



## 128K x 9 Static RAM

### Features

- **High speed**  
—  $t_{AA} = 12 \text{ ns}$
- **CMOS for optimum speed/power**
- **Low active power**  
— 1020 mW
- **Low standby power**  
— 250 mW
- **2.0V data retention**  
— 100  $\mu\text{W}$
- **Available in plastic 32-pin 400-mil SOJ**
- **Automatic power-down when deselected**
- **Easy memory expansion with  $\overline{\text{CE}}_1$ ,  $\text{CE}_2$ , and  $\text{OE}$  options**

### Functional Description

The CY7C1088 is a high-performance CMOS static RAM organized as 131,072 words by 9 bits. Easy memory expansion is provided by an active LOW chip enable ( $\overline{\text{CE}}_1$ ), an active HIGH chip enable ( $\text{CE}_2$ ), an active LOW output enable ( $\overline{\text{OE}}$ ), and three-state drivers. This device has an automatic power-down feature that reduces power consumption by more than 75% when deselected.

Writing to the device is accomplished by taking chip enable one ( $\overline{\text{CE}}_1$ ) and write enable ( $\overline{\text{WE}}$ ) inputs LOW and chip enable two ( $\text{CE}_2$ ) input HIGH. Data on the eight I/O pins ( $\text{I/O}_0$  through  $\text{I/O}_7$ ) is then written

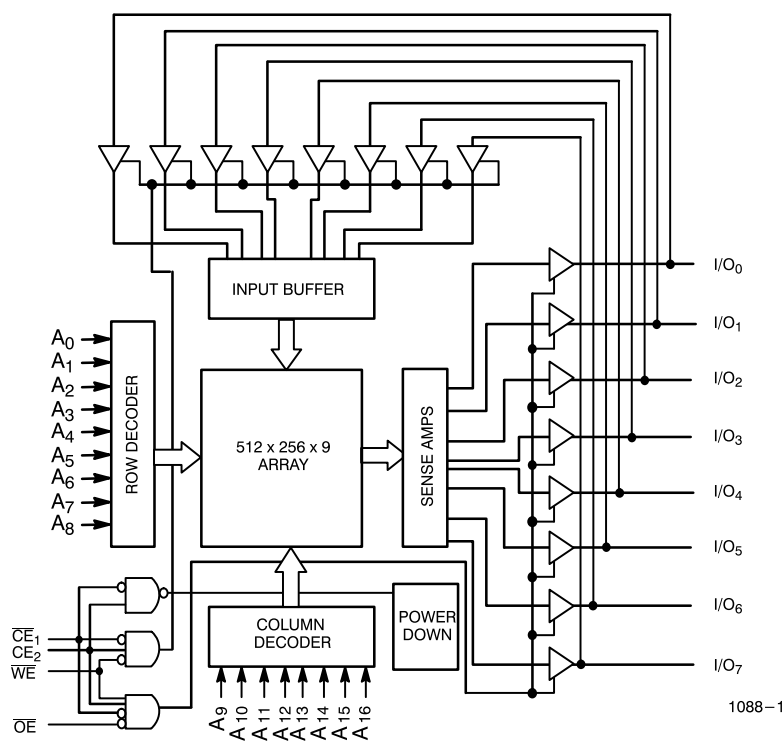
into the location specified on the address pins ( $\text{A}_0$  through  $\text{A}_{16}$ ).

Reading from the device is accomplished by taking chip enable one ( $\overline{\text{CE}}_1$ ) and output enable ( $\overline{\text{OE}}$ ) LOW while forcing write enable ( $\overline{\text{WE}}$ ) and chip enable two ( $\text{CE}_2$ ) HIGH. Under these conditions, the contents of the memory location specified by the address pins will appear on the I/O pins.

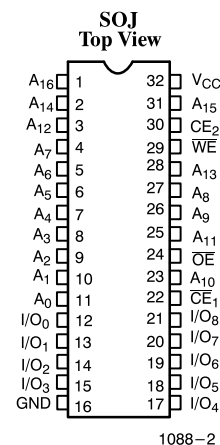
The eight input/output pins ( $\text{I/O}_0$  through  $\text{I/O}_7$ ) are placed in a high-impedance state when the device is deselected ( $\overline{\text{CE}}_1$  HIGH or  $\text{CE}_2$  LOW), the outputs are disabled ( $\overline{\text{OE}}$  HIGH), or during a write operation ( $\overline{\text{CE}}_1$  LOW,  $\text{CE}_2$  HIGH, and  $\overline{\text{WE}}$  LOW).

The CY7C1088 is available in standard 32-pin 400-mil-wide SOJs.

### Logic Block Diagram



### Pin Configuration



### Selection Guide

		7C1088-12	7C1088-15	7C1088-20	7C1088-25
Maximum Access Time (NS)		12	15	20	25
Maximum Operating Current (mA)	Commercial	185	170	155	145
	Military		180	170	160
Maximum Standby Current (mA)	Commercial	45	40	30	30
	Military		40	30	30

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