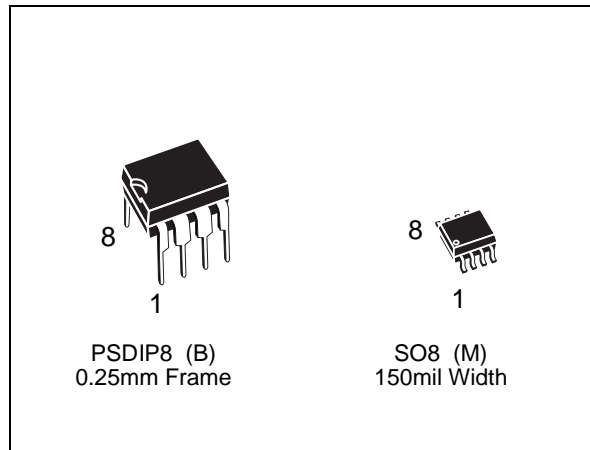




1Kb (x8) DUAL MODE SERIAL EEPROM
for VESA PLUG & PLAY

DATA BRIEFING

- 1 MILLION ERASE/WRITE CYCLES
- 40 YEARS DATA RETENTION
- 3.6V to 5.5V SINGLE SUPPLY VOLTAGE
- HARDWARE WRITE CONTROL (ST24LW21 and ST24FW21)
- TTL SCHMITT-TRIGGER on VCLK INPUT
- 100k / 400k Hz COMPATIBILITY with the I²C BUS BIT TRANSFER RANGE
- TWO WIRE SERIAL INTERFACE I²C BUS COMPATIBLE
- I²C PAGE WRITE (up to 8 Bytes)
- I²C BYTE, RANDOM and SEQUENTIAL READ MODES
- SELF TIMED PROGRAMMING CYCLE
- AUTOMATIC ADDRESS INCREMENTING
- ENHANCED ESD/LATCH UP PERFORMANCES
- ERROR RECOVERY MECHANISM (ST24FC21 and ST24FW21) VESA 2 COMPATIBLE



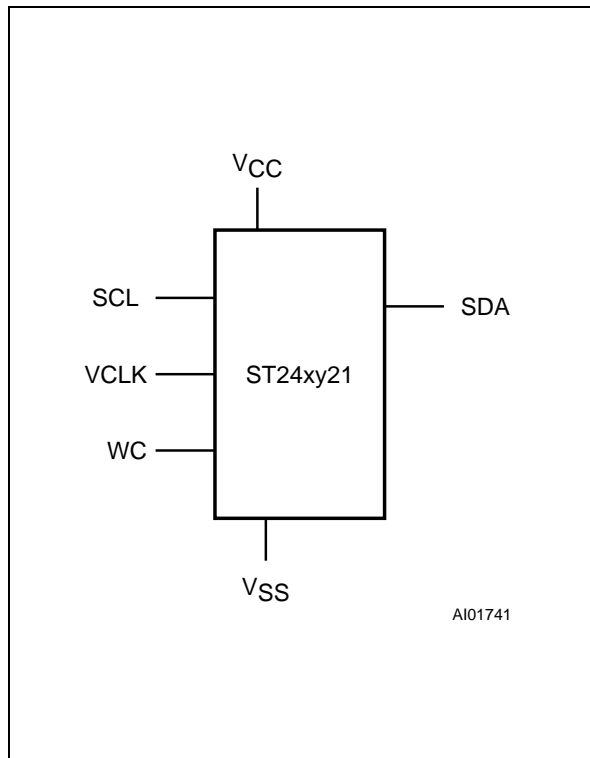
DESCRIPTION

The ST24LC21B, ST24LW21, ST24FC21 and ST24FW21 are 1K bit electrically erasable programmable memory (EEPROM), organized in 128x8 bits. In the text, products are referred as ST24xy21, where "x" is either "L" for VESA 1 or "F" for VESA 2 compatible memories and where "y" indicates the Write Control pin connection: "C" means WC on pin 7 and "W" means WC on pin 3.

Signal Names

| | |
|-----------------|--------------------------------------|
| SDA | Serial Data Address Input/Output |
| SCL | Serial Clock (I ² C mode) |
| V _{CC} | Supply Voltage |
| V _{SS} | Ground |
| VCLK | Clock Transmit only mode |
| WC | Write Control |

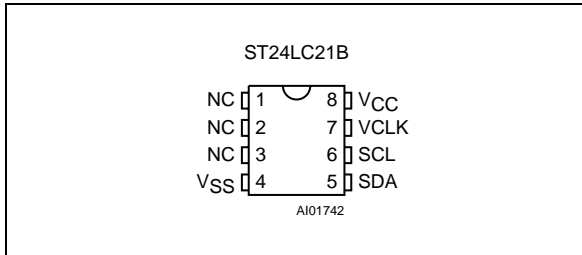
Logic Diagram



Note: WC signal is only available for ST24LW21 and ST24FW21 products.

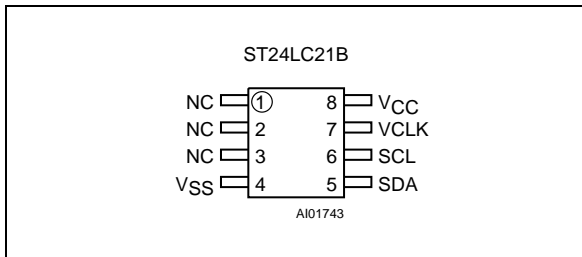
ST24LC21B, ST24LW21, ST24FC21, ST24FW21

DIP Pin Connections



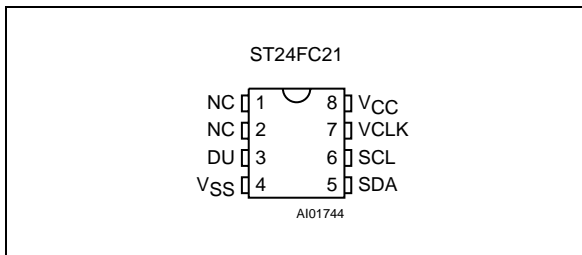
Warning: NC = Not Connected.

SO Pin Connections



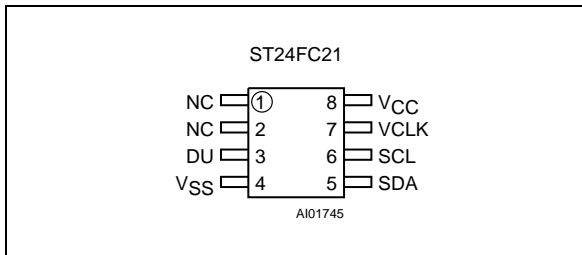
Warning: NC = Not Connected.

DIP Pin Connections



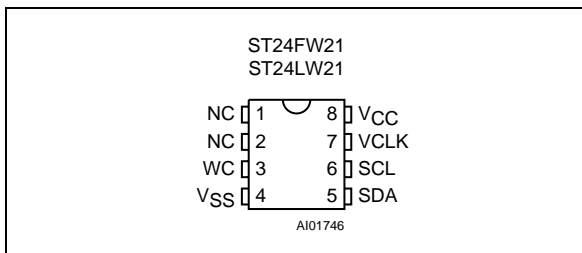
Warning: NC = Not Connected. DU = Don't Use, must be left open or connected to V_{CC} or V_{SS}.

SO Pin Connections



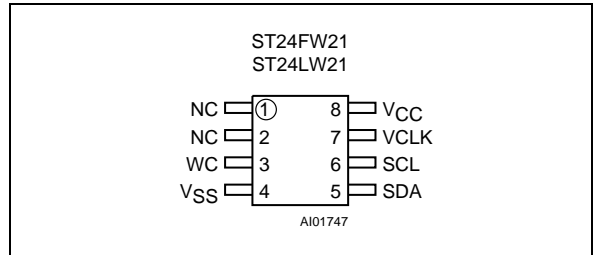
Warning: NC = Not Connected. DU = Don't Use, must be left open or connected to V_{CC} or V_{SS}.

DIP Pin Connections



Warning: NC = Not Connected.

SO Pin Connections



Warning: NC = Not Connected.

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: ST24LC21B M 1 TR

| Family Range | Package | Temp. Range | Option |
|---------------------------------|-----------------------------|----------------|---------------------------|
| ST24LC21B VESA 1 WC on pin 7 | B PSDIP8 0.25mm Frame | 1 0 to 70 °C | TR Tape & Reel Packing |
| ST24LW21 VESA 1 WC on pin 3 | M SO8 150mil Width | 6 -40 to 85 °C | |
| ST24FC21 VESA 2 WC on pin 7 | | | |
| ST24FW21 VESA 2 WC on pin 3 | | | |

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