Unique ID EEPROM
Track every moment

ST EEPROM

“ If only

I could track every moment and
ensure integrity, without extra components.

This is where we come in

Unique ID EEPROM
Meeting demand for identification

Industrial

Consumer

Medical

Personal electronics

Unique ID EEPROM
Value proposition

Added value

- A pre-programmed Unique Identifier (UID)
- ST guarantee unicity for all ST EEPROM Unique ID
- ST unique ID (128 bits serial number) inserted and locked inside the EEPROM

Benefits

- Allows customers to save test time and optimize infrastructure
- Ensures customer product traceability throughout its life cycle

Unique ID EEPROM
Top 3 applications

1 Identification

- Device recognition
- Counterfeiting detection

Genuine device is used in a system

2 Traceability

- Manufacturing tracking
- Supply chain management

Device reaches intended destination

3 Sustainability

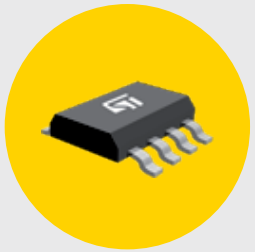
- Recycling and reparability
- Regulatory compliance

Meeting regulatory standards by assigning identifier to each device

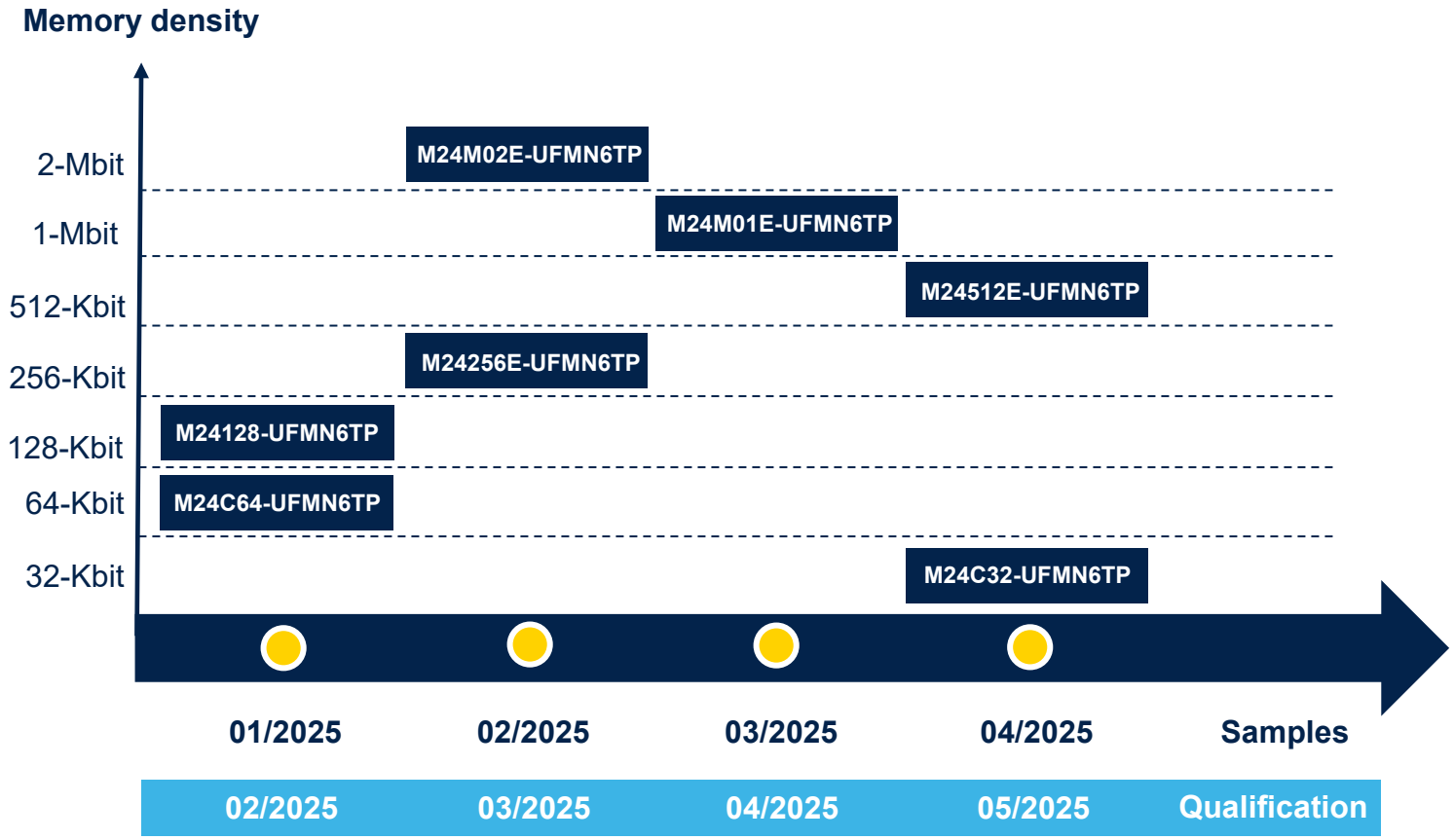
Unique ID EEPROM Portfolio

- Unique ID products are derived from standard M24xxx-x and M24xxxE-F
- ST guarantees the uniqueness of each Unique ID in their EEPROMs

- **Bus protocol**: I²C
- **User memory:** from 32-Kbit to 2-Mbit
- **Voltage range:** 1.7 to 5.5 V
- **Package:** SO8N
- **UID size:** 128 bits



Note: Any other device available upon request



Unique ID EEPROM Format

The UID is made of 16 bytes (128 bits) with the following format

	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8	Byte 9	Byte 10	Byte 11	Byte 12	Byte 13	Byte 14	Byte 15
Label	ST code	Bus protocol	EEPROM density	RFU*	UID											
Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F

The unique factory-programmed serial number (UID) is programmed inside the identification page by STMicroelectronics at its factory.

- Byte 0 contains the STMicroelectronics code.
- Byte 1 contains the bus protocol used.
- Byte 2 contains the EEPROM density.
- Byte 3 customization for *Reserved for Future Usage. Fixed at 0xFF
- Byte 4 to Byte 15 contain the unique serial number randomly generated by ST.

Unique ID EEPROM Use case

- Reparability / sustainability
- Hardware product upgrade

Through modular design and the identification of authorized equipment.

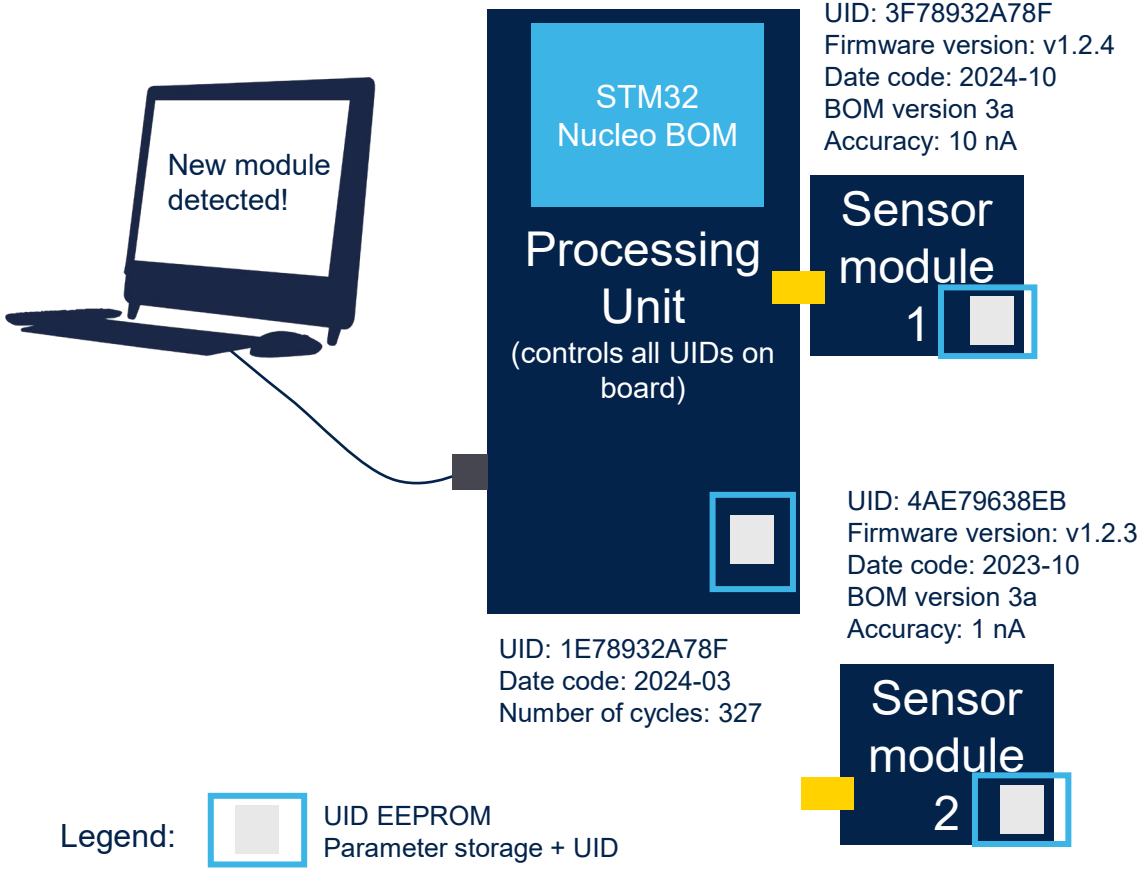
Use case Replace a new module (HW & SW)

- UID registration by processing unit

Processing can check & match database with storage in the module

- Firmware version
- Manufacturing date code
- BOM version
- Functional parameters

Processing unit can adapt its functionality and guarantee by downgrading / upgrading according to the match



EEPROM Unique ID

Key takeaways

128-bit unique factory-programmed serial number **(UID)** with unicity guaranteed by ST

Improved identification and verification to detect counterfeiting and ensure the use of only authorized devices

Improved traceability facilitating tracking and compliance of each device or module throughout its lifecycle

Our technology starts with You

Find out more at www.st.com/EEPROM-UID