

DALLAS SEMICONDUCTOR

DS1330YLPM/ABLPM 256K Nonvolatile SRAM with Power Monitors

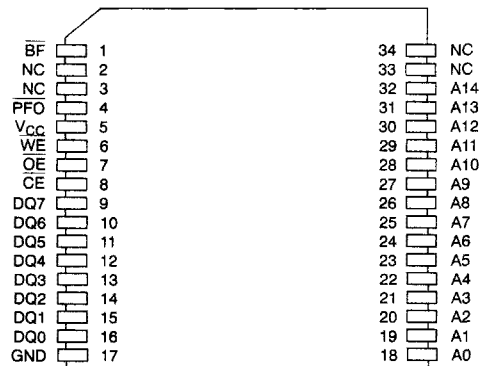
FEATURES

- Data retention in the absence of V_{CC}
- Data is automatically protected during power loss
- Replaces 32K x 8 volatile static RAM or EEPROM
- Unlimited write cycles
- Low-power CMOS operation
- Over 10 years of data retention
- Available in 70 and 100 ns access time
- Read cycle time equals write cycle time
- Full $\pm 10\%$ operating range (DS1330YLPM)
- Optional $\pm 5\%$ operating range (DS1330ABLPM)
- Dedicated power fail output indicates when power supply is out of tolerance to memory (i.e., memory has already been write protected)
- Dedicated battery fail output indicates when the internal backup lithium source is at the end of its life and the module should be replaced
- Low profile socketable module fits into standard 68-pin PLCC surface mountable sockets

DESCRIPTION

The DS1330YLPM/ABLPM 256K Nonvolatile SRAM is a 262,144-bit, fully static, nonvolatile SRAM organized as 32,768 words by 8 bits. The DS1330YLPM/ABLPM has a self-contained lithium energy source and control circuitry which constantly monitors V_{CC} for an out-of-tolerance condition. When such a condition occurs, the lithium energy source is automatically switched on and write protection is unconditionally enabled to prevent garbled data. The nonvolatile static RAM can be used in

PIN ASSIGNMENT



34-Pin Low Profile Module (LPM)

PIN DESCRIPTION

A0–A14	– Address Inputs
CE	– Chip Enable
GND	– Ground
DQ0–DQ7	– Data In/Data Out
V_{CC}	– +5 Volts
WE	– Write Enable
OE	– Output Enable
PFO	– Power Fail Output
BF	– Battery Fail Output
NC	– No Connect

place of a 32K x 8 SRAM. Additionally, the DS1330YLPM/ABLPM offers dedicated outputs for monitoring the status of V_{CC} and the status of the internal lithium source. There is no limit on the number of write cycles which can be executed and no additional support circuitry is required for a microprocessor interface. The DS1330YLPM/ABLPM is a low profile module that fits into a standard 68-pin PLCC surface mountable socket.