

DALLAS
SEMICONDUCTOR

DS1216H
SmartWatch/RAM 4M

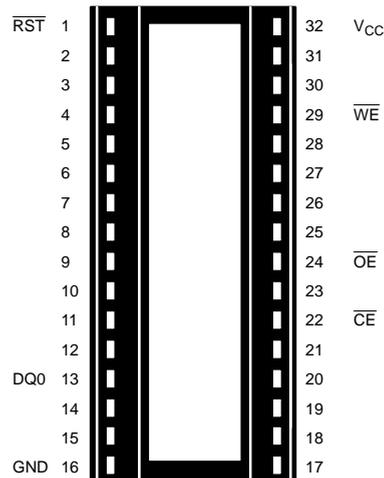
FEATURES

- Converts standard 512K x 8 CMOS static RAMs into nonvolatile memory
- Embedded lithium energy cell maintains watch information and retains RAM data
- Watch function is transparent to RAM operation
- Keeps track of hundredths of seconds, seconds, minutes, hours, days, date of the month, months, and years
- Month and year determine the number of days in each month; leap year compensation valid up to 2100
- Lithium energy source is electrically disconnected to retain freshness until power is applied for the first time
- Proven gas-tight socket contacts
- Full $\pm 10\%$ operating range
- Operating temperature range 0°C to 70°C
- Accuracy is better than ± 1 min./month @ 25°C

DESCRIPTION

The DS1216H SmartWatch/RAM 4M is a 32-pin, 600 MIL wide DIP socket with a built-in CMOS watch function, a nonvolatile RAM controller circuit, and an embedded lithium energy source. It accepts 512K x 8 JEDEC bytewise CMOS static RAM. When the socket is mated with a CMOS SRAM, it provides a complete solution to problems associated with memory volatility and

PIN ASSIGNMENT



32-PIN INTELLIGENT SOCKET

PIN DESCRIPTION

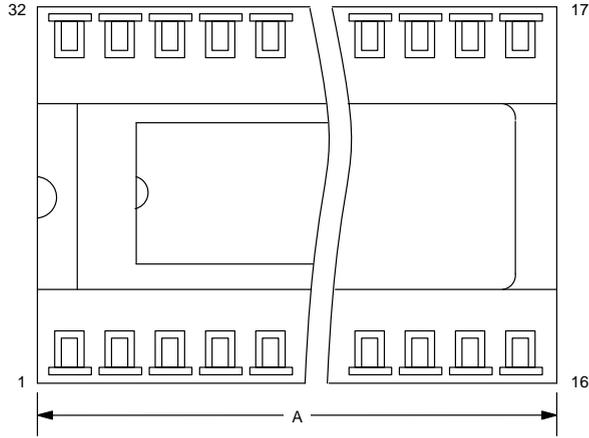
All pins pass through except 22 and 32.

- Pin 1 $\overline{\text{RST}}$ – RESET
 Pin 13 DQ0 – Data Input/Output 0
 Pin 16 GND – Ground
 Pin 22 $\overline{\text{CE}}$ – Conditioned Chip Enable
 Pin 24 $\overline{\text{OE}}$ – Output Enable
 Pin 29 $\overline{\text{WE}}$ – Write Enable
 Pin 32 V_{CC} – Switched V_{CC} for 32-pin RAM

uses a common energy source to maintain time and date. A key feature of the SmartWatch is that the watch function remains transparent to the RAM.

See the DS1216B SmartWatch/RAM 16/64K data sheet for technical details.

DS1216H SMARTWATCH



PKG	32-PIN	
DIM	MIN	MAX
A IN. MM	1.580 40.13	1.620 41.14
B IN. MM	0.690 17.53	0.720 18.29
C IN. MM	0.400 10.16	0.470 11.94
D IN. MM	0.035 0.89	0.065 1.65
E IN. MM	0.055 1.39	0.075 1.90
F IN. MM	0.120 3.04	0.160 4.06
G IN. MM	0.090 2.29	0.110 2.79
H IN. MM	0.590 14.99	0.630 16.00
J IN. MM	0.008 0.20	0.012 0.30
K IN. MM	0.015 0.38	0.021 0.53
L IN. MM	0.380 9.65	0.420 10.67

