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# HB56D136 Series

1,048,576-word  $\times$  36-bit High Density Dynamic RAM Module

# HITACHI

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## Description

The HB56D136 is a 1-M  $\times$  36-bit dynamic RAM module, mounted 8 pieces of 4 Mbit DRAM (HM514400CS/CLS) sealed in SOJ package and 2 pieces of 2 Mbit DRAM (HM512200BS/BLS) sealed in SOJ package. An outline of the HB56D136 is 72-pin single in-line package.

Therefore, the HB56D136 makes high density mounting possible without surface mount technology. The HB56D136 provides common data inputs and outputs. Decoupling capacitors are mounted beneath each SOJ.

## Features

- 72-pin
  - Lead pitch: 1.27 mm
- Single 5 V ( $\pm 5\%$ ) supply
- High speed
  - Access time: 60 ns/70 ns/80 ns (max)
- Low power dissipation
  - Active mode: 5.46 W/4.94 W/4.41 W (max)
  - Standby mode: 105 mW (max)  
5.25 mW (max) (L-version)
- Fast page mode capability
- 1,024 refresh cycle: 16 ms  
128 ms (L-version)
- 3 variations of refresh
  - $\overline{\text{RAS}}$  only refresh
  - $\overline{\text{CAS}}$ -before- $\overline{\text{RAS}}$  refresh
  - Hidden refresh
- TTL compatible

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## Ordering Information

Type No.	Access Time	Package	Contact Pad
HB56D136BW-6C	60 ns	72-pin SIP socket type	Gold
HB56D136BW-7C	70 ns		
HB56D136BW-8C	80 ns		
HB56D136BW-6CL	60 ns	72-pin SIP socket type	Solder
HB56D136BW-7CL	70 ns		
HB56D136BW-8CL	80 ns		
HB56D136SBW-6C	60 ns	72-pin SIP socket type	Solder
HB56D136SBW-7C	70 ns		
HB56D136SBW-8C	80 ns		
HB56D136SBW-6CL	60 ns	72-pin SIP socket type	Solder
HB56D136SBW-7CL	70 ns		
HB56D136SBW-8CL	80 ns		

Note: The specification of this device is subject to change without notice. Please contact your nearest Hitachi’s Sales Dept. regarding specification.