0–1.0 MHz	0–2.1 MHz
Instruction Set	Standard M6805	Standard M6805 plus "STOP" & "WAIT"	Standard M6805 plus "STOP," & "WAIT" & "MUL"
Operating Voltage	4.75–5.75 V	3–6 V (3–5.5 V, EPROM Parts)	3–6 V
Typical Power Consumption	350–650 mW	8–20 mW	25mW

M6805 Family Variations

CMOS Versions

	HCMOS				CMOS			
Features	**MC68HC05C4**	**68HC05C8**	**68HC05B6**	**68HC05B4**	**E2**	**F2**	**G2**	**H2**
No. of pins	40	40	52	52	40	28	40	40
RAM (bytes)	176	176	176	176	112	64	112	112
User ROM (bytes)	4156	7740	5952	4160	0	1089	2106	2048
I/O Lines (Bidirectional)	24	24	24	24	16	16	32	24
I/O Lines (Unidirectional)	7	7	8	8	0	4	0	4
Timer (Bits)	16	16	16	16	8	8	8	8
Special Features	SPI SCI	SPI SCI	SCI A/D D/A	SCI A/D D/A	operates in expanded mode			COP Freq. Synth. Tone Gen.
	*4MHz bus version available		256 byte E² Power saving	power saving				
(E)EPROM Version	MC68HC805C4		MC68HC05B6	MC68HC805B6		MC1468705F2	MC1468705G2	

PDF Support

Definitions

SPI = Serial Peripheral Interface
SCI = Serial Communications Interface
PLL = Phase Lock Loop
COP = "Computer Operating Properly" reset timer which acts as a "watchdog" to automatically reset the CPU if not reset by a program sequence within a given amount of time.

EPROM
Security = A programming sequence which, when implemented, makes the contents of the EPROM inaccessible.