

Description

The μPD7507H, μPD7508H, and μPD75CG08HE are pin-compatible, high-speed (4.19 MHz), 4-bit, single-chip CMOS microcomputers designed with the μPD7500-series architecture. The subroutine stack is implemented in RAM for greater nesting depth and flexibility.

Thirty-two I/O lines are organized into eight 4-bit ports: input port/serial interface port 0, output ports 2 and 3, and I/O ports 1, 4, 5, 6, and 7.

The μPD7507H and μPD7508H execute 92 instructions of the μPD7500 series A instruction set with a 2.86-μs instruction cycle time.

Maximum power consumption is 3 mA at 5 V and less in the HALT and STOP low-power modes.

The μPD75CG08HE is a piggyback EPROM prototyping chip that is pin-compatible with the μPD7507H and the μPD7508H. A 2716 plugged into the top of the μPD75CG08HE emulates the ROM of a μPD7507H. A 2732 emulates the ROM of the μPD7508H.

When emulating the μPD7507H, the user must take care to use only the first 128 RAM locations. Although the μPD7507H and μPD7508H can operate over a range of 2.7 to 6.0 V, the μPD75CG08HE is limited to 5 V ± 10%.

Features

- Single-chip microcomputer
- Program ROM
 - μPD7507H: 2048 x 8 bits
 - μPD7508H: 4096 x 8 bits
 - μPD75CG08HE: piggyback EPROM
- Data RAM
 - μPD7507H: 128 x 4 bits
 - μPD7508H: 224 x 4 bits
 - μPD75CG08HE: 224 x 4 bits
- 8-bit timer/event counter
- Four 4-bit general-purpose registers
- Four vectored, prioritized interrupts
- Executes 92 instructions of μPD7500-series A instruction set
- 2.86 μs instruction cycle/4.19 MHz external clock
- Two low power standby modes: HALT, STOP
- 32 I/O lines
- LED direct drive (ports 2-5; 16 lines)

Ordering Information

Part Number	Package	Max Frequency of Operation
μPD7507HC-xxx	40-pin plastic DIP	4.19 MHz
μPD7507HCU-xxx	40-pin plastic shrink DIP	
μPD7507HG-xxx-22	44-pin plastic QFP	
μPD7508HC-xxx	40-pin plastic DIP	
μPD7508HCU-xxx	40-pin plastic shrink DIP	
μPD7508HG-xxx-22	44-pin plastic QFP	
μPD75CG08HE	40-pin ceramic piggyback DIP	

Notes:

- (1) xxx indicates ROM code suffix.

Block Diagram

