

# DALLAS

SEMICONDUCTOR

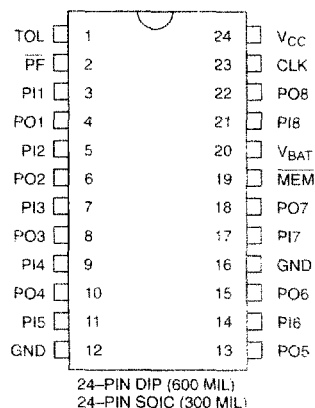
## DS1380

RAMport

### FEATURES

- 2K x 8 static RAM
- 8-Bit transparent I/O port
- Battery connection provided for nonvolatility
- Multiplexed address/data bus reduces pin count
- 5% or 10%  $V_{CC}$  tolerance
- Power Fail output signal
- Low power CMOS
- 24-pin DIP package or optional 24-pin SOIC
- Ideally suited for microcontroller applications as add on memory

### PIN ASSIGNMENT



### PIN DESCRIPTION

PI1 – PI8	– Port Inputs ( $\mu P$ Ports)
PO1 – PO8	– Port Outputs (External Ports)
$\overline{PF}$	– Power Fail Output
CLK	– Clock
$\overline{MEM}$	– Memory Select
$V_{BAT}$	– + Battery Connection
$V_{CC}$	– +5 Volts
GND	– Ground

### DESCRIPTION

The DS1380 is a 2K x 8 nonvolatile static RAM designed to connect directly to the port pins of a microcontroller. Eight of ten port pins required to interface with the microcontroller are reproduced by the DS1380 for general purpose use. The reproduced port pins can be both inputs and outputs and will appear exactly the same as the pins on the attached microcontroller. The static RAM is read or written with three successive cycles con-

taining high order address, low order address and then data. Read, write and status information is passed to the DS1380 along with the high order address transfer. While transferring data to and from memory, the I/O status is locked and maintained. All data within the DS1380 can be made nonvolatile with direct connection of a 3-volt lithium battery. The DS1380 is controlled by only two signals: clock and memory select.