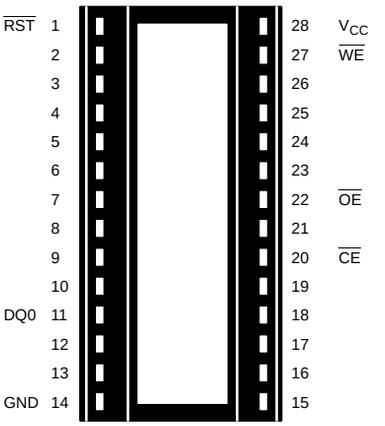
DALLAS SEMICONDUCTOR

DS1216C
SmartWatch/RAM 64K/256K

FEATURES

- Keeps track of hundredths of seconds, seconds, minutes, hours, days, date of the month, months, and years
- Converts standard 8K x 8 and 32K 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
- 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 ±10% operating range
- Operating temperature range 0°C to 70°C
- Accuracy is better than ±1 min./month @ 25°C

PIN ASSIGNMENT



28–PIN INTELLIGENT SOCKET

PIN DESCRIPTION

All pins pass through except 20, 28.

Pin 1	$\overline{RST}$	– $\overline{RESET}$
Pin 11	DQ0	– Data Input/Output 0
Pin 14	GND	– Ground
Pin 20	$\overline{CE}$	– Conditioned Chip Enable
Pin 22	$\overline{OE}$	– Output Enable
Pin 27	$\overline{WE}$	– Write Enable
Pin 28	V_{CC}	– Switched V_{CC}

DESCRIPTION

The DS1216C SmartWatch/RAM is a 28–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 or a 32K x 8 JEDEC bytewide CMOS static RAM. When the socket is mated with a CMOS SRAM, it provides a complete solution to problems 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.