



Releasing your creativity

Discover the STM32 family of
microcontrollers & microprocessors



STM32: a developer-first strategy since 2007



STM32 is a key enabler: empowering embedded developers around the world to release their creativity.

We provide embedded developers with cutting-edge hardware and software technology, comprehensive support, and high-quality, reliable supply. This helps them build designs that are smarter, more connected, and more secure.

The most familiar MCUs in the developer community

Source: Aspencore embedded survey, 2025

15 billion units shipped

#1 GP MCU Worldwide

2021-2025

Source: Omdia, March 2026

100,000+ customers



What makes STM32 unique?

The densest embedded flash memory
40 nm eSTM, 18 nm ePCM

Edge AI, GUI, security, motor control, digital power, safety

The largest GP portfolio

Innovative technologies

A strong ecosystem

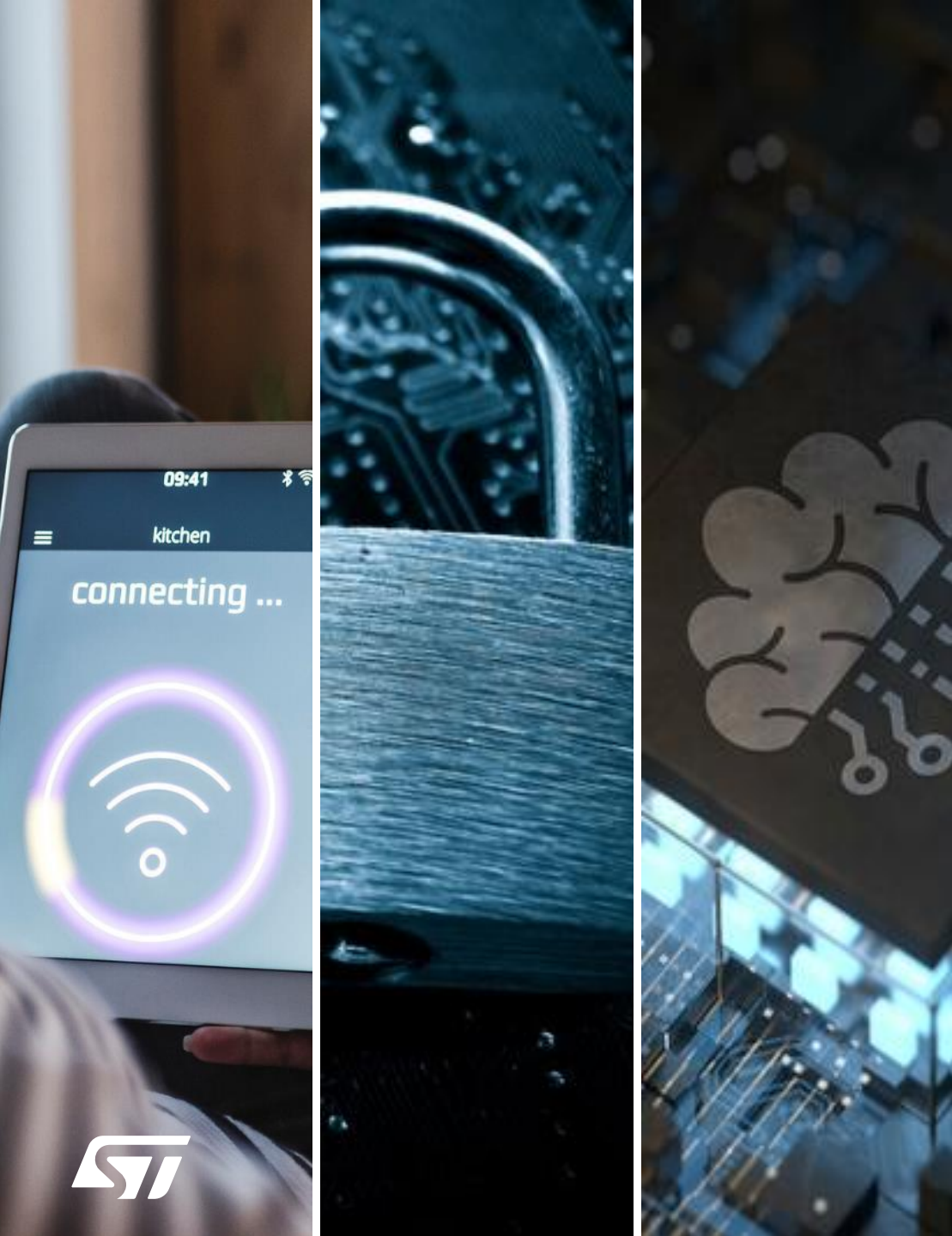
Unique ecosystem verticals

The most resilient supply chain

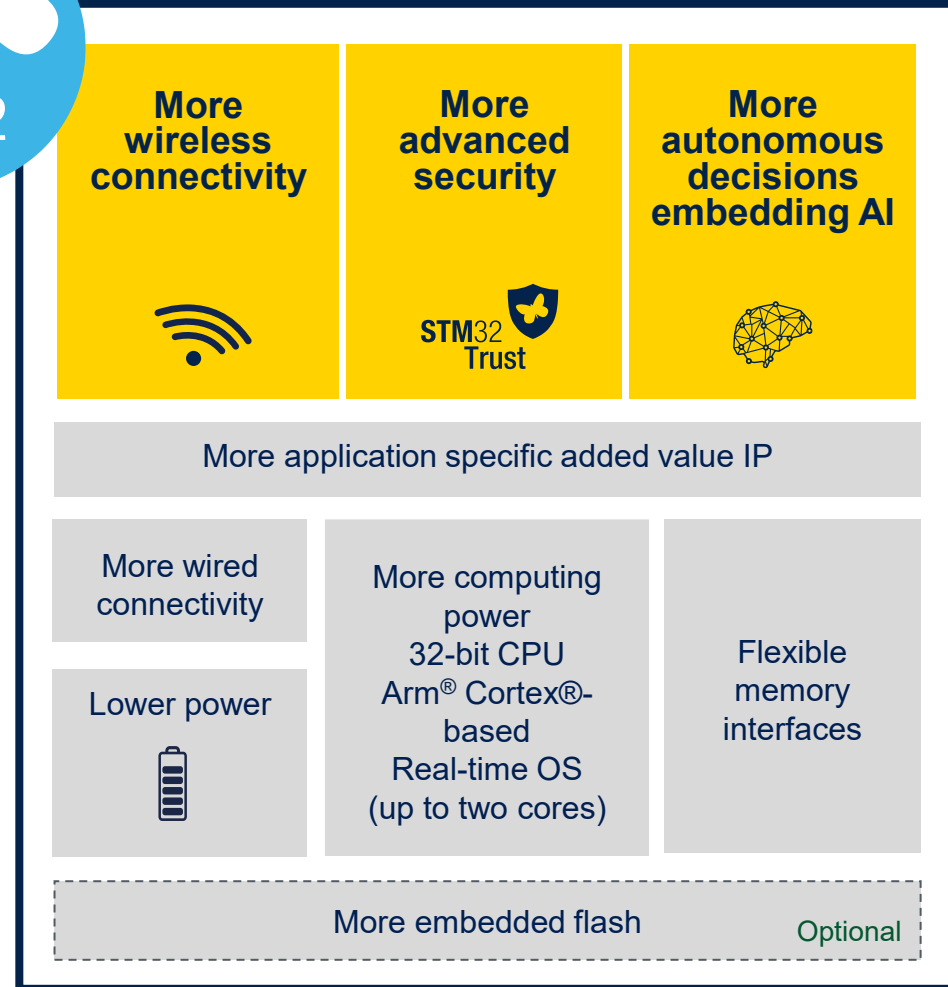
4000+ part numbers
Expanding every year

STM32Cube, Partner program
1.5M+ unique users of ST tools

Outstanding quality and reliability



Supporting developers' needs





What the STM32 products offer

Real-time performance

- Powerful Cortex® cores
- Multicore performance
- Fast interfaces
- Hardware accelerators



Outstanding power efficiency

- Ultra-low dynamic power consumption
- Long lifetime, small battery
- Sustainable technology



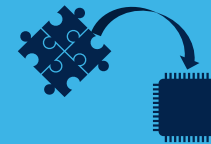
Advanced, innovative peripherals

- Graphic acceleration
- Digital & analog peripherals
- USB Type-C®
- Peripherals for wireless and edge AI solutions



Optimized integration

- Best fit for application requirements (package size, cost, performance)
- Safety & security features



Extensive ecosystem

- Comprehensive development tools
- Wide range of partners
- Community support



4,000+ commercial part numbers



Rolling 10-year longevity commitment for continuous supply



The STM32 portfolio



Five product categories



Wireless
MCU

Short- and long-range connectivity



Ultra-low-power
MCU

32-bit general-purpose microcontrollers: from 75 to 5,072 CoreMark score



Mainstream
MCU

High-performance
MCU



Embedded
MPU

32- and 64-bit microprocessors



Enabling edge AI solutions



Scalable security



[MPU portfolio](#)
[MCU portfolio](#)



STM32 portfolio

 MPU

 High-performance MCUs

 Mainstream MCUs

 Ultra-low-power MCUs

 Wireless MCUs

STM32MP1
1 GHz Cortex®-A7
209 MHz Cortex®-M4

STM32MP2
Dual 1.5 GHz Cortex®-A35
400 MHz Cortex®-M33

STM32F7
1,082 CoreMark
216 MHz Cortex®-M7

STM32N6
3,360 CoreMark
800 MHz Cortex® -M55
Neural processing unit

STM32V8
Up to 5,072 CoreMark
800 MHz Cortex®-M85

STM32F2
398 CoreMark
120 MHz Cortex®-M3

STM32F4
608 CoreMark
180 MHz Cortex®-M4

STM32H5
1,035 CoreMark
250 MHz Cortex®-M33

STM32H7
3,347 CoreMark
Up to 600 MHz Cortex® -M7
240 MHz Cortex® -M4

STM32F3
245 CoreMark
72 MHz Cortex®-M4

STM32G4
569 CoreMark
170 MHz Cortex®-M4

Mixed-signal MCUs

STM32C0
114 CoreMark
48 MHz Cortex® M0+

STM32C5
593 CoreMark
144 MHz Cortex® M33

STM32F0
106 CoreMark
48 MHz Cortex®-M0

STM32G0
142 CoreMark
64 MHz Cortex®-M0+

STM32F1
177 CoreMark
72 MHz Cortex®-M3

STM32L0
75 CoreMark
32 MHz Cortex®-M0+

STM32U0
140 CoreMark
56 MHz Cortex®-M0+

STM32L4
273 CoreMark
80 MHz Cortex®-M4

STM32U3
393 CoreMark
96 MHz Cortex®-M33

STM32L4+
409 CoreMark
120 MHz Cortex®-M4

STM32L5
443 CoreMark
110 MHz Cortex®-M33

STM32U5
651 CoreMark
160 MHz Cortex®-M33

STM32WL
162 CoreMark
48 MHz Cortex®-M4
48 MHz Cortex®-M0+

STM32WB0
156 CoreMark
64 MHz Cortex®-M0+

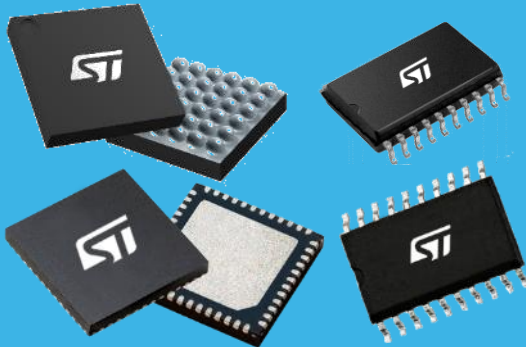
STM32WB
216 CoreMark
64 MHz Cortex®-M4
32 MHz Cortex®-M0+

STM32WBA
407 CoreMark
100 MHz Cortex®-M33





Addressing entry-level to high-performance applications



90+ package types
from 5 to 784 mm²



- 20- to 68-pin QFN
- 18- to 208-pin WLCSP
- 20-pin TSSOP
- 8-pin SO
- 32- to 208-pin LQFP
- 64- to 273-pin BGA



Multiple memory options

From 8 Kbytes to 4 Mbytes of flash memory
From 2 Kbytes to 4.2 Mbytes of RAM

STM32C0

Arm Cortex M0+
8 pins
16 Kbytes of flash
48 MHz

XXS



XXL



STM32V8*

Arm Cortex-M85
273 pins
4 Mbytes of embedded NVM
Up to 800 MHz

STM32 high-performance MCUs



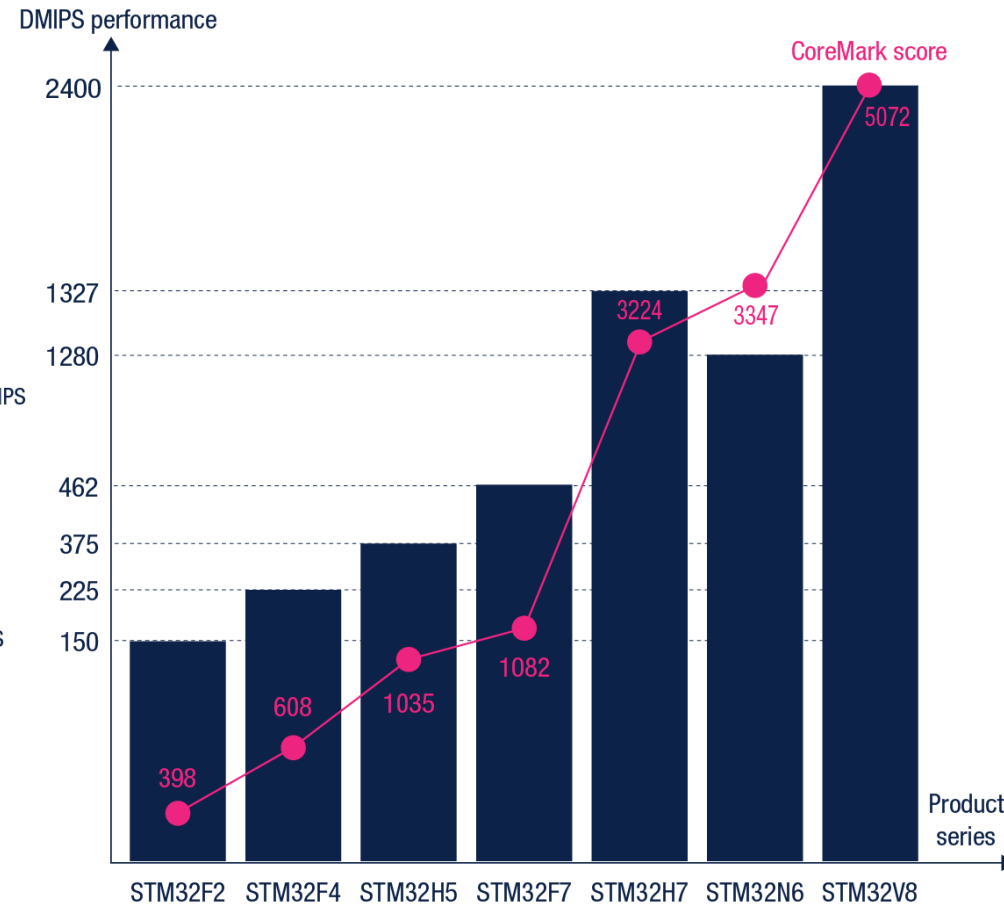


STM32 high-performance MCUs

Up to 3360 CoreMark and a rich set of peripherals

Preannouncement

STM32V8	• Arm® Cortex®-M85 at 800 MHz – 2400 DMIPS • 4 MB embedded NVM • World-first MCUs built on 18nm process technology
STM32N6	• Arm® Cortex®-M55 at 800 MHz – 1280 DMIPS • 4.2 MB embedded RAM • First MCU with NPU: ST Neural-ART @ 600Gops
STM32H5	• Arm® Cortex®-M33 at 250 MHz – 375 DMIPS • From 128 Kbytes to 4 Mbytes of Flash memory • High performance, scalable security, affordable
STM32H7	• Arm® Cortex®-M7 + Arm® Cortex®-M4 FPU at 480 MHz – 1327 DMIPS and up to 600 MHz - 1284 DMIPS on single core Arm® Cortex®-M7 • From 64 Kbytes to 2 Mbytes of Flash memory • High Performance, scalable memory and security
STM32F7	• Arm® Cortex®-M7 + FPU at 216 MHz – 462 DMIPS • From 256 Kbytes to 2 Mbytes of Flash memory • Embedded flash & external memories
STM32F4	• Arm® Cortex®-M4 + FPU up to 180 MHz – 225 DMIPS • From 64 Kbytes to 2 Mbytes of Flash memory • Cost-effective and power efficiency
STM32F2	• Arm® Cortex®-M3 at 120 MHz – 150 DMIPS • From 128 Kbytes to 1 Mbyte of Flash memory • Foundation lines for performance and connectivity



Legend: Available Q4 2026



STM32V8 MCU series

Setting new performance levels



Cutting edge Arm® Cortex®-M85 core with Helium

Performance boost in scalar, DSP, and ML versus Cortex®-M7
Up to 800 MHz frequency



World-first MCU built on 18 nm FD-SOI and PCM

High density: larger program embedded NVM (4 Mbytes)
140°C junction temperature



Strong security with regulatory compliance

PSA Certified L3 and SESIP3 security targets



STM32N6 MCU series edge AI acceleration



Enabling high-performance edge AI on MCUs

- Embedded proprietary neural processing unit, ST Neural-ART accelerator.
- 600 GOPS / 3 TOPS/W power consumption



The most powerful STM32 series ever made

- 800 MHz Arm Cortex®- M55 core
- 1280 DMIPS / 3360 CoreMark



Elevating graphics & multimedia experiences

- Multiple graphics accelerators + multimedia encoder/decoder
- Computer vision pipeline



Streamlined developpment and integration

- Supported by ST Edge AI Suite tools, resources, & case studies
- Compatible with the TouchGFX packages for graphics



STM32H7Rx/Sx MCU lines

A scalable bootflash approach



Max performance: 600 MHz bootflash MCU

- Real-time execution from internal or external memories
- High speed serial & parallel memory interfaces up to 200MHz DTR. Large internal SRAM



High scalability to optimize your design & reduce costs

- Flexible external memory capacity
- 10 packages from cost-effective 68 up to 225 pins



Security assurance: ready for future security directives

- Target security certifications: SESIP Level 3 and PSA certified L3.
- On-the-fly decrypt/encrypt & secure boot



Best-in-class platform for graphics applications

- Powerful 2.5D NeoChrom GPU. Smart DMA architecture memory/GPU
- Enabling UIs with HD resolution



STM32H5 MCU series for high performance and strong security



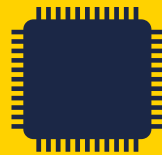
Most powerful Arm® Cortex®-M33 MCU

Industry-first 32-bit MCU with Arm® Cortex®-M33 core running as high as 250 MHz.



Scalable security to address every need

From the most essential security building blocks to fully certified services maintained by ST.



Optimized cost/performance trade-off

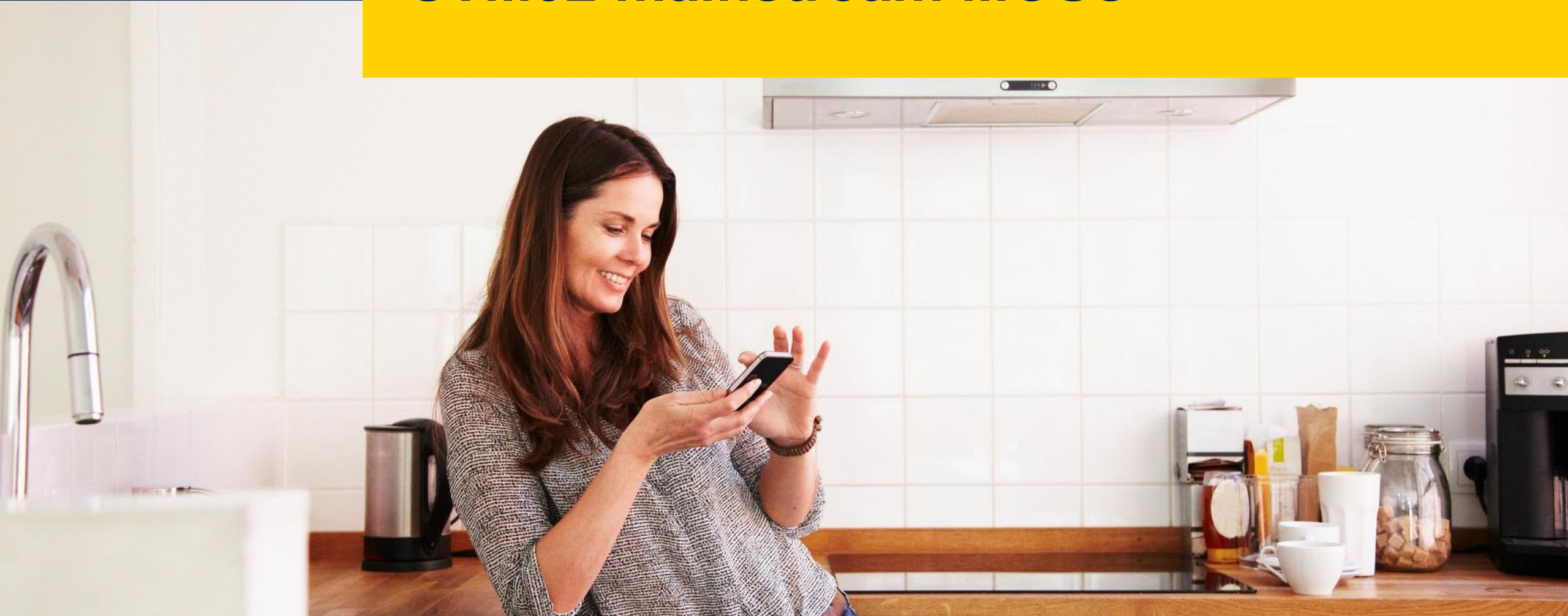
Based on ST's optimized 40 nm process technology.
Large choice of memory, peripherals, and package options.



Boost your graphical user interface

Next-gen 2D graphics accelerator: ChromART2
High-performance graphics up to 3.5-inch displays
Large embedded memory: 1.5 Mbytes of SRAM, 4 Mbytes of flash

STM32 mainstream MCUs





STM32 mainstream MCUs (1/2)

Latest product generation

STM32C5

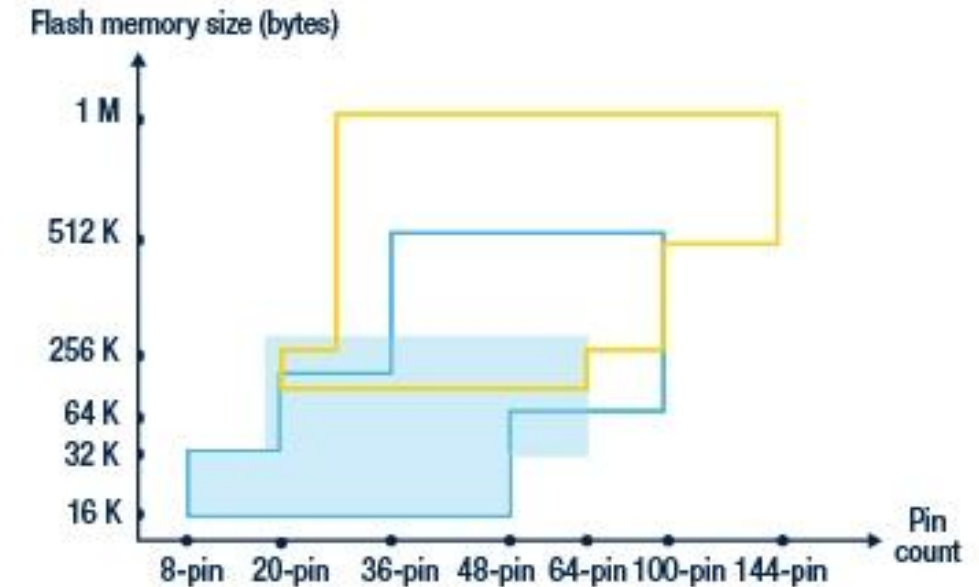
- Arm Cortex-M33 at 144 MHz – 217 DMIPS
- New DNA for entry-level STM32 32-bit MCU
- Simple, efficient and cost-effective

STM32C0

- Arm Cortex-M0+ at 48 MHz – 44 DMIPS
- Most affordable entry-cost STM32 32-bit MCU
- Affordable, reliable, continuum with STM32G0

STM32G0

- Arm Cortex-M0+ at 64 MHz – 59 DMIPS
- Maximum IO count per package
- Advanced function is analog, low-power, control





STM32 mainstream MCUs (2/2)

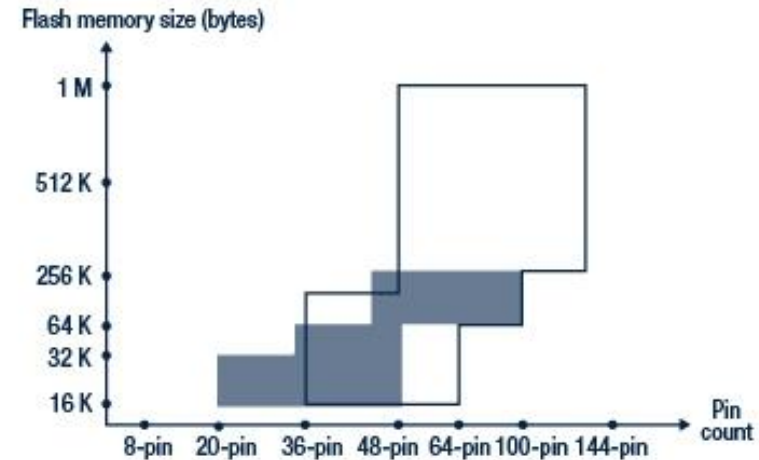
Legacy product

STM32F1

- Arm Cortex-M3 at 72 MHz – 61 DMIPS
- STM32 Foundation line
- Wide range of performance and peripherals, easy-to-use tools

STM32F0

- Entry-level MCU for cost-sensitive operations
- Arm Cortex-M0 at 48 MHz – 38 DMIPS



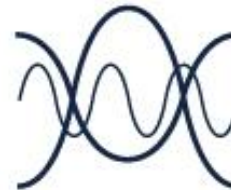
Mixed-signal MCUs

STM32G4

- Arm Cortex-M4 + FPU at 170 MHz – 213 DMIPS
- Rich analog peripheral set
- High-resolution timer
- Mathematical accelerators

STM32F3

- Arm Cortex-M4 + FPU at 72 MHz – 90 DMIPS
- Rich analog peripheral set
- High-resolution timer



Instrumentation
& Measurement



Digital Power



Motor Control



STM32C5 MCU series for entry-level designs at lower costs

**Recommended resale price for 10ku*



Built on Arm® Cortex®-M33 core

STM32C5 provides **three times more performance** than the competition Cortex®-M0+ in the market



Reliable performance in industrial environments

A robust platform and precise clock system
Industrial interfaces and flexible memory
Security & safety mechanisms and certifications



No impact on end-product costs

Based on ST's optimized 40 nm process technology
Product series starts at \$0.64* USD. \$0.87* USD for 512 Kbytes of flash and 128 Kbytes of SRAM in LQFP64 package



1st MCU Supported by STM32Cube evolution

STM32CubeMX2 tool, optimized HAL2 and LL drivers, production-ready examples, STM32CubeIDE (including Visual Studio Code), STM32CubeProgrammer and STM32CubeMonitor tools





STM32C0 MCU series making 32-bit capabilities accessible to all

ST's most compact and affordable 32-bit MCU now supports USB and FDCAN.



Affordable

Reduce costs thanks to an attractive price point and an optimized BOM. **Starting at \$0.21.**



Reliable

- Monitoring and diagnostic features for safe behavior.
- High accuracy internal high-speed clock.



Flexible

- Flexible function mapping for optimized layout.
- Common platform & consistent pinout with STM32G0.

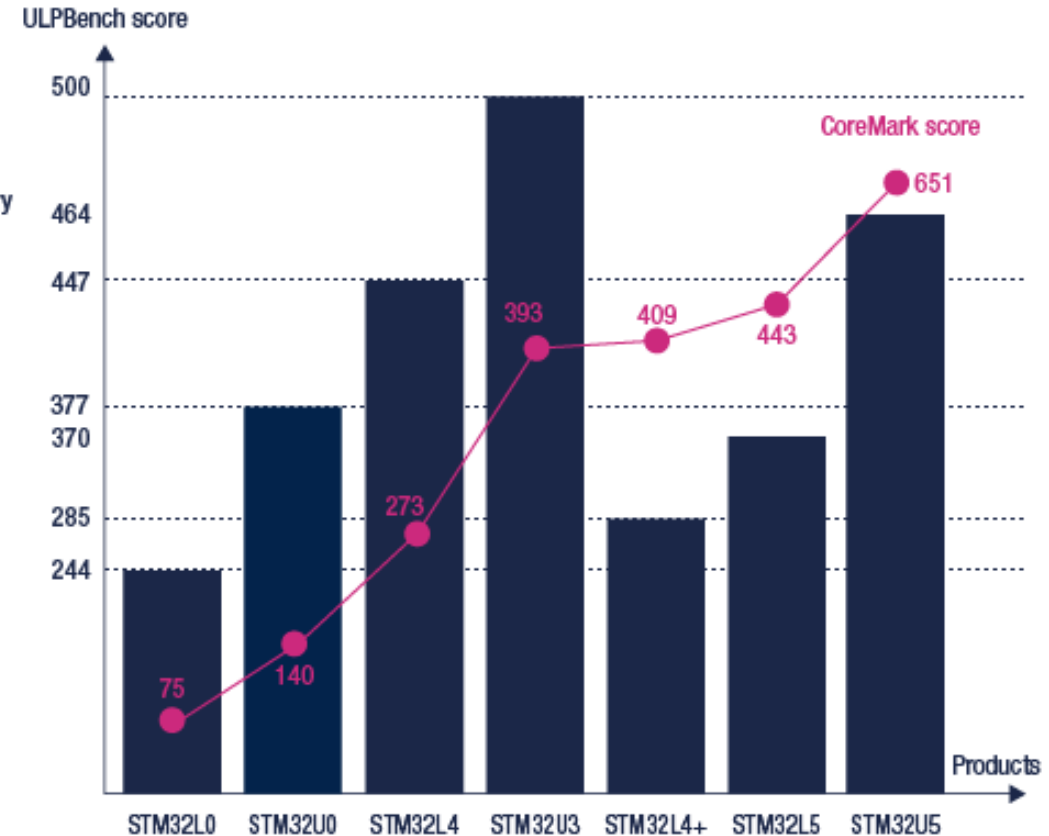
STM32 ultra-low-power MCUs





STM32 ultra-low-power MCUs

STM32U5	• 32-bit Arm® Cortex®-M33 + FPU at 160 MHz • From 128 to 4 Mbytes of Flash memory • Lowest power mode with RAM + RTC: 0.35 µA
STM32L5	• 32-bit Arm® Cortex®-M33 + FPU at 110 MHz • From 256 to 512 Kbytes of Flash memory • Lowest power mode with RAM + RTC: 0.35 µA
STM32L4+	• 32-bit Arm® Cortex®-M4 + FPU at 120 MHz • From 512 Kbytes up to 2 Mbytes of Flash memory • Lowest power mode with RAM + RTC: 0.39 µA
STM32U3	• 32-bit Arm® Cortex®-M33 + FPU at 96 MHz • From 512 Kbytes to 1 Mbytes of Flash memory • Lowest power mode with RAM + RTC: 0.95 µA
STM32L4	• 32-bit Arm® Cortex®-M4 + FPU at 80 MHz • From 64 Kbytes to 1 Mbyte of Flash memory • Lowest power mode with RAM + RTC: 0.34 µA
STM32U0	• 32-bit Arm® Cortex®-M0+ at 56 MHz • From 16 to 256 Kbytes of Flash memory • Lowest power mode with RAM + RTC: 0.25 µA
STM32L0	• 32-bit Arm® Cortex®-M0+ at 32 MHz • From 8 to 192 Kbytes of Flash memory • Lowest power mode with RAM + RTC: 0.67 µA





STM32U3 MCU series: market-leading power efficiency

Extending battery life and protecting data in cost-sensitive industrial, medical, and consumer devices.



First STM32 with near-threshold design
Significantly reduces dynamic consumption.



Market-leading efficiency with 117 CoreMark/mW
Five times more efficient vs previous product generation.



Standard & extended industrial temperature support
-40 up to +85°C and +105°C.



Vector graphics

STM32U5 series

The flagship of ultra-low-power MCUs

For IoT & embedded applications, up to 4 Mbytes of flash memory



1st MCU
certified by the NIST*



High energy efficiency/integration

Innovative power management features. Low power background.d autonomous mode (LPBAM), DMA, and IP autonomous in LP mode.



High security & safety

AES and PKA, side attack resistant. PSA-Certified and SESIP Level 3 target certifications.
ECC on flash memory and SRAM.



Enhanced graphic performance

First STM32 with advanced graphics accelerators (ART Accelerator) & NeoChrom Vector Graphics GPU based on Arm® Cortex® -M33 running at 160 MHz.

* *the National Institute of Standards and Technology* promotes U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.





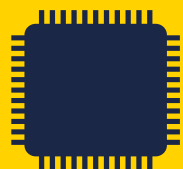
STM32U0 series: the latest generation of entry-level, ultra-low-power MCUs

The ideal combination between energy consumption, features, and cost.
Enabling more design freedom in entry-level, battery-operated devices



Energy savings & longer product usage

Best-in-class static consumption.
Many ultra-low-power modes for greater flexibility.



Integrated features

High integration, incl. LCD driver, MSI internal oscillator, ART accelerator, security and more.



Cost effectiveness

Lower BOM costs thanks to high integration.
Attractive price point.
Building on proven STM32 ULP series for faster time to market.



STM32 wireless MCUs





STM32 wireless MCUs

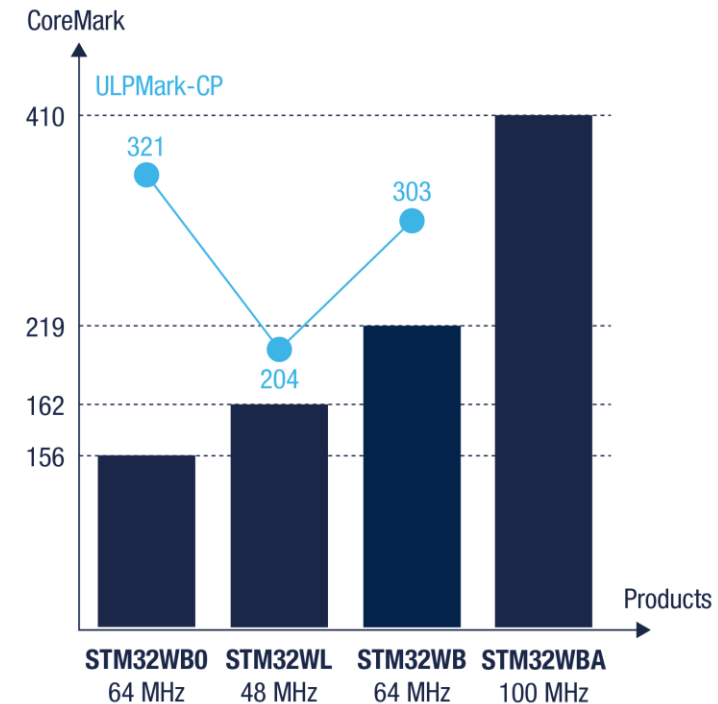
STM32WB0
STM32WL
STM32WB
STM32WBA

- Arm® Cortex®-M0+ at 64 MHz
- From 192 Kbytes to 512 Kbytes of Flash memory
- Output power: +8 dBm
- Sensitivity: -97 dBm (1Mbps) / -104 dBm (125Kbps)

- Arm® Cortex®-M4 and -M0+ at 48 MHz supporting RF
- From 64 Kbytes to 256 Kbytes of Flash memory
- Dual output power: Up to 15 dBm / Up to 22 dBm
- Sensitivity LoRa®: -148 dBm

- Arm® Cortex®-M4 at 64 MHz and dedicated M0+ at 32 MHz supporting RF
- From 256 Kbytes to 1 Mbyte of Flash memory
- Output power: +6 dBm
- Sensitivity BLE: -96 dBm, 802.15.4: -100dBm

- Arm® Cortex®-M33 + FPU at 100 MHz
- From 512 Kbytes to 2 Mbytes of Flash memory
- Output power: +10 dBm
- Sensitivity BLE: -96 dBm, 802.15.4: -97.5 dBm





STM32WBA MCU series: performance & reliability

Faster time-to-market and higher performance for wireless short-range devices



Enhanced wireless performance

Multiprotocol (Bluetooth® Low Energy, Zigbee, OpenThread, Matter) +10 dBm output power with low power consumption.



Compliant with the latest security regulations

Featuring TrustZone® technology.
SESIP level 3 target certification.



Simpler and faster development

Rich ecosystem offering hardware, embedded software & tools, documentation.



STM32WB0 MCU series: performance, efficiency, and security for the IoT

**Short-range wireless MCU, 2 Mbps, advertising extension
+8 dBm, isochronous channel, high security level**



Certified for Bluetooth® LE 5.4

Upgradable, highly modular, and robust Bluetooth® LE stack, developed and maintained by ST.



High wireless performance

System performance: Arm® Cortex® -M0+ core at 64 MHz. Best-in-class radio enabling robust and stable connectivity.



Longer battery life for IoT devices

High efficiency: 15.5 μ A/MHz from Cortex-M0+ and 3.9 mA radio peak Tx current / 3.2 mA radio peak Rx current.



STM32WL MCU series: efficient long-range communications

A highly integrated, low-power MCU featuring a sub-GHz radio



Wide variety of system peripherals

Up to 43 GPIOs, integrated SMPS, multiple low-power modes, dual-power output.



Flexibility in wireless applications

Multiple modulations supported (LoRaWAN®, Sigfox, W-MBUS, Mioty®, Wi-SUN).



Enhanced security

Embedded security hardware functions such as AES hardware encryption and read/write protection.

STM32 microprocessors



STM32 microprocessors making your industrial applications future-proof



STM32MP25 and STM32MP23

Single or dual Arm® Cortex®-A35 up to 1.5 GHz
Arm® Cortex®-M33 at 400 MHz
NPU at 1.35 TOPS (0.6 TOPS for MP23x)
time-sensitive networking support
3D GPU, 1080p platform

STM32MP2 series

STM32MP15

Single or dual Arm® Cortex®-A7 up to 800 MHz
Arm® Cortex®-M4 at 209 MHz
3D GPU 720p

STM32MP1 series

STM32MP13

Arm® Cortex®-A7 up to 1 GHz
Power- and cost-efficient with high security



STM32MP13 MPU lines

Cost-efficient MPUs for industrial and secure applications



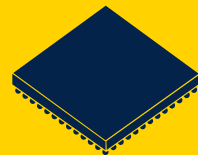
Power efficiency

- Best-in-class consumption in low power modes
- Over 90% energy savings in standby and VBAT modes



Certified security services for faster time to market

- SESIP L3 and PSA Certified
- PCI ready



Accessible

- Strong, user-friendly ecosystem (OpenSTLinux, Linux-RT, RTOS)
- PCB layout reference designs



STM32MP25 MPU product lines a step up in performance



Robustness for complex industrial applications

- Industrial-grade MPU
- 10-year rolling longevity program



64-bit MPU with advanced compute capabilities, including edge AI acceleration

- NPU accelerator (up to 1.35 TOPS), run AI on CPU, GPU, or NPU
- Multimedia capabilities (1080p, 3D GPU, LVDS/DSI, and more)



Supporting the growth of connected applications

- Hardware interfaces: TSN support, up to 3 gigabit Ethernet ports (with 2-port switch), PCIe Gen2, USB 3.0, 3 x CAN-FD
- Software & third-party ecosystem



Strong security

- SESIP3 certification target, TrustZone® on Cortex®-A & Cortex®-M,
- Secure provisioning ecosystem, Secure isolation for edge confidential computing





STM32MP23 MPU product lines

cost-optimized MPUs



Robustness for complex industrial applications

- Industrial-grade MPU
- 10-year rolling longevity program



64-bit MPU with advanced compute capabilities, including edge AI acceleration

- NPU accelerator (up to 0.6 TOPS), run AI on CPU, GPU, or NPU
- Multimedia capabilities (1080p, 3D GPU, LVDS/DSI, and more)



Supporting the growth of connected applications

- Hardware interfaces: 2 gigabit Ethernet ports, 2 x CAN-FD
- Software: Extended maintenance: OpenSTLinux family (Yocto, Buildroot, OpenWRT, OpenSTDroid) extended from 2 years to 5 years
- Third-party ecosystem

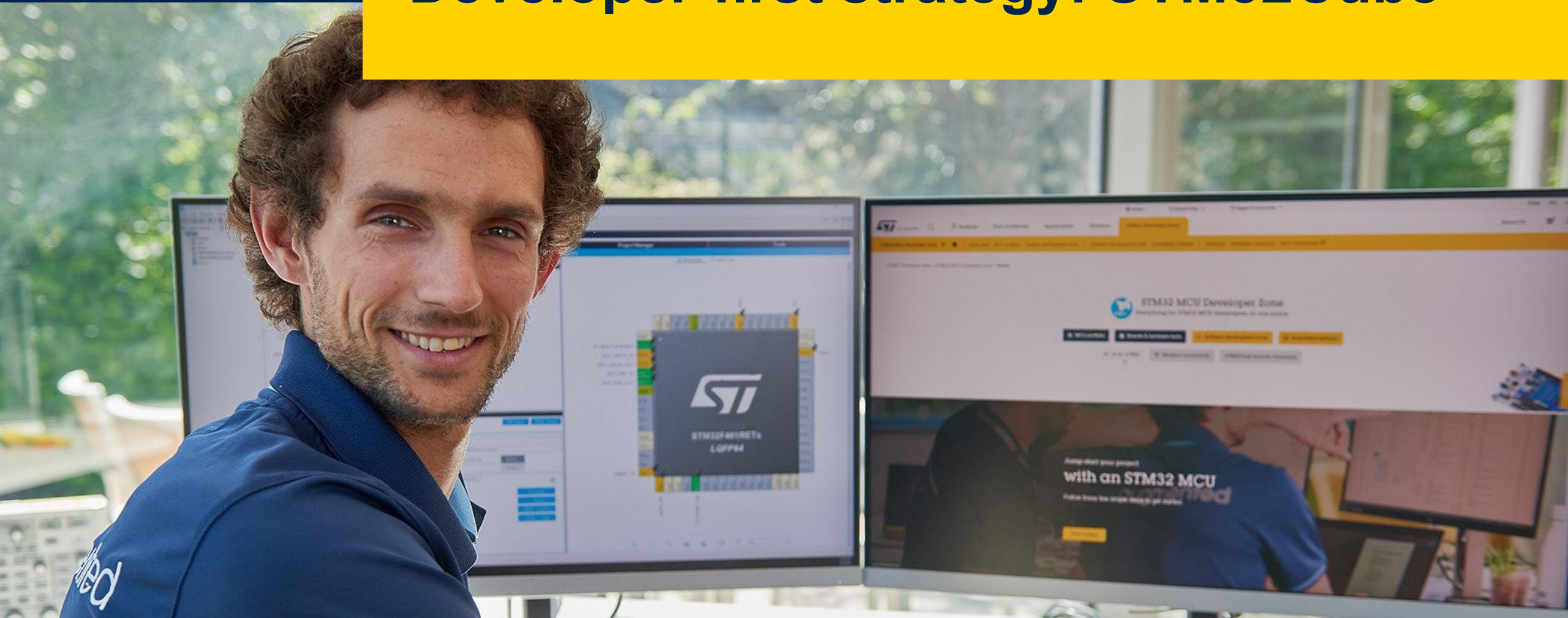


Strong security

- SESIP3 certification target, TrustZone® on Cortex®-A & Cortex®-M,
- Secure provisioning ecosystem, Secure isolation for edge confidential computing



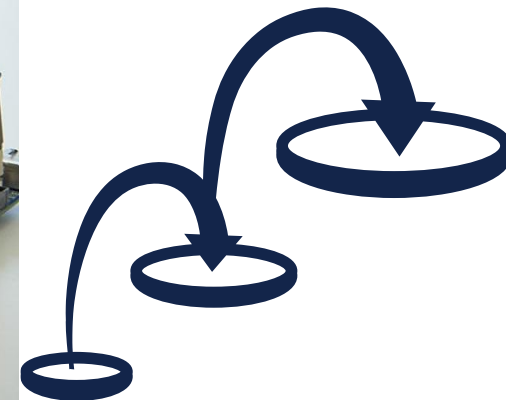
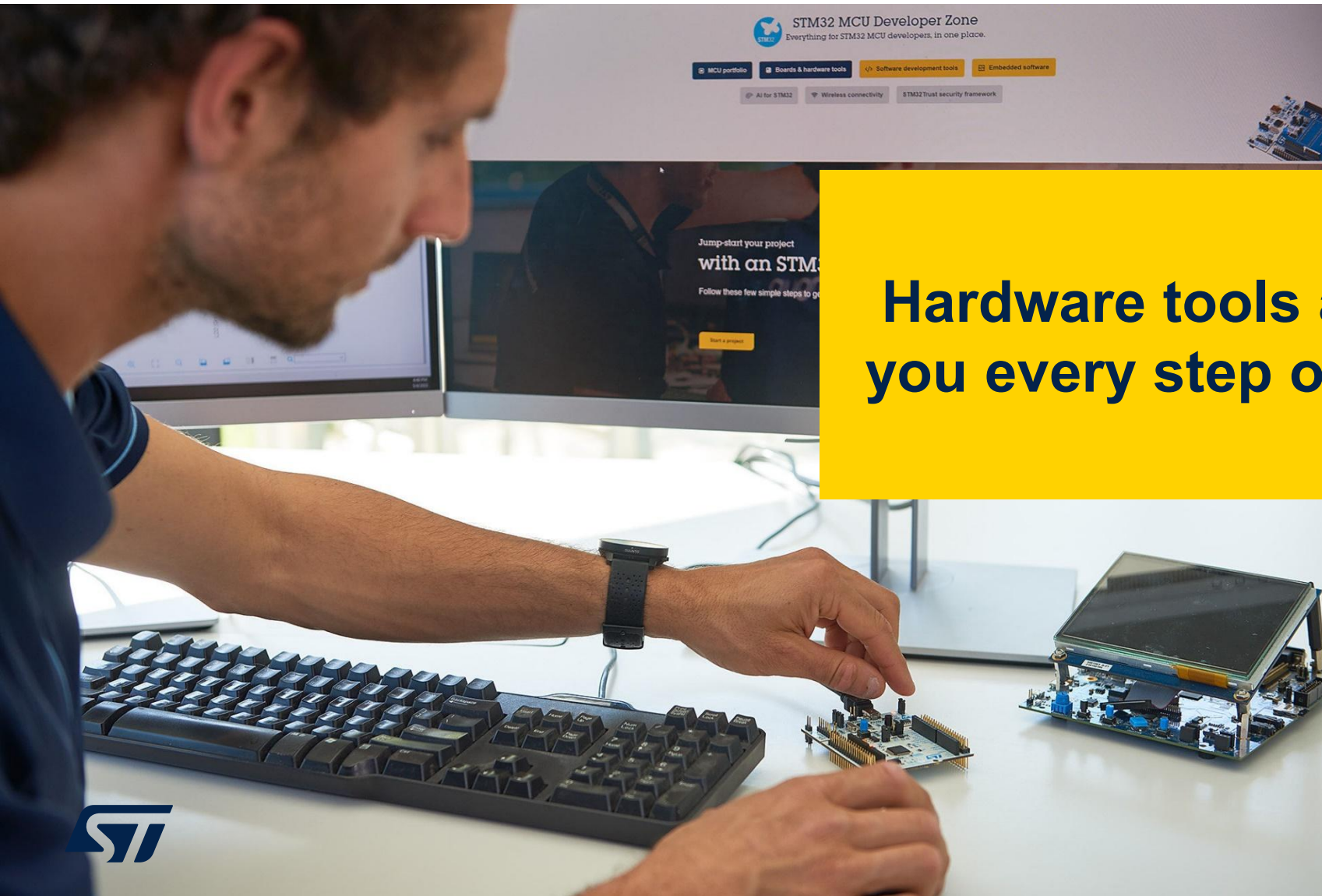
Developer-first strategy: STM32Cube



STM32Cube design ecosystem



**Hardware tools and software helping
you every step of your design journey**





STM32Cube framework

Helping developers release their creativity

Comprehensive offer helping you
accelerate your development

Focus on quality, compatibility, and
stability

Documentations, training and
worldwide support channels

STM32 MCU and MPU Developer Zone
Everything for STM32 developers in one place



Applicative reference implementations

Extension libraries and AI toolkit



Hardware



Embedded
SDK



Development
tool kit



Development
resources





STM32Cube framework

Tools and software supporting you during all your design steps

Evaluation,
prototyping,
and selection

Hardware and
software
configuration

Application development and debug

Code and hardware
options
programming

Runtime
application
monitoring

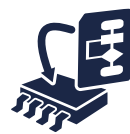


STM32
Finder

STM32
boards



STM32
CubeMX



STM32
CubeMCU Packages



STM32
CubeExpansion
&
Verticals and
partner solutions



STM32
CubeIDE
&
Partner IDEs



STM32
CubeProgrammer
&
Programmers from partners



STM32
CubeMonitor

Worldwide support channels

STM32 hardware evaluation tools

Easy prototyping, accurate evaluation, and board design references

\$10 → \$30*



STM32 Nucleo boards

Flexible prototyping

70+ references

\$10 → \$100*



Discovery kits

Evaluating key features

40+ references

\$100 → \$500*



Evaluation boards

Full feature evaluation

25+ references



Expansion boards

Add-on functionalities

100+ references



Accessories



Partner boards

From full evaluation to open hardware

20+ references



*recommended resell price (RRP)



STM32CubeMCU Packages

Efficient and flexible access to the MCU features

LL drivers	HAL drivers
Lower abstraction level	Higher abstraction level
Lower code size	Higher portability and reuse
MISRA C compliant, statically analyzed, rigorously tested	
A large set of production-ready examples	
Available from st.com , GitHub, or STM32Cube tools	



STM32CubeMCU Packages

Faster development with an optimized and ported selection of market-reference middleware stacks

Middleware	Expansions
AzureRTOS ThreadX and FreeRTOS™ AzureRTOS USBX With support of audio, CDC, HID, DFU, PIMA, printer, and storage host and device classes AzureRTOS NetXDuo With support of TCP, UDP, IPv4, IPv6, http, MQTT, LWM2M, FTP, PPP, SMTP, and telnet FileX and levelX USB PD and open bootloader Secure boot, Secure Manager API	TouchGFX graphics solution, Motor control, Artificial intelligence MEMS and sensors Secure cloud connectors Functional safety self-test library
A large set of applicative examples	
Available from st.com, GitHub, or STM32Cube tools	

STM32 Developer Zone for MCUs & MPUs

Everything for STM32 MCU & MPU developers, in one place



A user-friendly environment to help developers every step of their design journey

Direct access to products, hardware and software tools, embedded software, developer resources

[STM32 MCU Developer Zone](#)

[STM32 MPU Developer Zone](#)

[Watch the short video](#)



A growing base of partners addressing customer challenges



 <u>Software development tools</u>	 <u>Training</u>
 <u>Hardware development tools</u>	 <u>Engineering services</u>
 <u>Embedded software</u>	 <u>Design houses</u>
 <u>Evaluation boards</u>	 <u>Global services</u>
 <u>Development boards</u>	
 <u>Companion devices</u>	
 <u>Hardware integrated devices</u>	



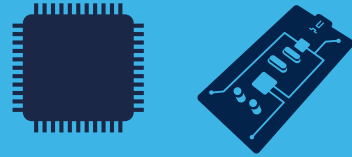
Click to discover our partners

Solutions with STM32





Helping you build advanced HMIs with a comprehensive STM32 graphic offering



STM32 hardware

STM32 silicon and development boards

TouchGFX

STM32 software

GUI development tools, GUI code
Examples, library of graphical assets



Extensive ecosystem



Vector graphics

Introducing NeoChrom and NeoChrom VG GPU

The NeoChrom GPU offloads the CPU from the graphic computations, freeing up the memory and boosting performance. Fully supported in X-CUBE-TOUCHGFX.



[Watch demos, tutorials, and more](#)

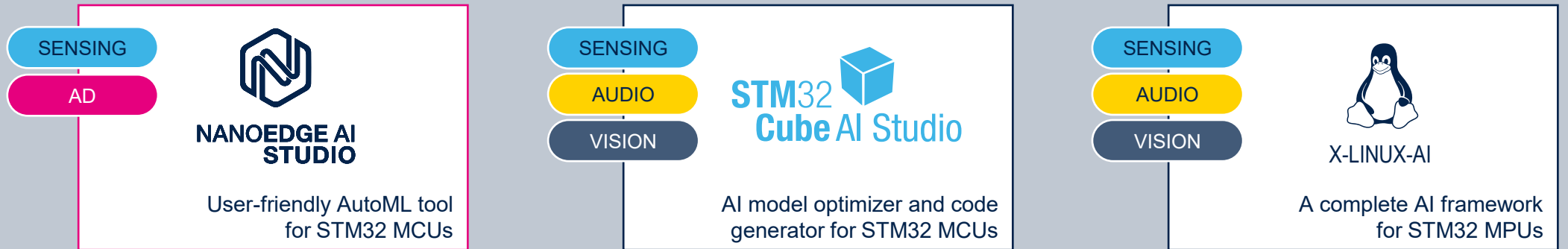


Making edge AI more accessible with STM32 solutions

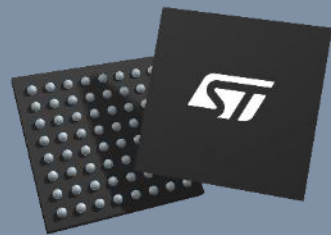
Enabling major edge AI technologies



Software tools for any user profile



Large choice of general purpose & **accelerated** hardware



STM32 MCUs



STM32N6 MCU



STM32MP1 & STM32MP2 MPUs



Fast-track your certification journey to meet functional safety standards with STM32

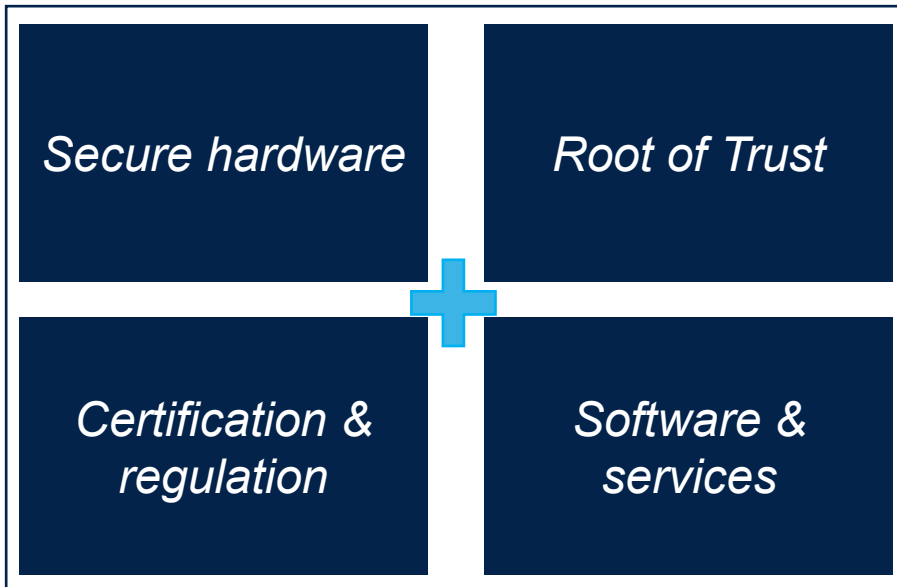
ST provides certified **functional safety packages** and documentation based on robust built-in MCU/MPU safety features.

- **SIL functional safety package**
for industrial IEC 61508 (STM32)
- **Class B functional safety package**
for household electrical appliances
IEC 60335-1/60730-1 (STM32 & STM8)

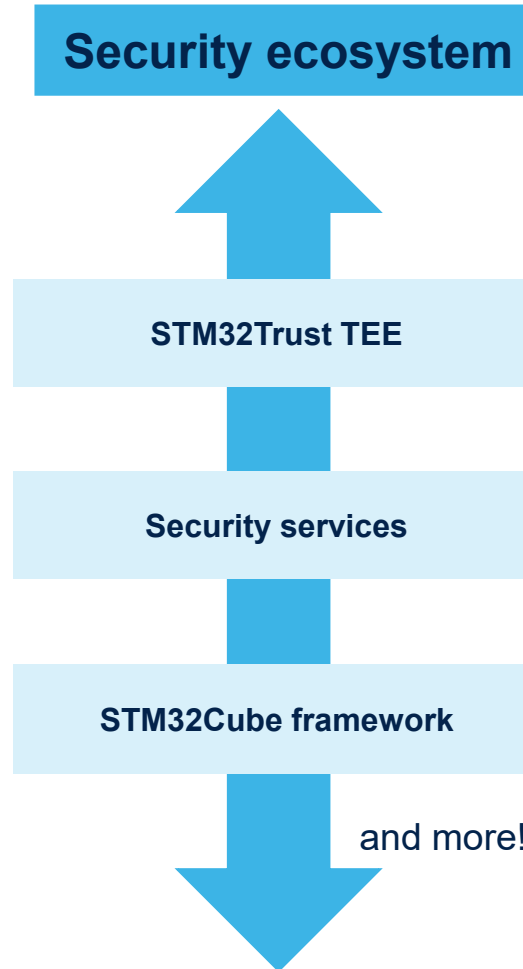


[STM32 Functional Safety](#)

Building trust in embedded systems: the pillars of STM32Trust

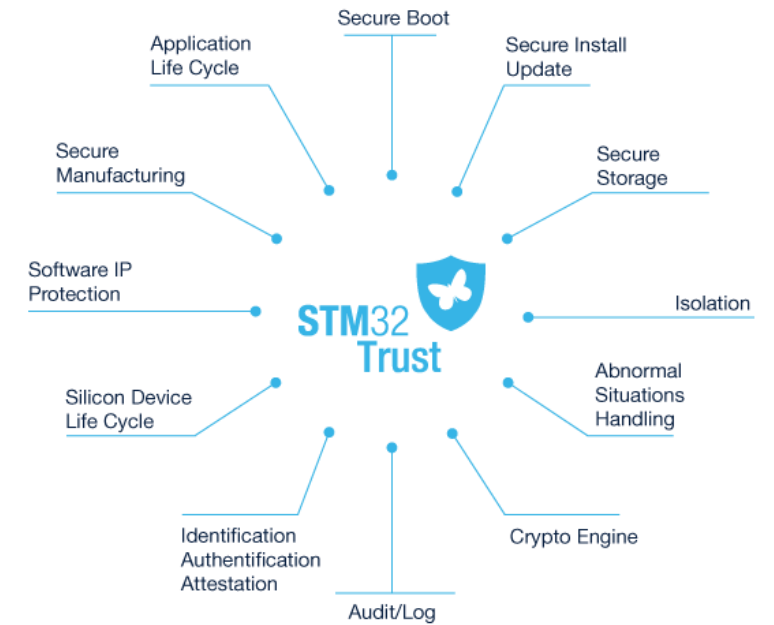


Security ecosystem



and more!

Security in STM32



Provide the right levels of security assurance thanks to the STM32Trust security functions



www.st.com/STM32Trust



STM32Trust – target certifications

 MPU	PCI DSS COMPLIANT STM32MP15 Native secure boot TF-A + OPTEE PSAL1SESIP3STM32MP13 Native secure boot External Memory encryption PSAL3SESIP3STM32MP25 Native secure boot External Memory encryption PSAL3SESIP3STM32MP23									
 High Perf MCUs	STM32F2	STM32F7	PSAL1STM32H7	PSAL3SESIP3STM32H5 Native secure boot Secure Manager & ST-RoT	PSAL3SESIP3STM32H7S Native secure boot ROMless	PSAL3SESIP3STM32N6				
 Mainstream MCUs										
	STM32F3	STM32F0	STM32F1	PSAL1STM32G4 Memory hide protect Feature	PSAL1STM32G0 Memory hide protect Feature	PSAL1STM32C0 Memory hide protect Feature				
 Ultra-low Power MCUs	PSAL1STM32L4 X-CUBE-SBSFU with STSAFE support	PSAL1STM32L4+	PSAL1SESIP3STM32L5 1 st STM32 With CM33 core	PCI DSS COMPLIANTPSAL3SESIP3STM32U5 1 st STM32 with secure storage hardware	PSAL3SESIP3STM32U0	PSAL3SESIP3STM32U3				
 Wireless MCUs										
	STM32WL5	PSAL1STM32WL3	STM32WB X-CUBE-SBSFU with Customer Key storage	PSAL1STM32WB0	PSAL3SESIP3STM32WBA					

Note: information reflects highest die security targets

● Mixed-signal MCUs

■ Latest-gen products

Motor control with STM32

Ease STM32 adoption for motor control

Providing development platform: MC-SDK (firmware library + workbench), MC pilot, MC profiler, hardware boards, documentation.

- Advanced motor control timer
- Rich and advanced analog peripherals embedded in the STM32
- Motor profiler
- STM32 ZeST and HSO / sensorless algorithms

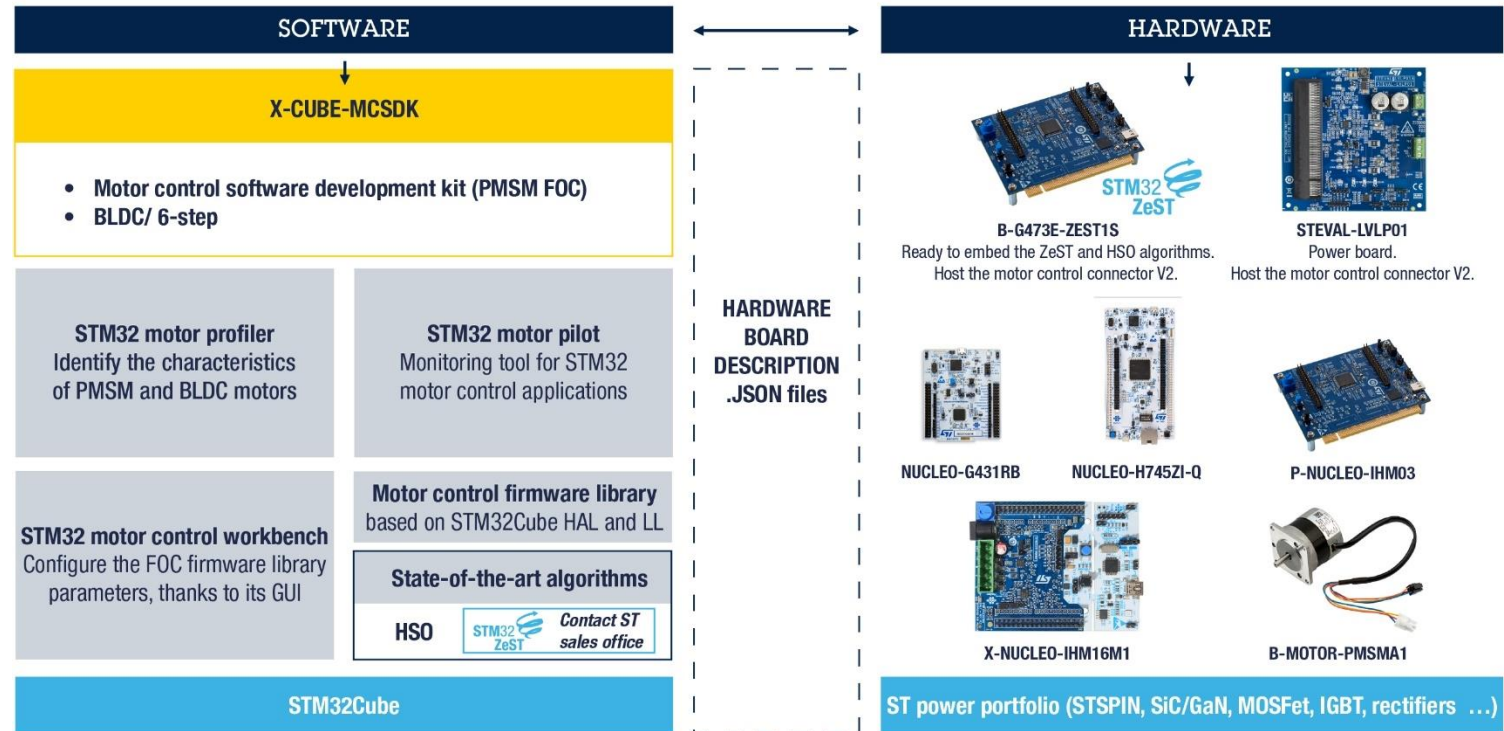
Large choice of power components and STM32 to create end-to-end motor control solutions.

Leverage ST portfolio



Software algorithm providing full torque at zero speed for any kind of BLDC/PMSM motor in sensorless mode (in addition to the observer HSO algorithm)

LATEST NEWS



[STM32 Ecosystem for motor control](#)

Digital power with STM32

Ease STM32 adoption for digital power converters

Development platforms:
DP SDK (PFC and PSU topology examples generator, firmware lib), hardware boards, docs, development tools.

Innovative products/peripherals and software algorithms

- High-resolution timer supporting numerous digital power topologies
- Rich and advanced analog peripherals embedded in STM32
- Hardware coprocessor usage
- Biricha method implementation (ST Authorized Partner)

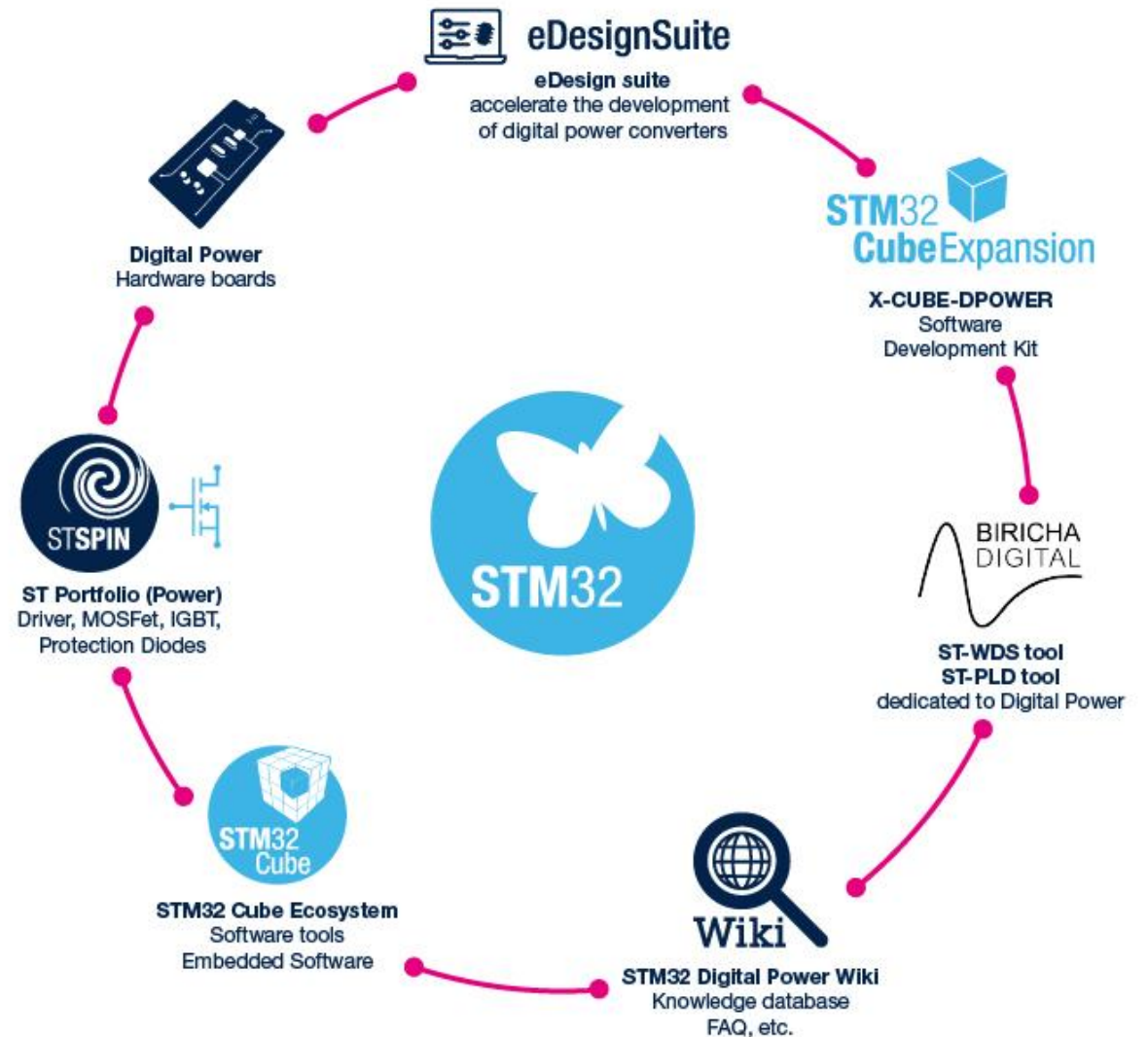
Leverage ST portfolio

Large choice of power components and STM32 to create end-to-end digital power solutions.

PFC and PSU within STM32CubeMX

Firmware pack importation with PFC and PSU topologies implementation in voltage or in current mode running on ST boards.

LATEST NEWS

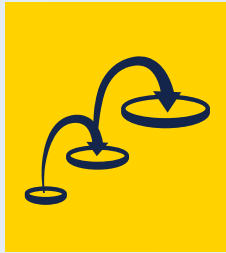


[STM32 for digital power](#)



Saving time, cost, and reducing complexity with STM32

STM32 with USB Type-C® connector simplifies your design, eliminating the need for an external PD controller



Fast prototyping without coding

- Ready-to-use hardware and firmware examples
- Code generation for all USB Type-C® roles on STM32
- Easy debug with STM32CubeMonUCPD software tool



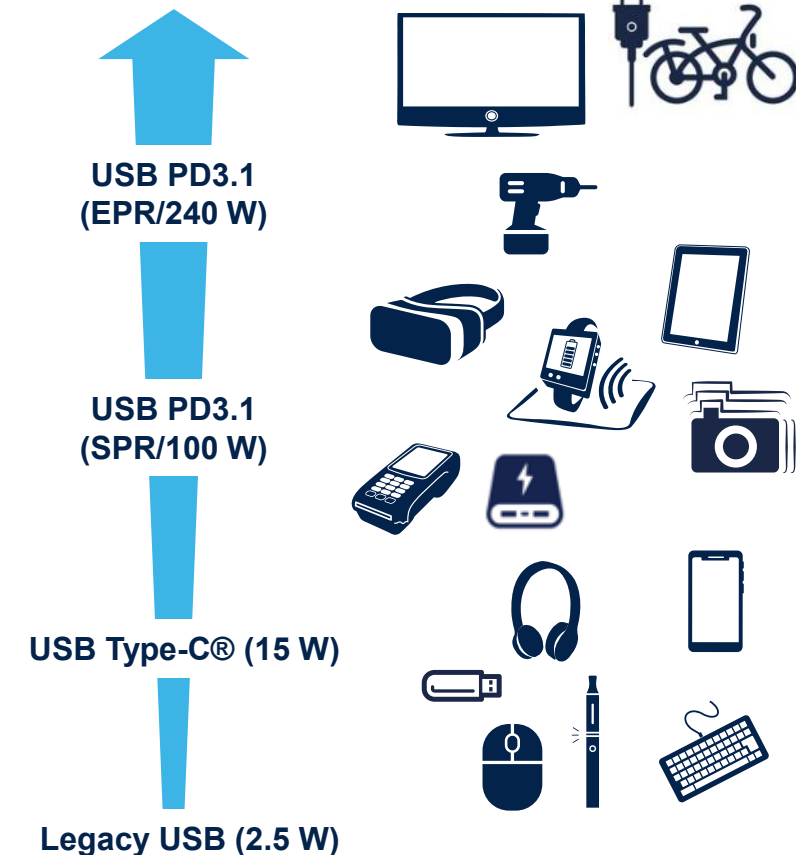
Optimize bill of material and safety

- CC logic, PD transceiver PHY, USB2 device/host interface
- Companion Type-C Port Protection devices (TCPP0x)



STM32 supports the latest USB Type-C® and PD3.1 standards

- SPR and EPR(*) power range up to 240 W, PPS ready. Sink, source, dual-role power, and data roles
- UCPD peripheral is USB-IF certified & supports connector management and USB PD r3.1 protocol (SPR, EPR*, PPS etc.)





Resources to move forward with your design

1+ million developers worldwide are using STM32.
Join them, share insights, and accelerate your design.



FIND INSIGHTS



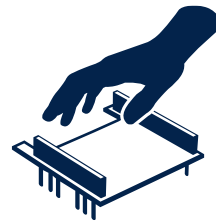
[Visit the STM32 Community](#)



[STM32 **MPU** Wiki](#)
[STM32 **MCU** Wiki](#)



[GitHub–STMicroelectronics](#)
[GitHub–STM32 hotspot](#)



LEARN & PRACTICE NEW SKILLS



[STM32 education](#)



[STM32 **MCU** Developer Zone](#)
[STM32 **MPU** Developer Zone](#)



[Check out our events, workshops, & webinars](#)



STAY UP TO DATE



[The ST blog](#)



[STM32 YouTube channel](#)



[ST LinkedIn](#)



[/STM32](#)



[@ST_World](#)

Our technology starts with You



Find out more at www.st.com/STM32

© STMicroelectronics - All rights reserved.

ST logo is a trademark or a registered trademark of STMicroelectronics International NV or its affiliates in the EU and/or other countries.

For additional information about ST trademarks, please refer to www.st.com/trademarks.

All other product or service names are the property of their respective owners.

