

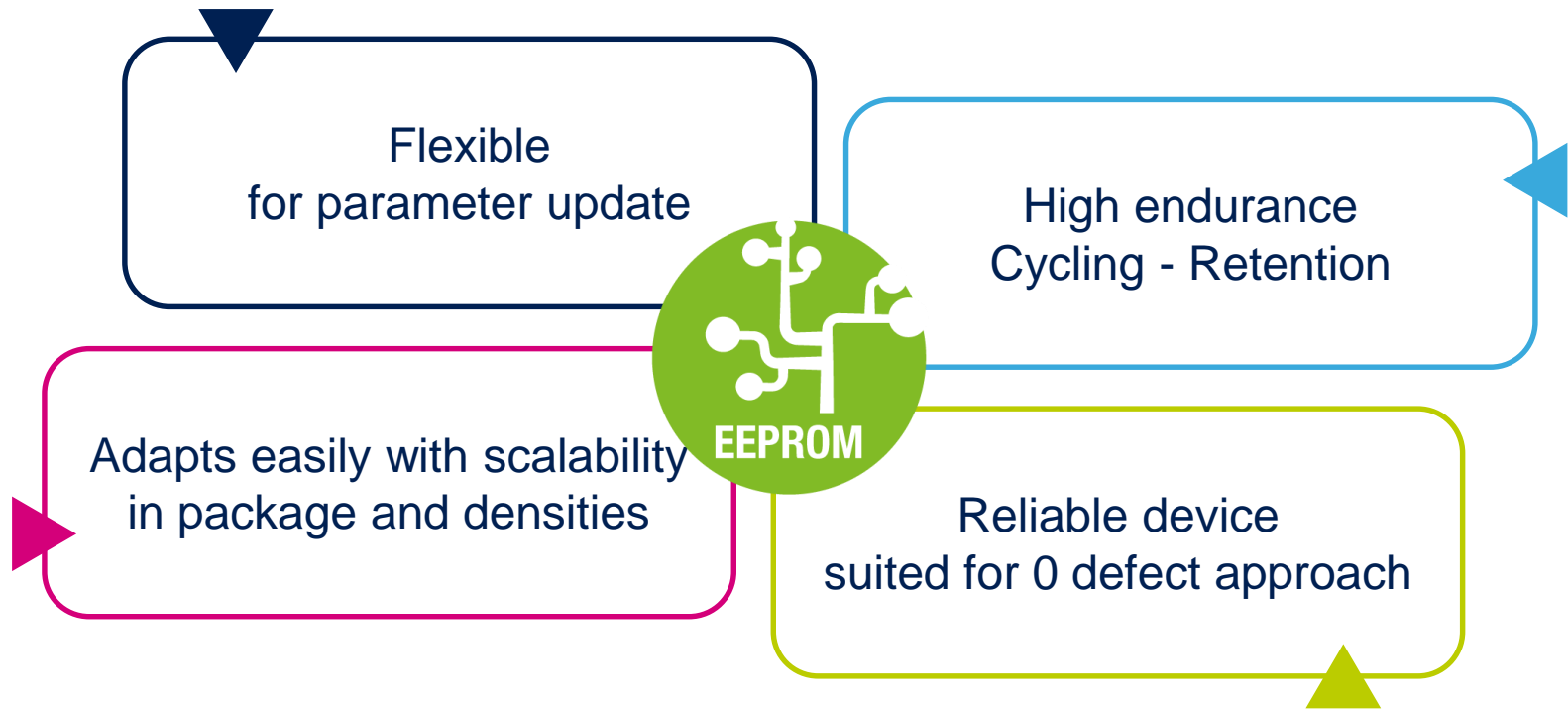


World's First Automotive-Qualified 2Mbit SPI EEPROM

M95M02-A125



EEPROMs make Applications Smarter



**High quality and Flexible parameter
management**

2Mbit EEPROM memory in SO8N

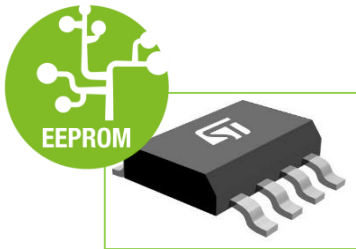
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Storage



More parameters make your application smarter

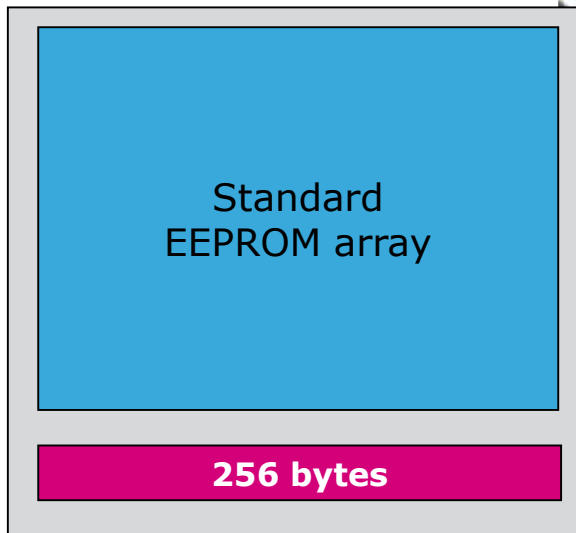
- 2Mbit reliable memory array
 - 256 Kbytes with embedded Error Correction Code (ECC)
 - Additional IDentification Lockable page
 - Page size of 256 bytes
 - Page Programing time 5ms
 - SPI bus 10MHz at 5V
 - More than 100 years retention



- SO8N package
 - RoHs and Leadfree compliant
 - AEC-Q100 Grade1 qualified (-40°C to +125°C)



Safer data



- **Additional Lockable page of 256 bytes**
 - Delivered with 3 ID bytes for software identification
 - Access with specific instruction set
 - Store your most sensitive data
 - Lockable in read only mode at anytime



Fast parameter loading

SPI bus: robust 4 wires interface with Fast Clock

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- 10MHz at 105°C and 5V Power supply
 - Sequential read of **256Kbytes (2Mbit) in less than 250ms** or 0.25 sec

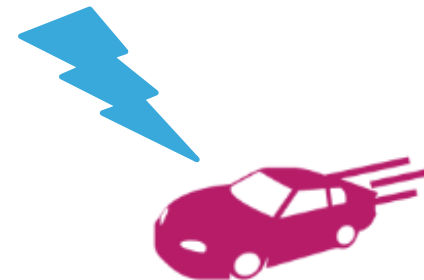
- 5MHz at 125°C, with 5V or 3.3V Power supply
 - Sequential read of **256Kbytes (2Mbit) in less than 500ms** or 0.5 sec
 - Reduced power consumption





Convenient Event Data Recording

- Storage of 256 bytes in 1 single page write instruction
 - Single shot Instruction takes only 210 μ s for 1 full page of 256 data bytes
 - Followed by self-timed programming cycle of 5ms



- **Fast write time: 5ms for 256 bytes**
 - Same for 1 byte or 1 page (256 bytes) in 5ms
 - 256K bytes can be stored in 5 sec.



Monitoring & Datalog

- **Extended byte endurance for easy Monitoring**
 - **20000 hours** at 25°C operation with **1 Cycle/15sec**
→ 4 Million cycles on a single byte
 - **20000 hours** at 85°C operation with **1 Cycle/min.**
→ 1.2 Million cycles on a single byte



- **Over 100 Million cycles per device for Very frequent updates**
 - **20000h** operating with **1 Cycle/sec.** => 72 Million cycles*
 - **Using 1 page 14 parameters could be cycled simultaneously every second**

*Cycles must be distributed over several bytes locations in order to keep byte cycling endurance inside authorized profile. For 72 Million cycles at 25°C, 18 bytes of the same page works.



Low power consumption

Compared to others NVM

- **Less than 2mA in Write mode**
 - Max. 2mA current consumption during write cycle time (Average 1mA)
 - Unexpected Power down: Supply EEPROM from small backup capacitor

- **Less than 1mA in Read mode at 5MHz**
 - Max 5mA at 10Mhz and 3mA at 5Mhz
 - Average 1mA at 5MHz and 600µA at 2MHz



Third parties Programmer for 2 Mbit

- Third Parties for EEPROM Programmers

- **Dediprog** model EE-100
- **Leap** model LP-56
- And you will find on our website other partners :

<http://www.st.com/web/en/support/third-parties-for-eprom-programmers.html>



Dediprog EE-100

New 2Mbit for a Safer and Greener Trip

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● M95M02-A125 : Highest EEPROM size

- Fast parameter loading at power up
- Event recording with large page size
- High endurance, Real time monitoring
- High reliability and quality
- ROHS and Leadfree package

● ST EEPROM service

- IBIS and Verilog models
- EEPROM Programmer partners
- Easy Buy-on-Line through our Distributors

Join us at www.st.com/automotiveEEPROM

Thank you!



ST stands for
life.augmented