


Real Time Clock Multiplexed 114byte Clock/Calendar/Alarm 24-Pin PDIP W

Manufacturer:	Maxim Integrated
Package/Case:	DIP24
Product Type:	Clock & Timer ICs
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The DS12885, DS12887, and DS12C887 real-time clocks (RTCs) are designed to be direct replacements for the DS1285 and DS1287. The devices provide a real-time clock/calendar, one time-of-day alarm, three maskable interrupts with a common interrupt output, a programmable square wave, and 114 bytes of battery-backed static RAM (113 bytes in the DS12C887 and DS12C887A). The DS12887 integrates a quartz crystal and lithium energy source into a 24-pin encapsulated DIP package. The DS12C887 adds a century byte at address 32h. For all devices, the date at the end of the month is automatically adjusted for months with fewer than 31 days, including correction for leap years. The devices also operate in either 24-hour or 12-hour format with an AM/PM indicator. A precision temperature-compensated circuit monitors the status of VCC. If a primary power failure is detected, the device automatically switches to a backup supply. A lithium coin-cell battery can be connected to the VBAT input pin on the DS12885 to maintain time and date operation when primary power is absent. The device is accessed through a multiplexed byte-wide interface, which supports both Intel and Motorola modes.

Key Features

- Supply voltage range is 4.5V to 5.5V
- Operating temperature range from 0°C to 70°C & periodic rates from 122µs to 500ms
- Drop-in replacement for IBM AT computer clock/calendar, 14 bytes of clock and control registers
- Counts seconds, minutes, hours, day, date, month and year with leap year compensation through 2099
- Binary or BCD time representation, daylight saving time option & end of clock update cycle flag
- Selectable intel or motorola bus timing, interfaced with software as 128 RAM locations
- Time of day alarm once per second to once per day, RAM clear function
- Programmable square-wave output
- UL recognized

Application

- Embedded Systems
- Network Hubs, Bridges, and Routers
- Security Systems
- Utility Meters

Recommended For You

DS1023-500

Maxim Integrated

SOP16

DS1243Y-120+

Maxim Integrated

DIP

DS1374U-33+

Maxim Integrated

MSOP10

DS1023S-50+

Maxim Integrated

SOIC16

DS12887+

Maxim Integrated

DIP

DS1308U-33+T

Maxim Integrated

MSOP8

DS1337S+

Maxim Integrated

SOP8

DS1023S-50

Maxim Integrated

SOP16

DS1746-70+

Maxim Integrated

DIP

DS1338C-33#

Maxim Integrated

SOP16

DS1558Y+

Maxim Integrated

48-LQFP

DS1000-25

Maxim Integrated

DIP-14

DS1375T+T&R

Maxim Integrated

TDFN-6

DS1306E+T&R

Maxim Integrated

TSSOP

DS1000K-100

Maxim Integrated

DIP