

T-5233-90

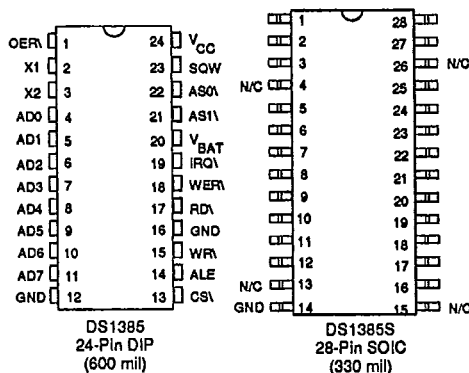
DALLAS
SEMICONDUCTOR**DS1385**
RAMified Real Time Chip
4K x 8**FEATURES**

- Drop-in replacement for IBM AT computer clock/calendar
- Counts seconds, minutes, hours, day of the week, date, month, and year with leap year compensation
- Binary or BCD representations of time, calendar, and alarm
- 12- or 24-hour clock with AM and PM in 12-hour mode
- Daylight Savings Time option
- Multiplex bus for pin efficiency
- Interfaced with software as 64 RAM locations plus 4K x 8 of static RAM
 - 14 bytes of clock and control registers
 - 50 bytes of general purpose RAM
 - Separate 4K x 8 SRAM accessible by using RAM control pins
- Programmable square wave output signal
- Bus-compatible interrupt signals (IRQ\)
- Three interrupts are separately software-maskable and testable:
 - Time-of-day alarm once/second to once/day
 - Periodic rates from 122 us to 500 ms
 - End-of-clock update cycle
- Real time chip compatible with DS1285 Real Time Chip

DESCRIPTION

The main elements of the DS1385 RAMified Real Time Chip are the real time clock (RTC) and a 4K X 8 static RAM (SRAM) with interface latches (see Figure 1).

For PIN descriptions for X₁, X₂, crystal spec, and battery see DS1202 Serial Timekeeper Chip data sheet.

PIN DESCRIPTION**PIN NAMES(\ Denotes Condition Low)**

SIGNAL	DESCRIPTION
OER\	RAM Output Enable
X1	32.768 KHz Crystal
X2	Connection
AD0-AD7	Multiplexed Address/Data Bus
GND	Ground
CS\	RTC Chip Select
ALE	RTC Address Strobe
WR\	RTC Write Strobe
GND	Ground, Battery
RD\	RTC Data Strobe
WER\	RAM Write Enable
IRQ\	Interrupt Request Output
V _{BAT}	Battery
AS1\	RAM Address Strobe
AS0\	RAM Address Strobe
SQW	Square Wave Output
V _{CC}	+5 Volt Supply
N/C	No Connect

See the DS1387 RAMified Real Time Clock data sheet for description and specifications.

DS1385 BLOCK DIAGRAM Figure 1

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