

## SERIAL 8K (1K x 8) EEPROM

### DATA BRIEFING

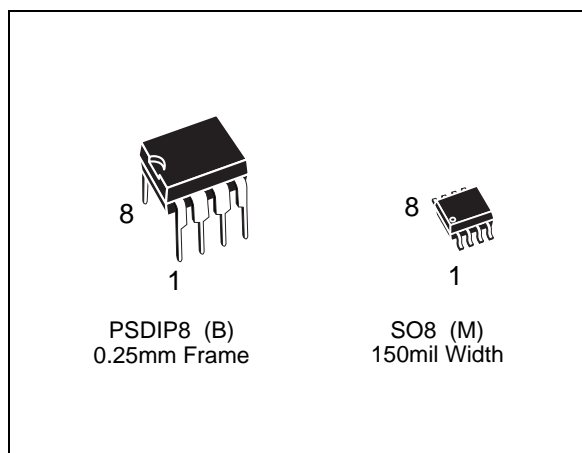
- 1 MILLION ERASE/WRITE CYCLES with 40 YEARS DATA RETENTION
- SINGLE SUPPLY VOLTAGE:
  - 3V to 5.5V for ST24x08 versions
  - 2.5V to 5.5V for ST25x08 versions
  - 1.8V to 5.5V for ST24C08R version only
- HARDWARE WRITE CONTROL VERSIONS: ST24W08 and ST25W08
- PROGRAMMABLE WRITE PROTECTION
- TWO WIRE SERIAL INTERFACE, FULLY I<sup>2</sup>C BUS COMPATIBLE
- BYTE and MULTIBYTE WRITE (up to 8 BYTES)
- PAGE WRITE (up to 16 BYTES)
- BYTE, RANDOM and SEQUENTIAL READ MODES
- SELF TIMED PROGRAMMING CYCLE
- AUTOMATIC ADDRESS INCREMENTING
- ENHANCED ESD/LATCH UP PERFORMANCES

### DESCRIPTION

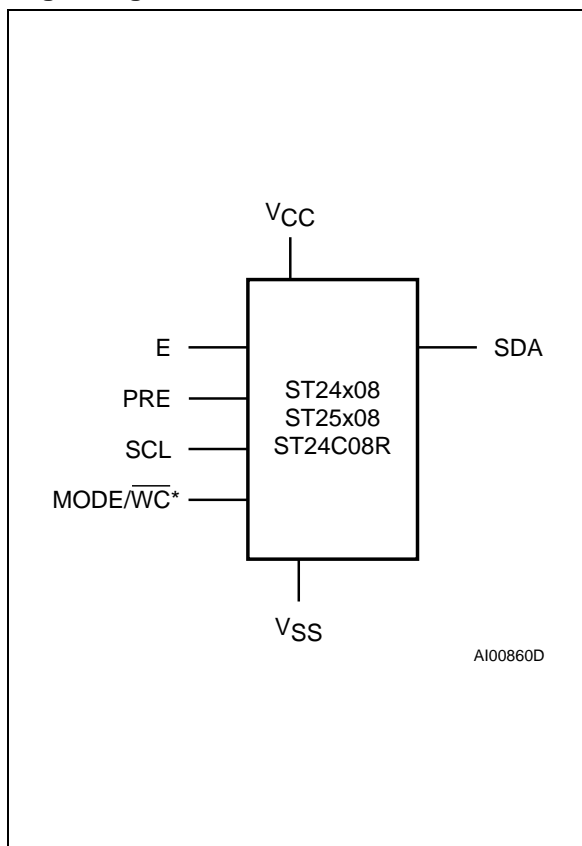
This specification covers a range of 8K bits I<sup>2</sup>C bus EEPROM products, the ST24/25C08, the ST24C08R and the ST24/25W08. In the text, products are referred to as ST24/25x08, where "x" is: "C" for Standard version and "W" for Hardware Write Control version.

The ST24/25x08 are 8K bit electrically erasable programmable memories (EEPROM), organized as 4 blocks of 256 x 8 bits. They 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 memories operate with a power supply value as low as 1.8V for the ST24C08R only.

Both Plastic Dual-in-Line and Plastic Small Outline packages are available.



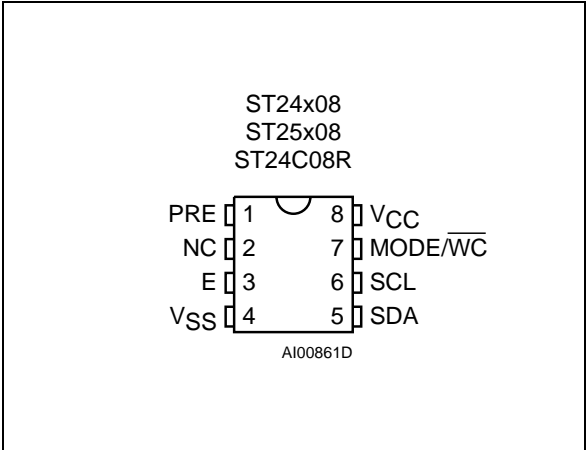
### Logic Diagram



**Note:** WC signal is only available for ST24/25W08 products.

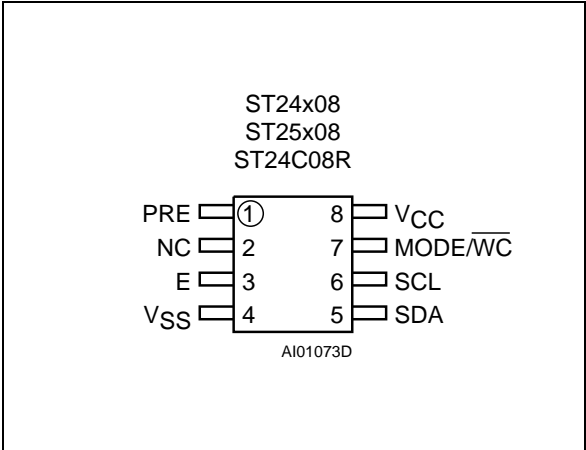
ST24/25C08, ST24C08R, ST24/25W08

DIP Pin Connections



Warning: NC = Not Connected.

SO Pin Connections



Warning: NC = Not Connected.

Signal Names

PRE	Write Protect Enable
E	Chip Enable Input
SDA	Serial Data Address Input/Output
SCL	Serial Clock
MODE	Multibyte/Page Write Mode (C version)
WC	Write Control (W version)
Vcc	Supply Voltage
Vss	Ground

Ordering Information Scheme

For a list of available options or for further information on any aspect of this device, please contact the SGS-THOMSON Sales Office nearest to you.

Example: ST24C08 M 1 TR

Operating Voltage	Range
24C08 3V to 5.5V	Standard
24W08 3V to 5.5V	HW Write Control
25C08 2.5V to 5.5V	Standard
25W08 2.5V to 5.5V	HW Write Control
24C08R 1.8V to 5.5V	Standard

Package
B PSDIP8 0.25mm Frame
M SO8 150mil Width

Temp. Range
1 0 to 70 °C
5 <sup>(1)</sup> -20 to 85 °C
6 -40 to 85 °C
3 <sup>(2)</sup> -40 to 125 °C

Option
TR Tape & Reel Packing

Notes: 1. Temperature range on special request only.  
2. Temperature range for ST24C08R only.

Devices are shipped from the factory with the memory content set at all "1's" (FFh).