

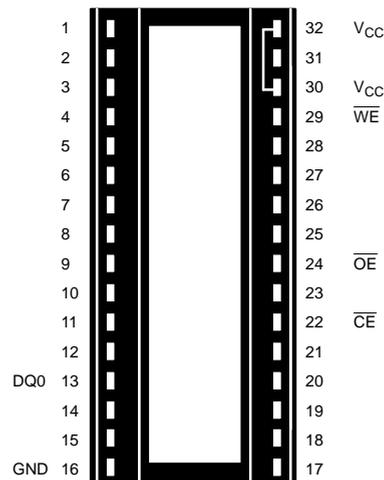
DALLAS
SEMICONDUCTOR

DS1216D
SmartWatch/RAM 256K/1M

FEATURES

- Converts standard 8K x 8, 32K x 8, 128K x 8, and 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

PIN ASSIGNMENT



32-PIN INTELLIGENT SOCKET

PIN DESCRIPTION

All pins pass through except 22, 30 and 32.

Pin 1	\overline{RST}	– RESET
Pin 13	DQ0	– Data Input/Output 0
Pin 16	GND	– Ground
Pin 22	\overline{CE}	– Conditioned Chip Enable
Pin 24	\overline{OE}	– Output Enable
Pin 29	\overline{WE}	– Write Enable
Pin 30	V _{CC}	– Switched V _{CC} for 28-pin RAM
Pin 32	V _{CC}	– Switched V _{CC} for 32-pin RAM

DESCRIPTION

The DS1216D SmartWatch/RAM 256K/1M 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 either an 8K x 8, 32K x 8, 128K x 8, or 512K x 8 JEDEC byte-wide CMOS static RAM. When the socket is mated with a CMOS SRAM, it provides a complete solution to prob-

lems associated with memory volatility and 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.