

5.2 H8/520

The H8/520 is a compact version of the H8/532.

These products are provided in 64-pin small packages, making them suitable for such applications as automobile body control, and printer and electronic musical instrument control.

Features

16-kbyte PROM (mask ROM)

512-byte High-Speed Static RAM

Watchdog Timer (WDT) (1 channel)

- Reset generated upon overflow (external reset output possible)
- Can be used as interval timer

16-bit Free-Running Timer (FRT) (2 channels)

- Two independent waveform outputs possible for each channel (output compare function)
- Input pulse width and cycle measurement (input capture function)

8-bit Multifunction Timer (1 channel)

- External event input possible
- Waveform output of any duty

Data Transfer Controller (DTC)

- Data transfer between memory and I/O channel independent of CPU

Serial Communication Interface (SCI) (2 channels)

- Choice of asynchronous mode or synchronous mode

10-bit A/D Converter

- Analog input: 4 channels (CP-68: 8 channels)
- Choice of single mode or scan mode
- A/D converter can be activated by external trigger

Interrupt Controller

- Nine external interrupt pins: NMI, $\overline{\text{IRQ}}_0$ to $\overline{\text{IRQ}}_7$
- 18 internal interrupt sources
- Eight priority levels settable

Wait State Controller

- Control by external pin or software

Clock Pulse Generator

- Source oscillation frequency divided by 2 for use as system clock (ϕ)
- Maximum operating frequency: 10 MHz

I/O Ports

- Input/output pins: 46
- Input-only pins: 4 (8 in CP-68)

Operating Modes

- Extended minimum mode: Supports max. 64-kbyte address space (modes 1 and 2)
- Extended maximum mode: Supports max. 16-Mbyte address space (modes 3 and 4)
- Single-chip mode (mode 7)

Power-Down Modes

- Sleep, software standby, or hardware standby mode can be set

Operating Voltage

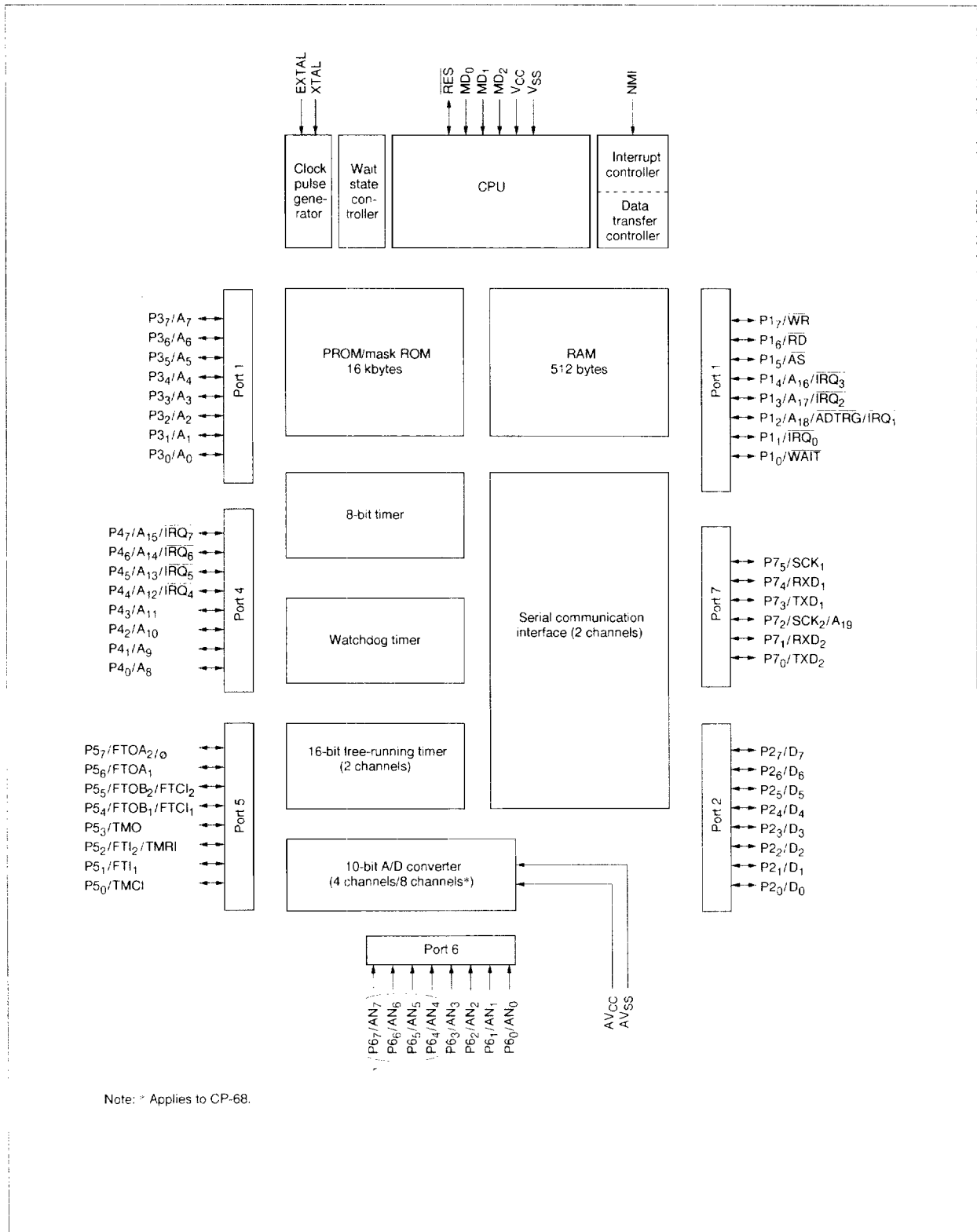
- 5.0 V $\pm 10\%$ (10 MHz)

Packages

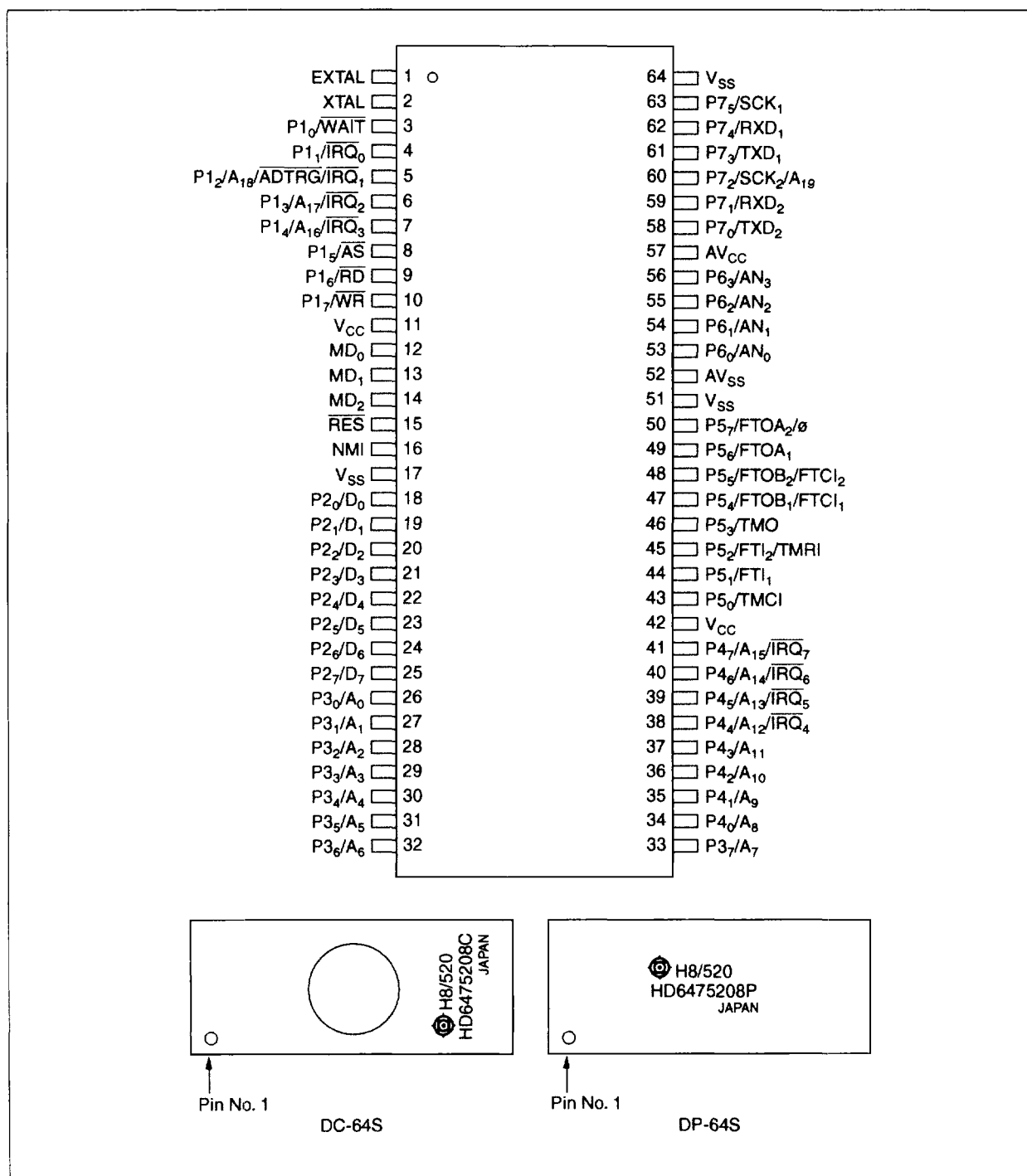
Package	Model No.	ROM
64-pin windowed shrink DIP (DC-64S)	HD6475208C	PROM
64-pin shrink DIP (DP-64S)	HD6475208P	
64-pin QFP (FP-64A)	HD6475208F	
68-pin PLCC (CP-68)	HD6475208CP	
64-pin shrink DIP (DP-64S)	HD6435208P	Mask ROM
64-pin QFP (FP-64A)	HD6435208F	
68-pin PLCC (CP-68)	HD6435208CP	

Section 5 Introduction to Each Product

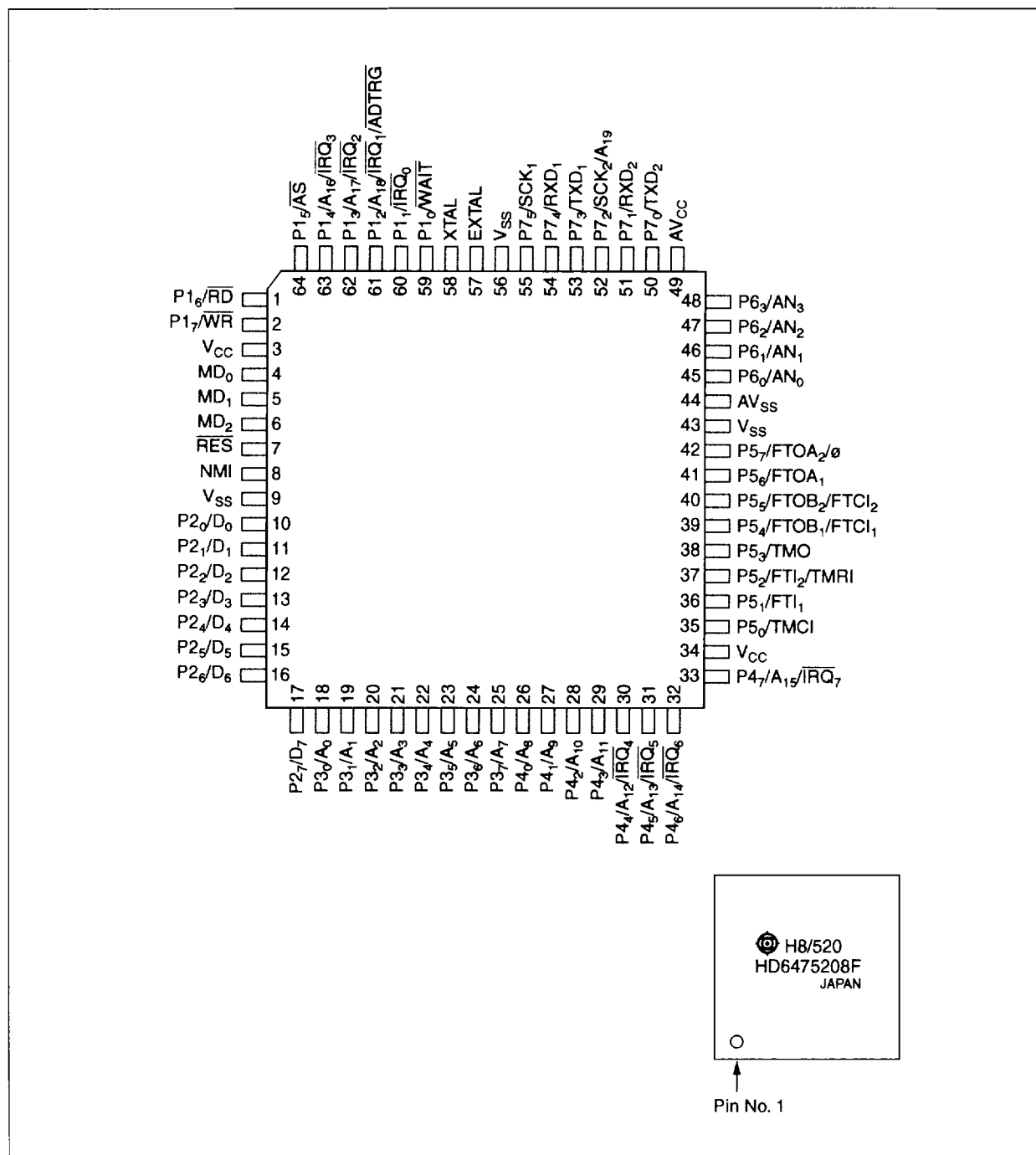
H8/520 Block Diagram



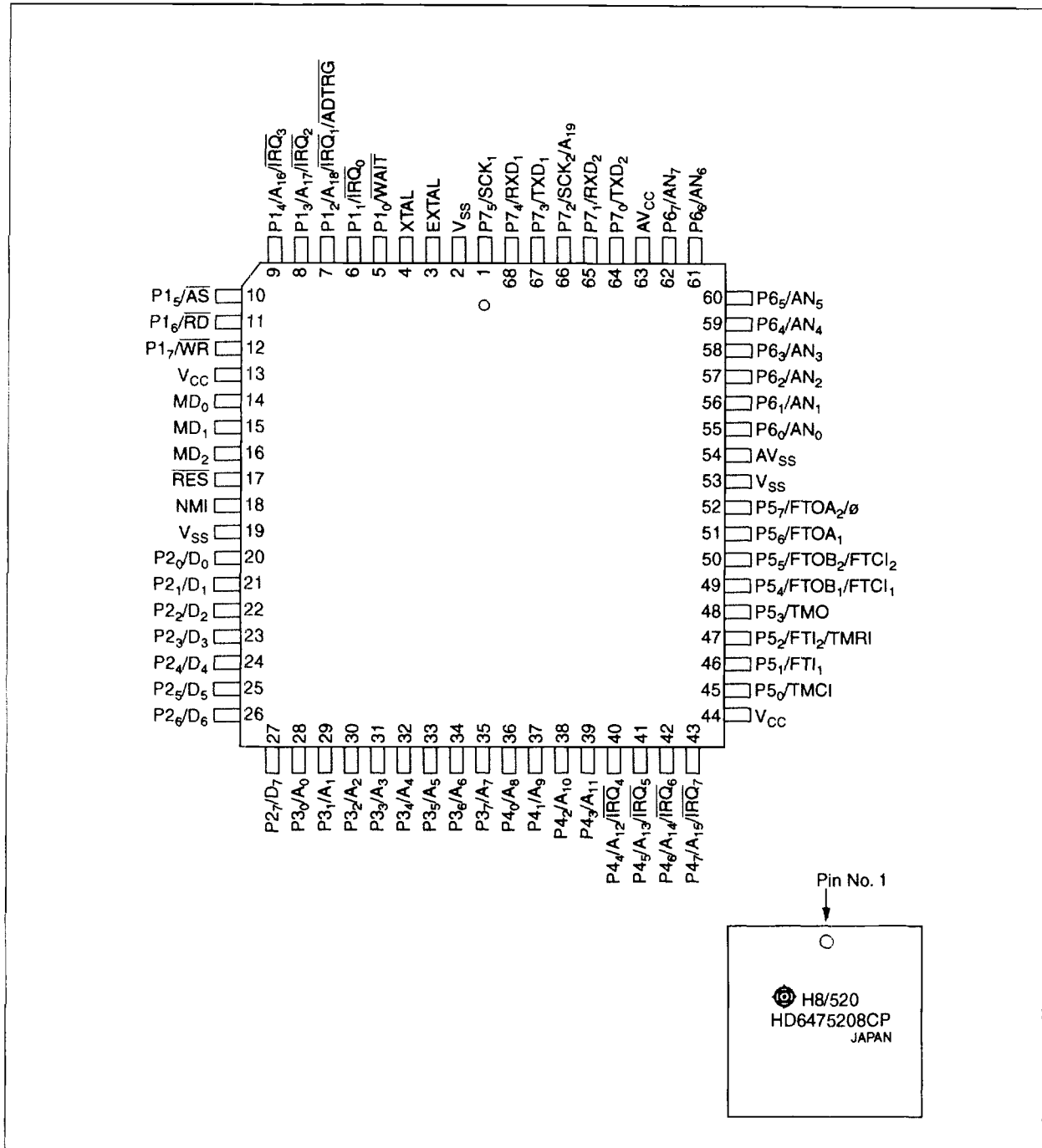
H8/520 Pin Arrangement (DC-64S, DP-64S, Top View)



H8/520 Pin Arrangement (FP-64A, Top View)



H8/520 Pin Arrangement (CP-68, Top View)



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Product