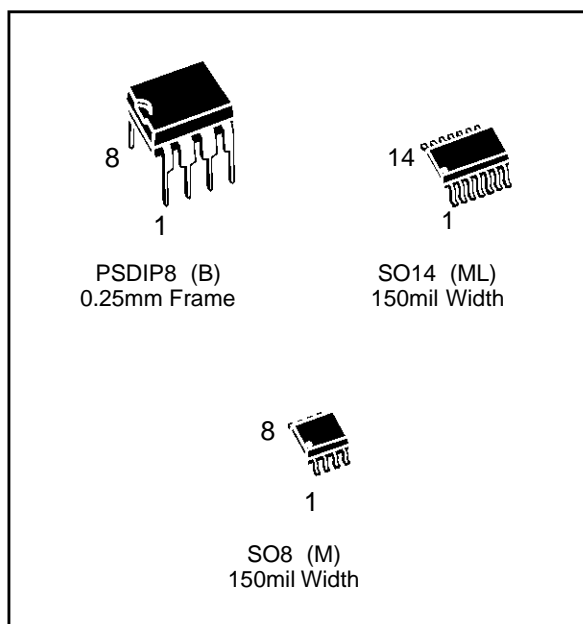


## SERIAL 16K (2K x 8) EEPROM

### DATA BRIEFING

- 1 MILLION ERASE/WRITE CYCLES, with 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE:
  - 4.5V to 5.5V for ST24x16 versions
  - 2.5V to 5.5V for ST25x16 versions
- HARDWARE WRITE CONTROL VERSIONS: ST24W16 and ST25W16
- TWO WIRE SERIAL INTERFACE, FULLY I<sup>2</sup>C BUS COMPATIBLE
- BYTE and MULTIBYTE WRITE (up to 8 BYTES) for the ST24C16
- PAGE WRITE (up to 16 BYTES)
- BYTE, RANDOM and SEQUENTIAL READ MODES
- SELF TIMED PROGRAMING CYCLE
- AUTOMATIC ADDRESS INCREMENTING
- ENHANCED ESD/LATCH UP PERFORMANCES

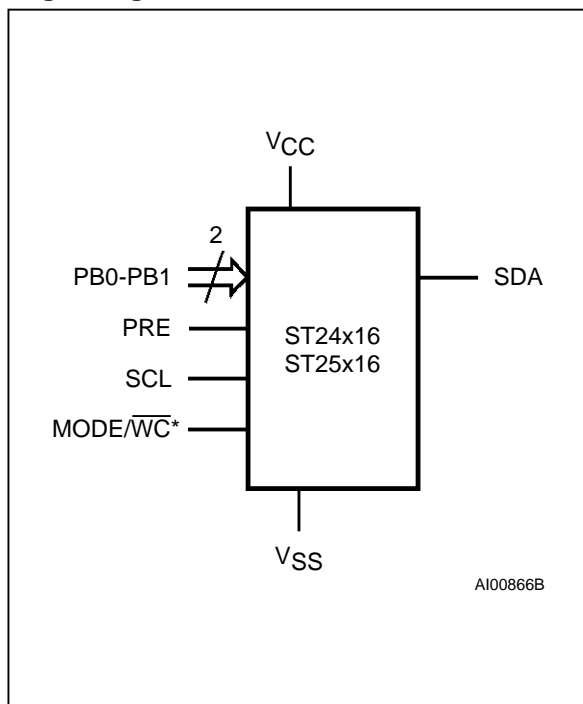


### DESCRIPTION

This specification covers a range of 16K bits I<sup>2</sup>C bus EEPROM products, the ST24/25C16 and the ST24/25W16. In the text, products are referred to as ST24/25x16 where "x" is: "C" for Standard version and "W" for hardware Write Control version.

The ST24/25x16 are 16K bit electrically erasable programmable memories (EEPROM), organized as 8 blocks of 256 x 8 bits. These are manufactured in SGS-THOMSON's Hi-Endurance Advanced CMOS technology which guarantees an endurance of one million erase/write cycles with a data retention of 40 years. The ST25x16 operates with a power supply value as low as 2.5V. Both Plastic Dual-in-Line and Plastic Small Outline packages are available.

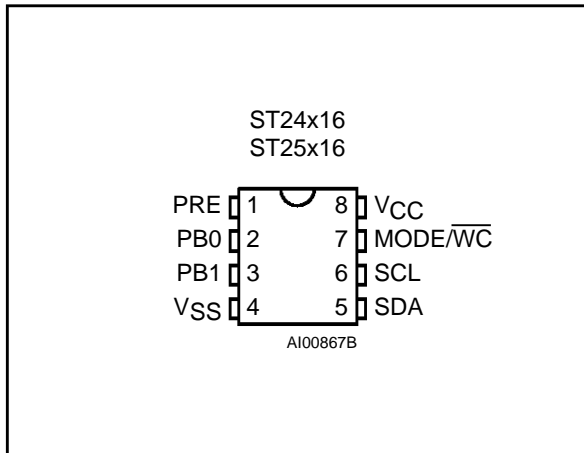
### Logic Diagram



Note:  $\overline{WC}$  signal is only available for ST24/25W16 products.

# ST24/25C16, ST24/25W16

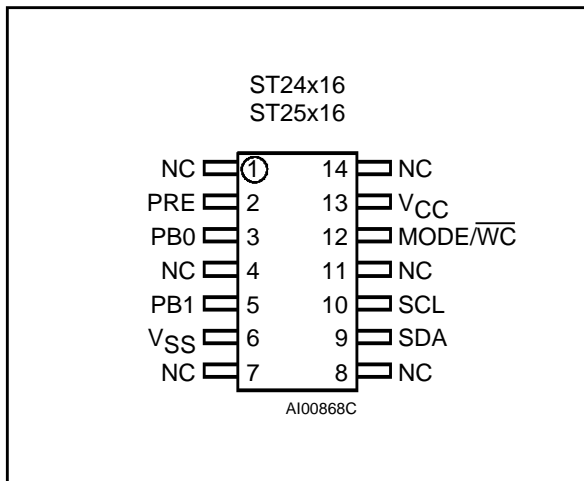
## DIP Pin Connections



## Signal Names

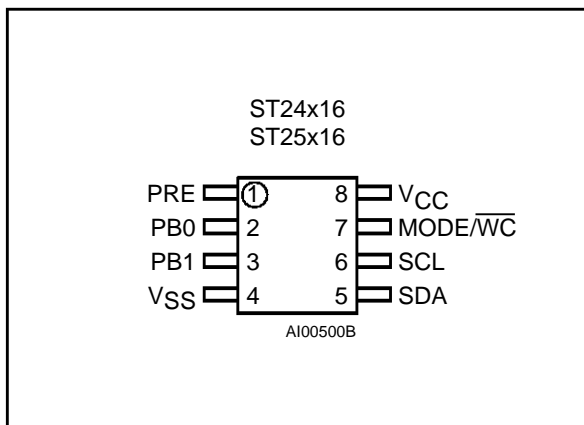
PRE	Write Protect Enable
PB0, PB1	Protect Block Select
SDA	Serial Data Address Input/Output
SCL	Serial Clock
MODE	Multybyte/Page Write Mode (C version)
$\overline{WC}$	Write Control (W version)
V <sub>CC</sub>	Supply Voltage
V <sub>SS</sub>	Ground

## SO14 Pin Connections



Warning: NC = Not Connected.

## SO8 Pin Connections



## Ordering Information Scheme

For a list of available options refer to the current Memory Shortform catalogue.

For further information on any aspect of this device, please contact the SGS-THOMSON Sales Office nearest to you.

Example: ST24C16 M 1 TR

### Operating Voltage

- 24 3V to 5.5V
- 25 2.5V to 5.5V

### Range

- C Standard
- W Hardware Write Control

### Package

- B PSDIP8  
0.25mm Frame
- M SO8  
150mil Width
- ML SO14  
150mil Width

### Temp. Range

- 1 0 to 70 °C
- 6 -40 to 85 °C
- 3 -40 to 125 °C

### Option

- TR Tape & Reel Packing