



CYPRESS SEMICONDUCTOR

T-46-23-10  
ADVANCED INFORMATION

CY7C1001  
CY7C1002

256K x 4 Static R/W RAM  
with Separate I/O

2  
SRAMS

Features

- High speed  
—  $t_{AA} = 15$  ns
- Transparent write (7C1001)
- CMOS for optimum speed/power
- Low active power  
— 800 mW
- Low standby power  
— 250 mW
- Low data-retention power  
— 100  $\mu$ W at 2.0V
- Automatic power-down when deselected
- TTL-compatible inputs and outputs

Functional Description

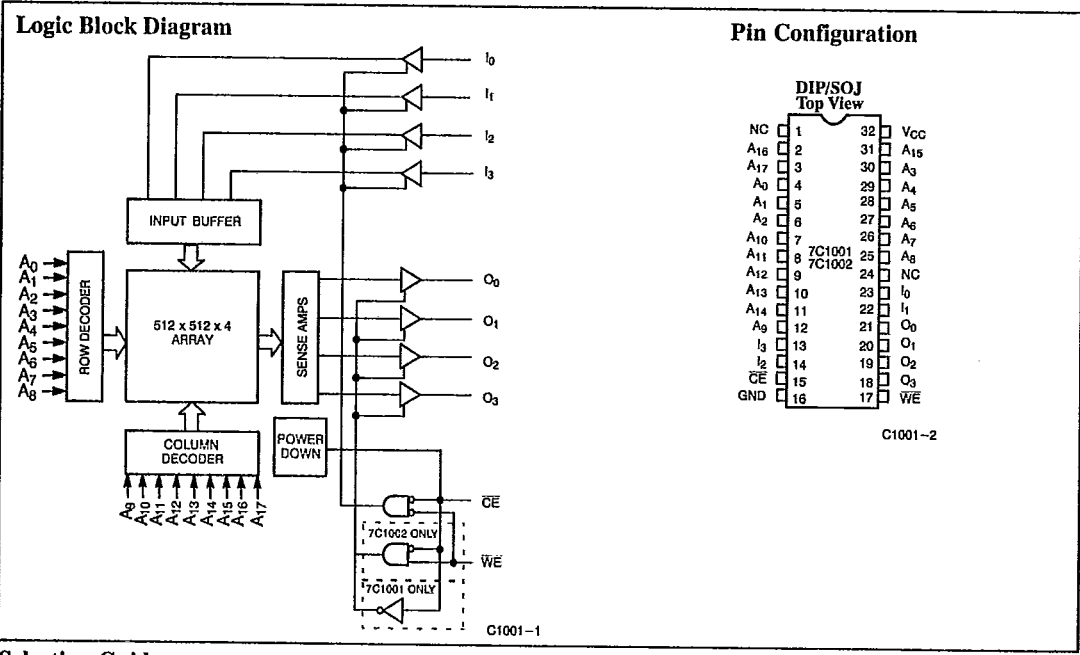
The CY7C1001 and CY7C1002 are high-performance CMOS static RAMs organized as 262,144 x 4 bits with separate I/O. Easy memory expansion is provided by active LOW chip enable ( $\overline{CE}$ ) and three-state drivers. They have an automatic power-down feature, reducing the power consumption by more than 65% when deselected.

Writing to the device is accomplished by taking both chip enable ( $\overline{CE}$ ) and write enable ( $\overline{WE}$ ) inputs LOW. Data on the four input pins ( $I_0$  through  $I_3$ ) is written into the memory location specified on the address pins ( $A_0$  through  $A_{17}$ ).

Reading the device is accomplished by taking chip enable ( $\overline{CE}$ ) LOW while write enable ( $\overline{WE}$ ) remains HIGH. Under these conditions, the contents of the memory location specified on the address pins will appear on the four data output pins ( $O_0$  through  $O_3$ ).

The data output pins on the CY7C1001 and the CY7C1002 are placed in a high-impedance state when the device is deselected ( $\overline{CE}$  HIGH). The CY7C1002's outputs are also placed in a high-impedance state during a write operation ( $\overline{CE}$  and  $\overline{WE}$  LOW). In a write operation on the CY7C1001, the output pins will track the inputs after a specified delay.

The CY7C1001 and CY7C1002 are available in standard 300-mil-wide DIPs and SOJs.



Selection Guide

		7C1001-15 7C1002-15	7C1001-20 7C1002-20	7C1001-12 7C1002-12
Maximum Access Time (ns)		15	20	25
Maximum Operating Current	Commercial	145	145	145
	Military		150	150
Maximum Standby Current (mA)	Commercial	45	45	45
	Military		50	50

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