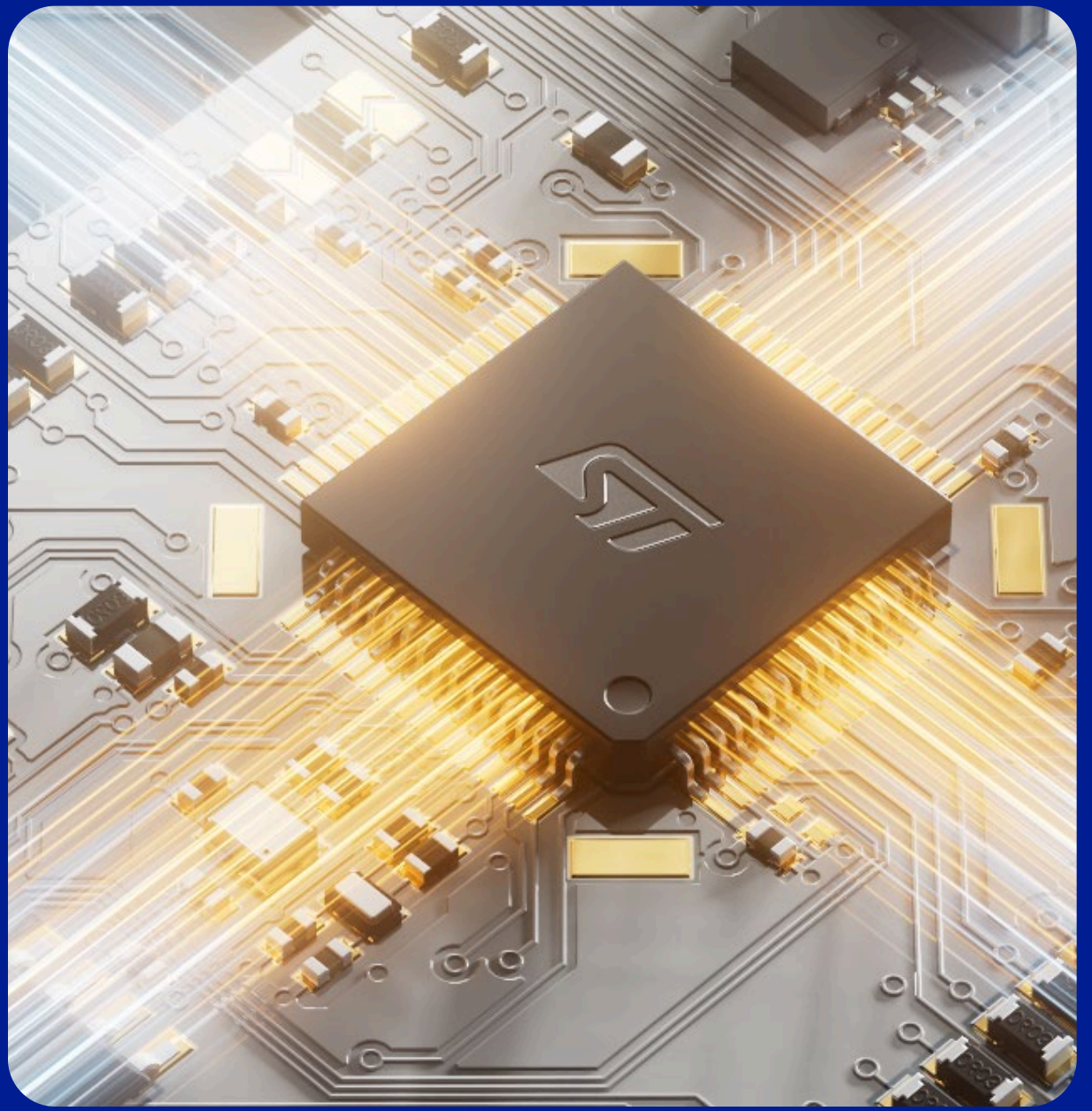
# STM32: pioneering the convergence era

**Remi El-Ouazzane**

President, Microcontrollers, Digital ICs and RF products Group

November 18, 2026



# Our ambition: doubling STM32 revenues between 2025 and 2028

## Agenda

- STM32 business update
- STM32 value proposition
- Entering the convergence era
- Market opportunity and takeaways

# STM32 state of the union
# Market share recovery ahead of schedule

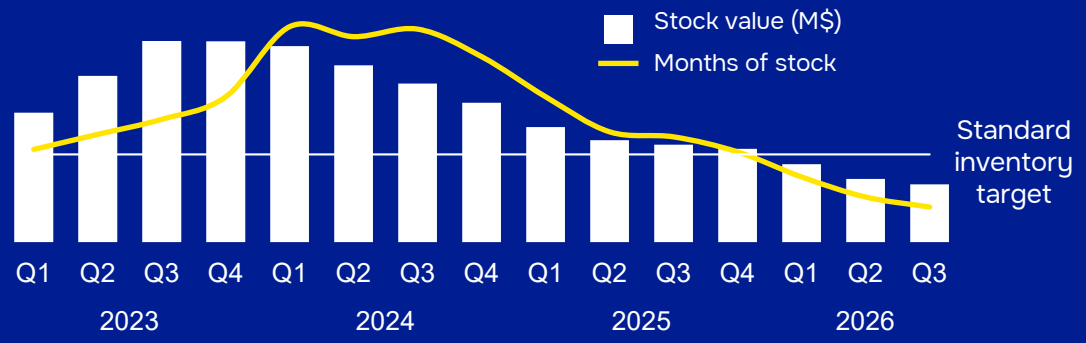
## GP MCU market share

#1 GP MCU 2021–2026



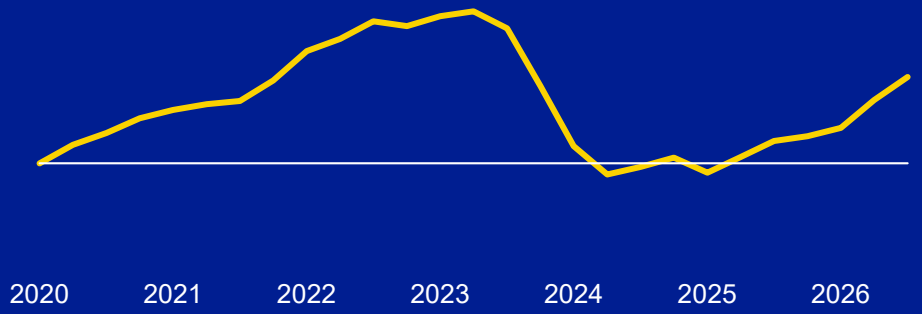

## Distribution inventory

Inventories now below standard targets



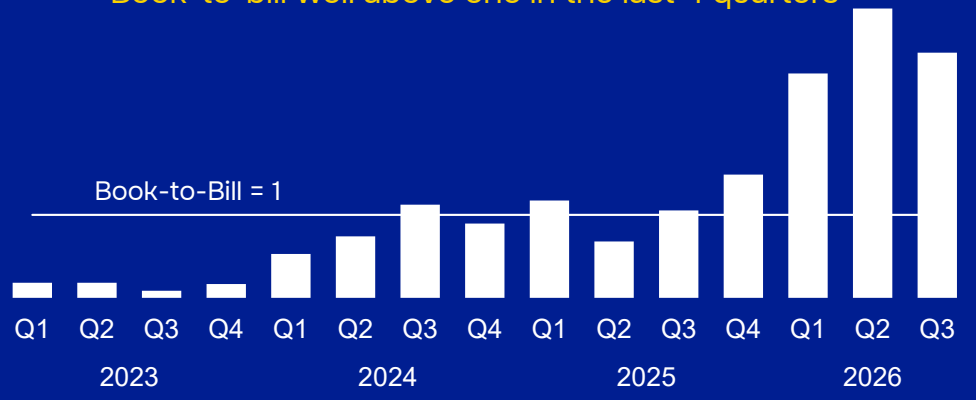

## GP MCU revenue

Q3 2026 still ~25% below Q2 2023 peak




## Book-to-bill

Book-to-bill well above one in the last 4 quarters

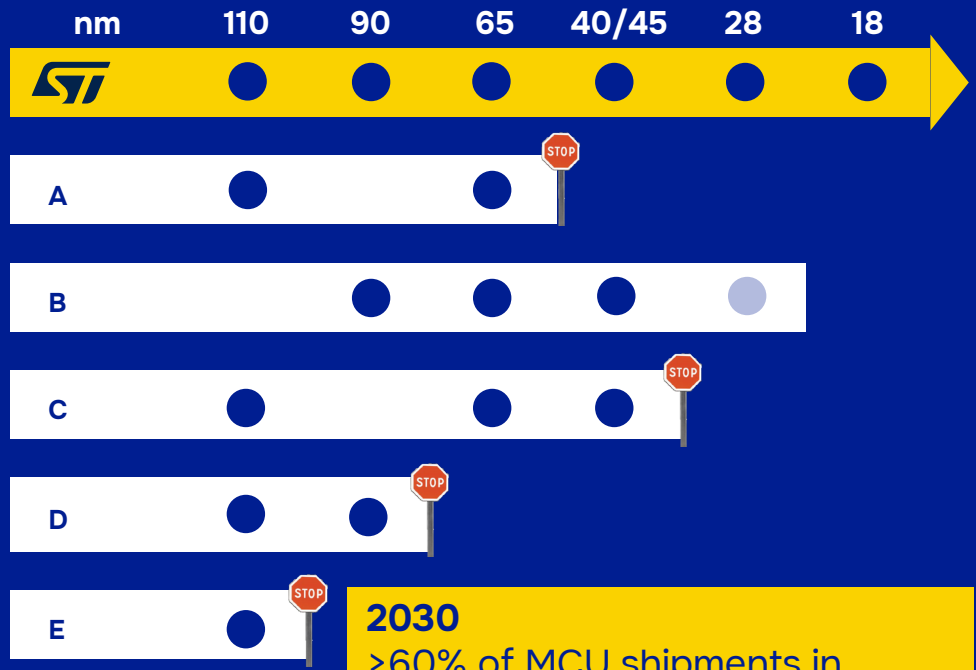


# What's unique about ST in microcontrollers

| MCU key success factors | Why ST |
|---|---|
| Manufacturing capacity, resilience | In-house silicon technology & capacity in Europe, external partners, fully local China supply chain |
| eNVM technology | 40 nm eNVM in production<br>**28 / 18 nm ePCM** ramping |
| Developer productivity → stickiness | Most advanced MCU ecosystem<br>Close to 2 million unique developers |
| AI HW acceleration & SW stack | Most **comprehensive MCU AI full stack** in the industry |
| Security | State-of-the art IP (inc. PQC) for a scalable, future-proof, easy to use MCU **security offering** |
| System-level solutions | Broad **ST product portfolio**: Unified STM32 platform + sensing, analog, power, actuation, etc. |



**eNVM CMOS process in-house technology in production**

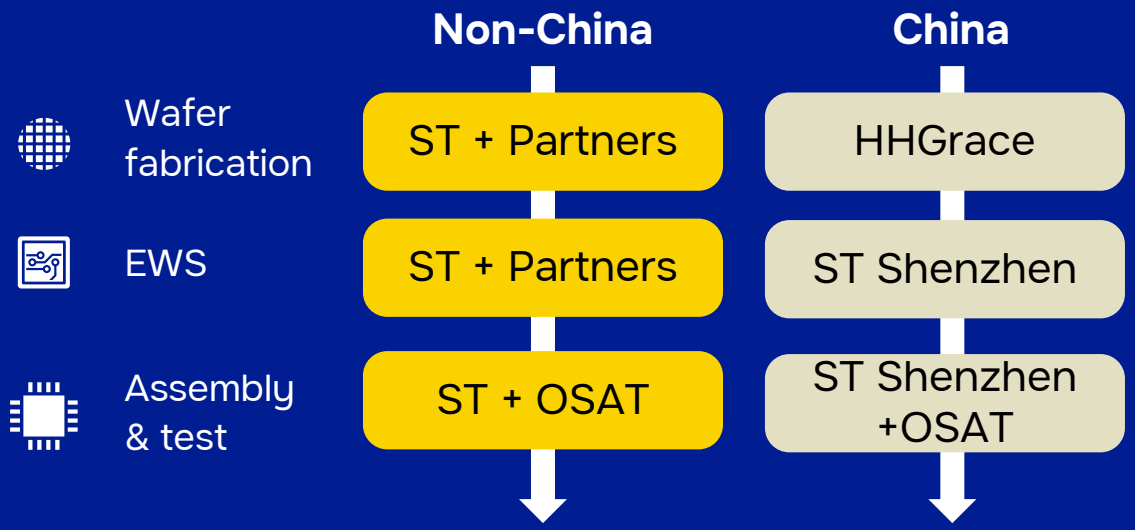



**2030**
>60% of MCU shipments in technologies at 40nm and below
Source: ST estimate

Not yet in production

# STM32 China for China: one product, two supply chains

## ST eNVM 40nm dual-supply chain

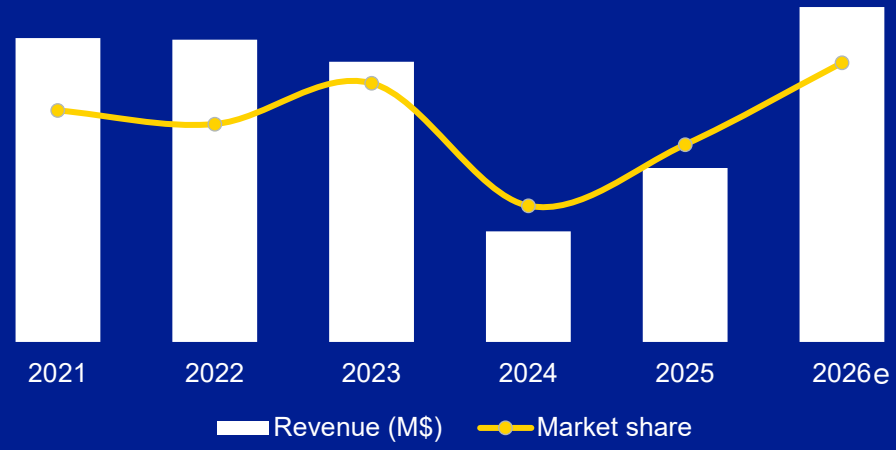



First deliveries of fully made-in-China STM32 in **Q1 26**

**Exact same design / technology** as non-China products

**Gradual extension** to additional STM32 families

## GP MCU revenue & market share in China




ST estimate for market share based on WSTS

**Revenues** now above prior peak

**Improved** market share

Expanding our STM32 market share in China

# The world’s smallest node MCU in production today




# 18 nm

**FD-SOI + embedded PCM**

High performance

Robustness in harsh environments

## STM32V8

Up to 800 MHz Cortex-M85

4 MB embedded non-volatile memory

Dual source (ST Crolles, Samsung Foundry)

## Addressing demanding industrial applications

- Automation & robotics
- Energy management
- Smart cities & buildings
- Aerospace
- Health & biosensing
- Audio
- Transportation

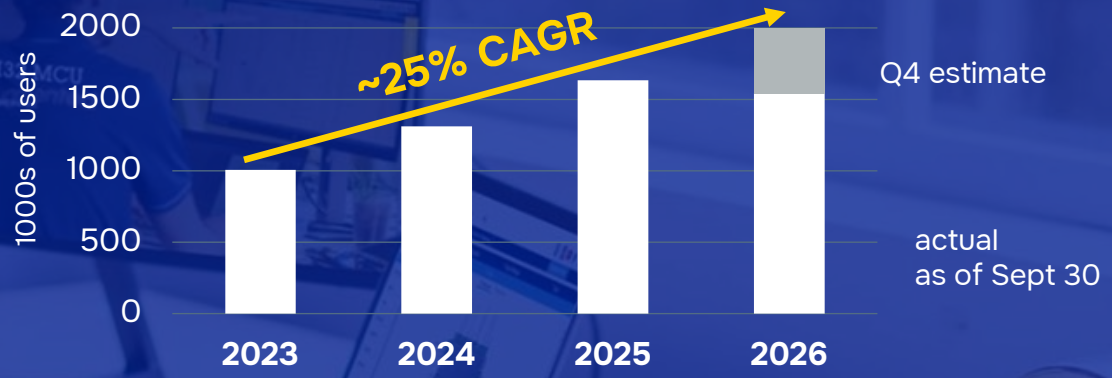
MPU-class processing performance in an MCU

# STM32 Cube: augmented for agentic AI software ecosystem

- Enriched STM32Cube embedded software and tools; augmented for agentic AI increases productivity
- ~14K validated embedded software reference examples tailored for each STM32 feature
- AI-powered support with **STM32 Sidekick**
- STM32 MCUs are the most familiar in developer community*

**~2M active developers**

Unique active users by year



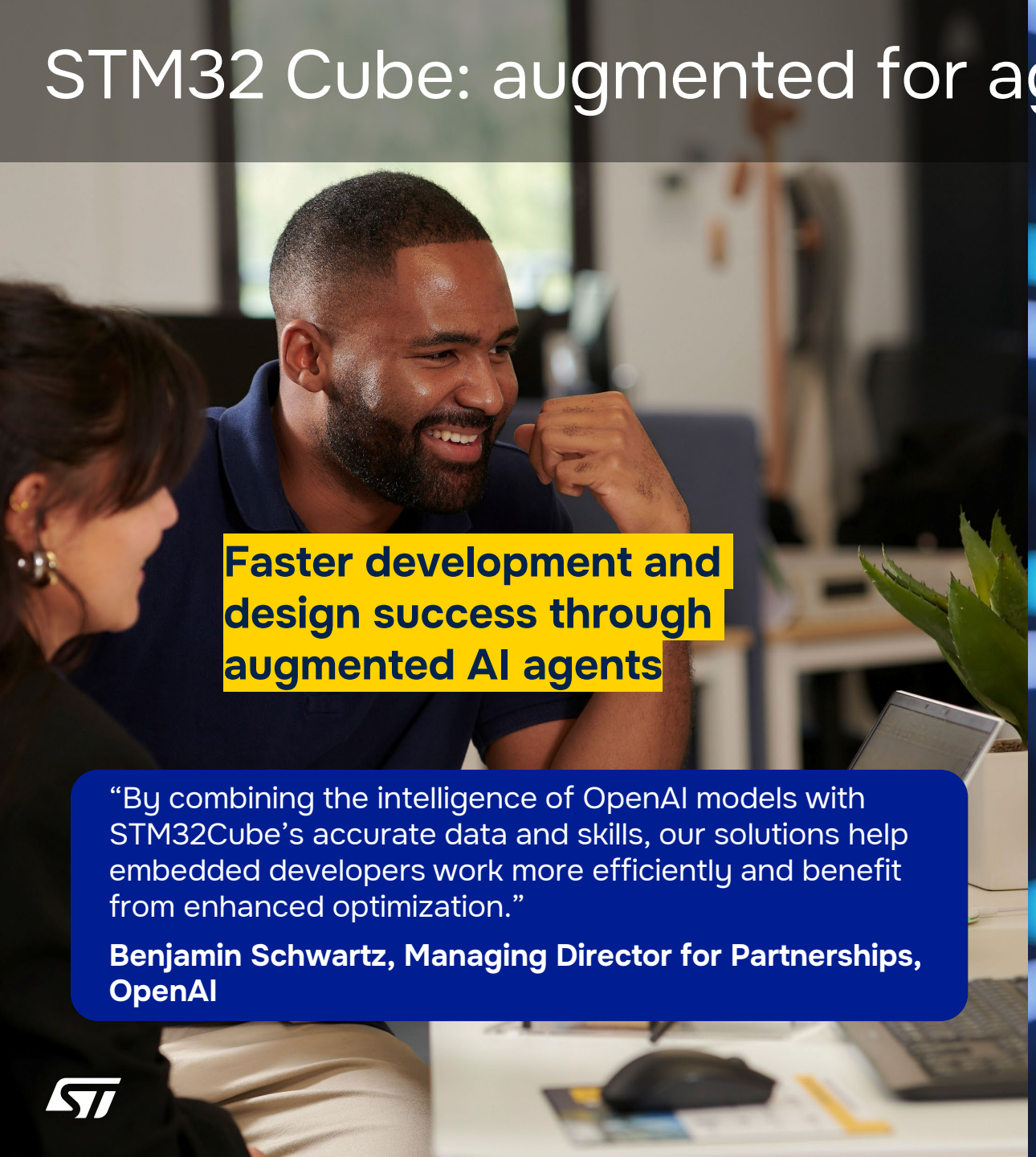

**Most considered 32-bit processors by developers***




The world's largest MCU software ecosystem platform

*Source: 2025 ASPENCORE survey

# STM32 Cube: augmented for agentic AI software ecosystem



**Faster development and design success through augmented AI agents**

"By combining the intelligence of OpenAI models with STM32Cube's accurate data and skills, our solutions help embedded developers work more efficiently and benefit from enhanced optimization."

**Benjamin Schwartz, Managing Director for Partnerships, OpenAI**

- STM32 ecosystem as **single, authoritative source of truth**
- **Skills and MCP servers** to leverage STM32 MCUs differentiators
- Accurate, regularly maintained **STM32 knowledge and resources**
- **STM32 Sidekick,** AI-powered assistant for technical support

# STM32: the gold standard of edge AI microcontroller

## Edge AI solutions are adopted at scale



**37%** CAGR (‘26 –‘31 )* for **TinyML MCUs**

**60%** of **top 100 STM32 customers** using ST Edge AI

*Source: ABI Research 2026

## Most complete edge AI ecosystem offered by ST




| | |
|---|---|
| ST Edge AI Core | STM32CubeAI Studio |
| Model Explorer | Model Factory |
| Dataset Factory | Model Bench |

**Redesigned edge AI tools to** reduce friction

Largest **library of AI models** for MCUs

**400+** +250% vs 2025

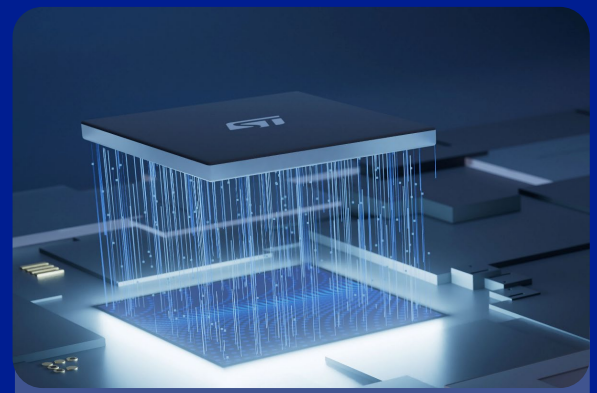
## Usage of our AI tools is surging




**260K** **Active projects** on ST AI tools over 12 months, +150% vs 2025

**25+ industrial partners** with proven edge AI expertise

## AI is enabled across our portfolio



Multiple series embed **Neural-ART AI accelerator** and many more to come

**10K+** **STM32N6 boards** shipped by end 2026

Enabling AI across the portfolio with easy-to-use tools

# The shift to software-defined systems & physical AI is aligning technology foundations



## Domain-specific requirements

- Homologation frameworks & regulations
- Safety & security standards
- Operating environments
- Lifecycle expectations

## Shared underlying technology foundations

- AI
- Safety
- Security
- Sensing
- Connectivity

# One unified STM32 MCU platform

## Three pillars for scalability and faster time to market

### 1. Portfolio consistency and continuity

Arm Cortex-M cores (M33, M55, M85 ...)

STM32 IP: edge AI connectivity, safety, security

### STM32 X Arm

ST is a lead partner in defining the future of Arm Cortex-M core

Benefiting the entire Arm ecosystem for decades to come



You can access the video HERE

# One unified STM32 MCU platform

## Three pillars for scalability and faster time to market

| 1. Portfolio consistency and continuity | 2. A common ecosystem foundation | 3. Shared process technologies |
| --- | --- | --- |
| Arm Cortex-M cores (M33, M55, M85 ...)<br><br>STM32 IP: edge AI connectivity, safety, security | STM32Cube SW ecosystem, incl. ST Edge AI Suite<br><br>The industry reference that continues to expand | 40 nm embedded memory<br><br>18 nm FD-SOI with ePCM<br><br>TSMC eNVM technologies |

# STM32 cross-domain portfolio based on the unified STM32 MCU platform

High-performance MCU



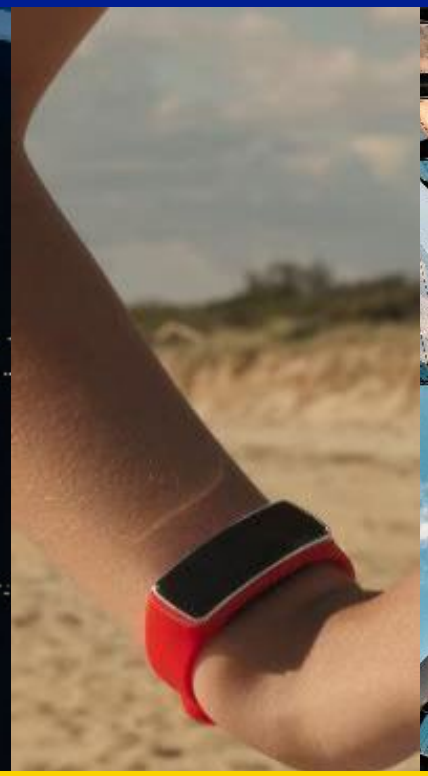
Mainstream MCU



Mixed signal MCU



Ultra-low-power MCU



Wireless MCU



High-safety & automotive MCU




Common ecosystem foundation

# STM32A - bringing STM32 strengths to high-safety & automotive worlds

## Arm cores

**Cortex®-M**
M85, M55, M33

+

## The ST advantage

- 20+ years expertise in industrial and automotive
- A common ecosystem foundation
- Long-standing expertise in edge AI, security, safety
- Proven process technologies

## STM32 cross-domain portfolio

**STM32 general-purpose series**

4,500+ part numbers
100,000+ customers
15 billion units shipped




+

NEW

**STM32A high-safety & automotive series**

Scalable offering
from low-end
to advanced safety MCU



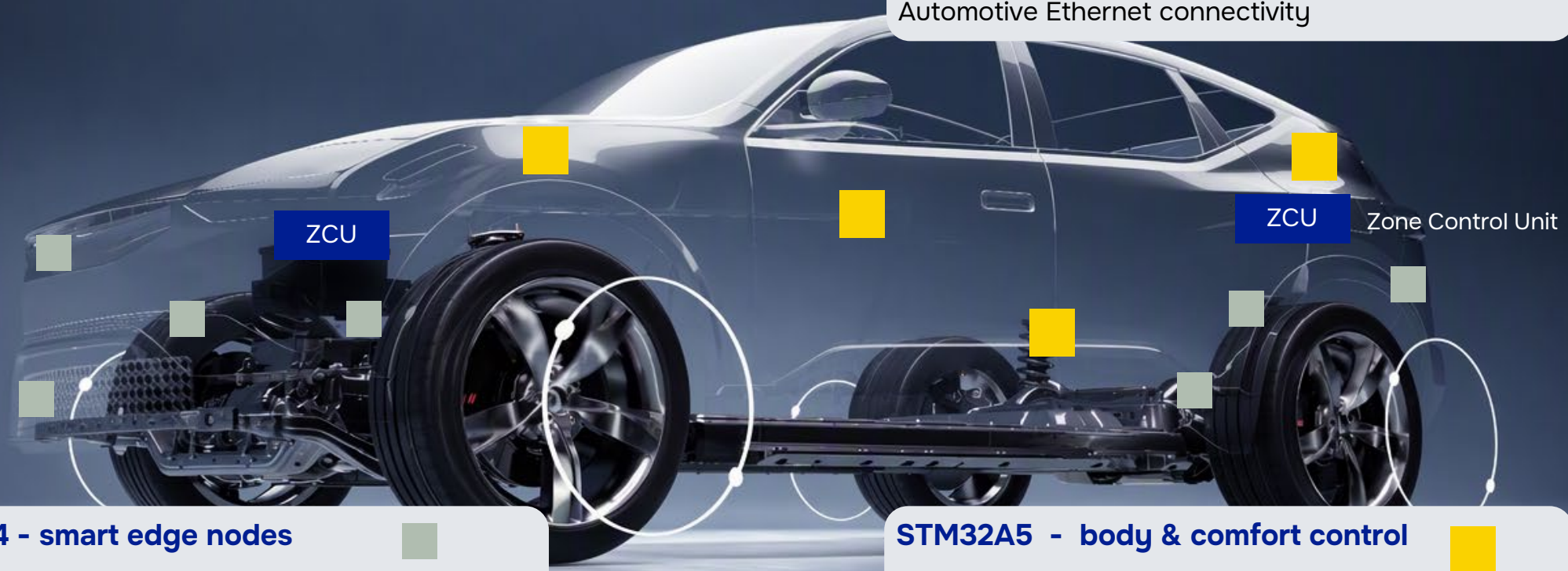

Leveraging synergies with one unified MCU platform and ecosystem

# STM32A – scaling from smart edge nodes to zonal control

## STM32A9 - zonal & real-time control

**Best-fit applications**
Zone controllers, I/O aggregation,
power distribution and real-time actuator control

**Key value**
ASIL-D-capable multicore performance
Automotive Ethernet connectivity




## STM32A4 - smart edge nodes

**Best-fit applications**
Local actuation, distributed sensors,
motor control and basic body functions

**Key value**
Cost-optimized MCU with up to 0.5 MByte memory, QM / optional ASIL-B and embedded security

## STM32A5 - body & comfort control

**Best-fit applications**
Body control, lighting, doors, seats,
climate and comfort systems

**Key value**
Scalable performance and memory up to 4 MByte
ASIL-B safety and advanced PQC-ready security



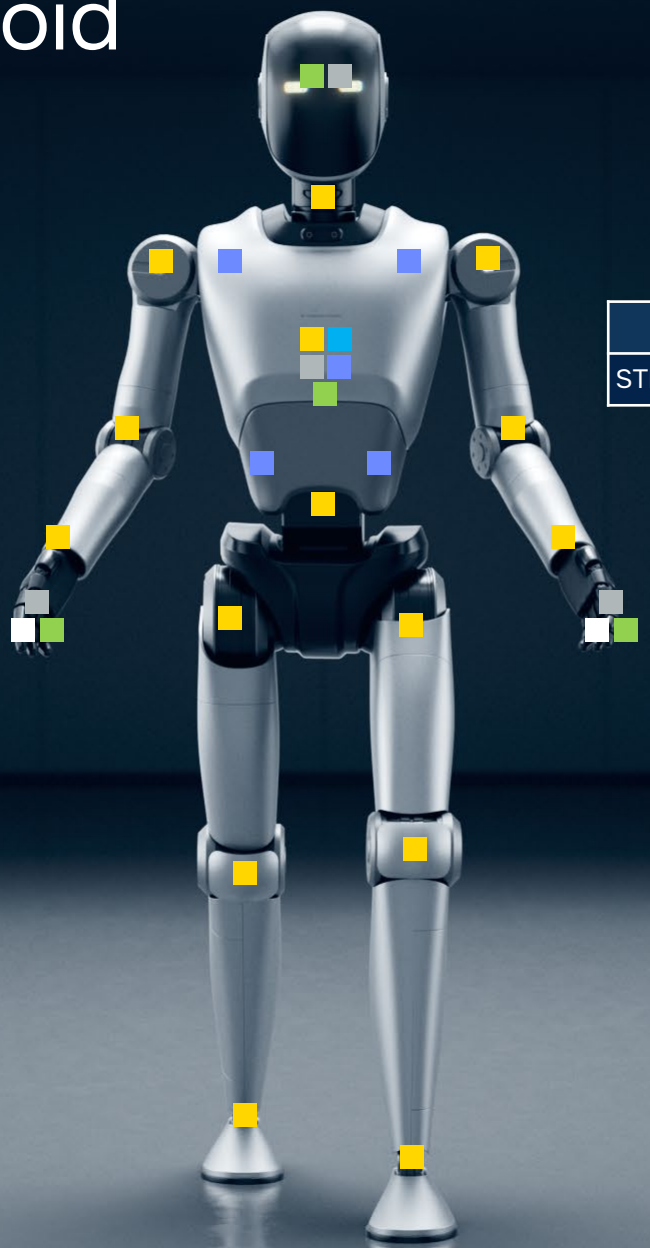
You can access the video HERE

# STM32 provides the MCU foundation for humanoid robots

## 6 MCU classes in humanoid robots

- Hand actuator
- Body actuator
- Hand & head gateway / connectivity
- Battery management
- Body controller
- Sensing unit

**STM32 addresses all MCUs classes in humanoid robots**



Leading humanoids players engaged with STM32

| Top accounts | #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 |
|---|---|---|---|---|---|---|---|---|---|---|
| STM32 engagement | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Humanoid robot typically uses **~100+** MCUs*.

$**800+** current addressable BoM in humanoid robots: MCU represents **~20%.**

Global humanoid annual shipments expected to reach ~6.5m units by 2035*.

Active contribution to the **NVIDIA robotics** ecosystem.

*Source: Goldman Sachs - Physical AI Framing the Forward Progress of Humanoids, August 2026




You can access the video HERE

# Unique exposure to cloud AI MCU opportunity

**Exposure across data center functions**

**OPTICAL**

**Transceiver control**

**COMPUTE**

**AI compute board control**

**POWER**

**Power supply, battery backup, energy storage system control and cooling control system**

**Diversified customer base** across the entire cloud AI value chain

Leading market share in **optical transceivers**

MCU is above **30%** of ST data center revenue in 2026

Data center MCU revenues to **double in 2027**

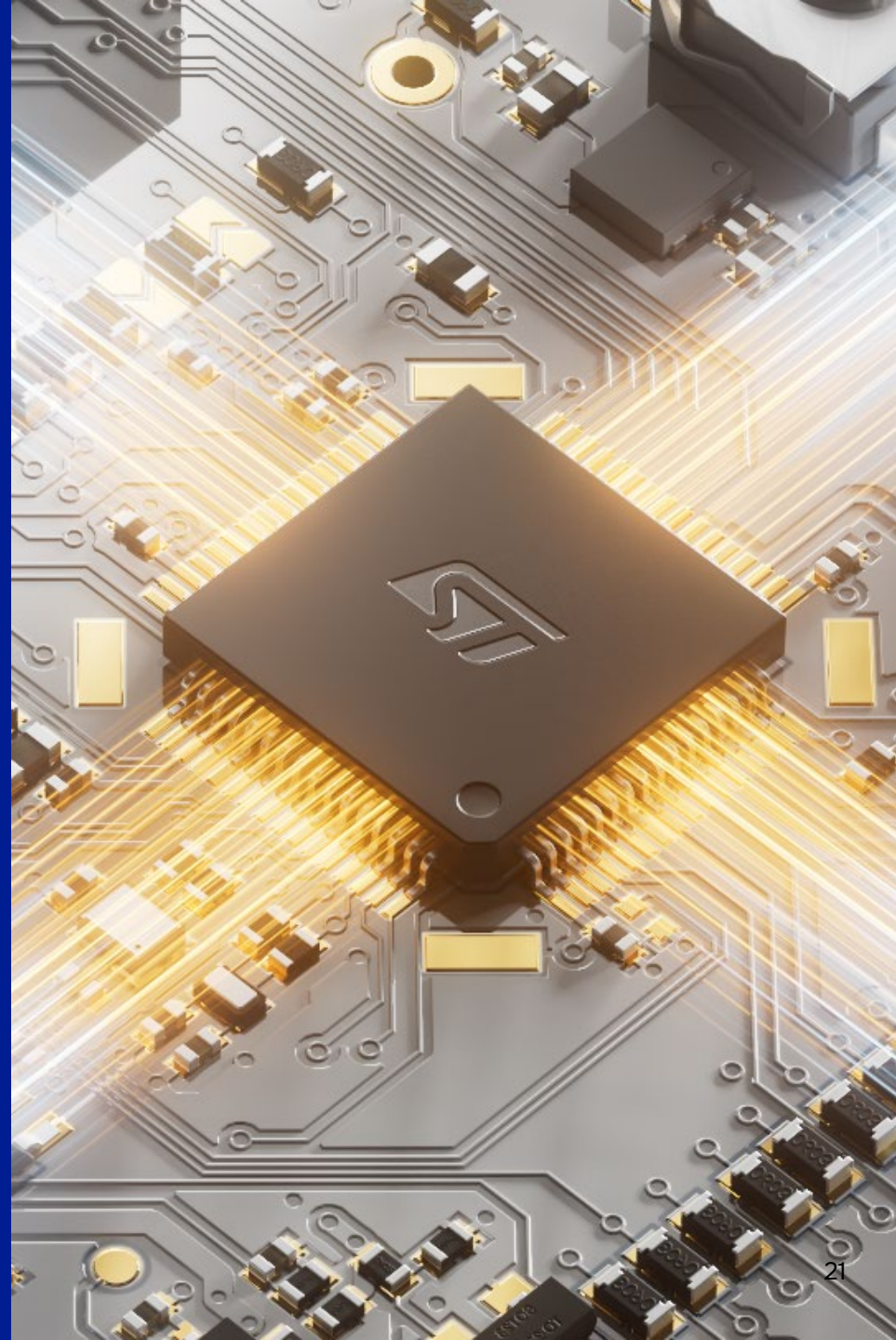
# Our ambition: doubling STM32 revenues between 2025 and 2028

STM32 **market-share recovery** completed ahead of schedule.

**Differentiated value proposition**: dual sourcing, advanced technology, AI-ready ecosystem, edge AI expertise.

**Pioneering the convergence era:** one unified STM32 platform, faster time to market and higher software reuse.

Uniquely positioned for growth in **cloud AI** and **physical AI.**




Let’s make
it happen.

# Forward looking information

Some of the statements contained in this release that are not historical facts are statements of future expectations and other forward-looking statements (within the meaning of Section 27A of the Securities Act of 1933 or Section 21E of the Securities Exchange Act of 1934, each as amended) that are based on management's current views and assumptions, and are conditioned upon and also involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those anticipated by such statements due to, among other factors:

- changes in global trade policies, including the continuation, adoption and expansion of tariffs and trade barriers and sanctions, that are affecting and could further affect the macro-economic environment and are adversely impacting and could further adversely impact the demand for our products;
- uncertain macro-economic and industry trends (such as inflation and fluctuations in supply chains), which are impacting and may further impact production capacity and end-market demand for our products;
- customer demand that differs from projections which may require us to undertake transformation measures that may not be successful in realizing the expected benefits in full or at all;
- the ability to design, manufacture and sell innovative products in a rapidly changing technological environment;
- changes in economic, social, public health, labor, political, or infrastructure conditions in the locations where we, our customers, or our suppliers operate, including as a result of macro-economic or regional events, geopolitical and military conflicts, social unrest, labor actions, or terrorist activities;
- unanticipated events or circumstances, which may impact our ability to execute our plans and/or meet the objectives of our research and development and manufacturing programs, which benefit from public funding;
- financial difficulties with any of our major distributors or significant curtailment of purchases by key customers;
- the loading, product mix, and manufacturing performance of our production facilities and/or our required volume to fulfill capacity reserved with suppliers or third-party manufacturing providers;
- availability and costs of equipment, raw materials, utilities, third-party manufacturing services and technology, or other supplies required by our operations (including increasing costs resulting from inflation);
- the functionalities and performance of our IT systems, which are subject to cybersecurity threats and which support our critical operational activities including manufacturing, finance and sales, and any breaches of our IT systems or those of our customers, suppliers, partners and providers of third-party licensed technology;
- theft, loss, or misuse of personal data about our employees, customers, or other third parties, and breaches of data privacy legislation;
- the impact of intellectual property claims by our competitors or other third parties, and our ability to obtain required licenses on reasonable terms and conditions;
- changes in our overall tax position as a result of changes in tax rules, new or revised legislation, the outcome of tax audits or changes in international tax treaties which may impact our results of operations as well as our ability to accurately estimate tax credits, benefits, deductions and provisions and to realize deferred tax assets;
- variations in the foreign exchange markets and, more particularly, the U.S. dollar exchange rate as compared to the Euro and the other major currencies we use for our operations;
- the outcome of ongoing litigation as well as the impact of any new litigation to which we may become a defendant;
- product liability or warranty claims, claims based on epidemic or delivery failure, or other claims relating to our products, or recalls by our customers for products containing our parts;
- natural events such as severe weather, earthquakes, tsunamis, volcano eruptions or other acts of nature, the effects of climate change, health risks and epidemics or pandemics in locations where we, our customers or our suppliers operate;
- increased regulation and initiatives in our industry, including those concerning climate change and sustainability matters and our goal to become carbon neutral in all direct and indirect emissions (scopes 1 and 2), product transportation, business travel, and employee commuting emissions (our scope 3 focus), and to achieve our 100% renewable electricity sourcing goal by the end of 2027;
- epidemics or pandemics, which may negatively impact the global economy in a significant manner for an extended period of time, and could also materially adversely affect our business and operating results;
- industry changes resulting from vertical and horizontal consolidation among our suppliers, competitors, and customers;
- the ability to successfully ramp up new programs that could be impacted by factors beyond our control, including the availability of critical third-party components and performance of subcontractors in line with our expectations; and
- individual customer use of certain products, which may differ from the anticipated uses of such products and result in differences in performance, including energy consumption, may lead to a failure to achieve our disclosed emission-reduction goals, adverse legal action or additional research costs.

Such forward-looking statements are subject to various risks and uncertainties, which may cause actual results and performance of our business to differ materially and adversely from the forward-looking statements. Certain forward-looking statements can be identified by the use of forward-looking terminology, such as "believes", "expects", "may", "are expected to", "should", "would be", "seeks" or "anticipates" or similar expressions or the negative thereof or other variations thereof or comparable terminology, or by discussions of strategy, plans or intentions.

Some of these risk factors are set forth and are discussed in more detail in "Item 3. Key Information — Risk Factors" included in our Annual Report on Form 20-F for the year ended December 31, 2025 as filed with the Securities and Exchange Commission ("SEC") on February 26, 2026. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in this press release as anticipated, believed or expected. We do not intend, and do not assume any obligation, to update any industry information or forward-looking statements set forth in this release to reflect subsequent events or circumstances.



Unfavorable changes in the above or other factors listed under "Item 3. Key Information — Risk Factors" from time to time in our SEC filings, could have a material adverse effect on our business and/or financial condition.