The world’s first Automotive-Qualified 4Mbit SPI EEPROM

M95M04-A125
M95M04-A145

STMicroelectronics - June 2021
EEPROMs make Applications Smarter

Flexible for parameter update

Adapts easily with scalability in package and densities

High endurance Cycling - Retention

Reliable device suited for 0 defect approach

High quality
Flexible parameter management
4Mbit Automotive EEPROM

- 512 Kbytes with embedded Error Correction Code (ECC)
- 1024 pages of 512 bytes
- Additional IDentification Lockable page
- Page write time 4ms
- 1 Million E/W cycles
- 50 years data retention
- SPI bus 10MHz
- Vcc 2.9 to 5.5V

AEC-Q100 Grade 1 (125°C)  SO8N & TSSOP
AEC-Q100 Grade 0 (145°C)  TSSOP
Safer Data

Store safe your most sensitive data

Additional Lockable page of 512 bytes
- Delivered with 3 ID bytes for software identification
- Access with specific instruction set
- Lockable in read only mode at anytime
Flexible data management

SPI 10MHz speed clock
- Sequential read of 512Kbytes (4Mbit) in less than 0.5 sec

Fast 512 bytes page write
- Full memory write 512Kbytes (4Mbit) in less than 5 sec.

Store 512 bytes in 1 single instruction
- Fast event recording of 512bytes in less than 4ms
High endurance

Monitoring and datalog function

1 Million cycles per byte at 25°C
- 1 Cycle/min for active mission profile of 18000h

100 Million cycles per device
- 1 Cycle/sec. for active mission profile of 18000h
- Cycled data must be evenly distributed over 65 different locations*

*1 cycle/sec during 18000h are 64.8 Million cycles. To respect the 1 Million cycles per byte, total cycling must be distributed over 65 different locations.
Low power consumption

Less than 1mA operating current

**Write mode**
- At 3.3V, average 0.75mA current consumption during 4ms
- Only 10µJ energy budget for write instruction

**Read mode**
- At 3.3V, average 0.65mA current consumption at 10Mhz
- Only 1µJ energy budget for reading 512 bytes
Automotive Serial EEPROM

SO8N  M95M04-DWMN3TP/V
TSSOP  M95M04-DWDW3TP/V
TSSOP  M95M04-DWDW4TP/V

4Mbit 125°C / 4Mbit 145°C

Apply for samples at st.com
Serial EEPROM - make it easy

ST EEPROM Finder app

*Select & order the right EEPROM for your design*

X-Nucleo-EEPRMA2

*Plug-in shield*

*Prototype and validate*
New 4Mbit for a Safer and Greener Trip

ST EEPROM service

- IBIS and Verilog models
- Easy Buy-on-Line & through our Distributors
- ROHS and Halogen-free package
- Long term commitment
Thank you