

DS1216F SmartWatch/ROM 64K/256K/1M

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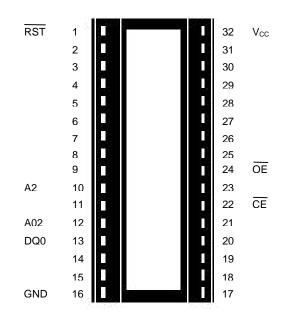
FEATURES

- Adds timekeeping to any 32-pin JEDEC bytewide memory location
- Embedded lithium energy cell maintains calendar time for more than 10 years in the absence of power
- Timekeeping function is transparent to memory 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 ±10% V_{CC} operating range
- Operating temperature range 0°C to 70°C
- Accuracy is better than ±1 minute/month @ 25°C

ORDERING INFORMATION

DS1216F	5 volt operation
DS1216F-3	3 volt operation

PIN ASSIGNMENT



32-Pin Intelligent Socket

PIN DESCRIPTION

Pin 1	RST	- RESET
Pin 10	A2	- Address Bit 2(READ/WRITE)
Pin 12	A0	- Address Bit 0 (Data Input)
Pin 13	DQ0	- I/O ₀ (Data Output)
Pin 16	GND	- Ground
Pin 22	CE	- Conditioned Chip Enable
Pin 24	OE	- Output Enable
Pin 32	V_{CC}	- Power Supply Input

All pins pass through to the socket except 22.

DESCRIPTION

The DS1216F SmartWatch/ROM is a 32-pin, 600-mil wide DIP socket with a built-in CMOS timekeeper and an embedded lithium energy source to maintain time and date. It accepts any 32-pin bytewide ROM or volatile RAM. A key feature of the SmartWatch is that the timekeeping function remains transparent to the memory device placed above. The SmartWatch monitors V_{CC} for an out-of-tolerance condition. When such a condition occurs, an internal lithium energy source automatically switches on to prevent loss of time and calendar data.

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Using the SmartWatch saves PC board space since the combination of SmartWatch and the mated memory device takes up no more area than the memory alone. The SmartWatch uses pins 1, 10, 12, 13, 22, and 24 for timekeeper control. All pins pass through to the socket receptacle except for pin 22 ($\overline{\text{CE}}$), which is inhibited during the transfer of time information.

See the DS1216E SmartWatch/ROM/64/256K data sheet for technical details.

DS1216F SMARTWATCH

