

Mikrokontroler & Mikroprosesor












ROBONESIA.com
more than robotics learning


MCUs & MPUs

STMicroelectronics (STM)


- Microcontroller (MCU)
 1. STM**8** (8-bit)
 2. STM**32** (32-bit)
 3. STM32-**SPC5** (32-bit)
- Microprocessor (MPU)
 1. STM32 **MPU** (32-bit)

8-bit MCUs		32-bit MCUs and MPUs	
			
Discover STM8 8-bit MCUs		Discover STM32 32-bit MPUs	Discover SPC5 32-bit MCUs
	MPU	STM32MP1	
	High Performance MCUs	STM32H7 STM32F7 STM32F4 STM32F2	
	Mainstream MCUs	STM8S	STM32G0 STM32F0 STM32F1 STM32G4 STM32F3
	Ultra-low-power MCUs	STM8L	STM32U5 STM32L5 STM32L4+ STM32L4 STM32L1 STM32L0
	Wireless MCUs	STM32WB STM32WL	
	Automotive MCUs	STM8AF STM8AL	SPC56 SPC57 SPC58






8-Bit MCU




STM8 8-bit MCUs Core up to 24 MHz



STM8 Ecosystem

 Mainstream	Industrial, consumer and mass market	Robust and reliable Up to 125 °C	STM8S Data EEPROM, 3 and 5 V families, precise RC	
 Ultra-low-power	Ideal combination of low-power performance and features	High-end analog IPs Active Halt < 1 µA	STM8L Data EEPROM, 1.65 and 3 V families, strong analog, LCD drivers, low-leakage technology	
 Automotive	Long-term guarantee	AEC-Q100 Up to 150 °C	STM8AF Data EEPROM, 3 and 5 V families, precise RC, LIN, CAN, grade 0	 ASIL Ready
	Long-term guarantee	AEC-Q100 Up to 125 °C	STM8AL Data EEPROM, 1.65 and 3 V families, strong analog, LCD drivers, low-leakage technology	 ASIL Ready



Join the STM8 Community!

<http://community.st.com/stm8>

Software tools

STM8CubeMX
Configuration tool

Integrated Development Environments (IDE)

STM Studio Monitoring tool

▶ More software tools

Embedded software

Standard Peripheral Library for STM8L (8kb)

Standard Peripheral Library for STM8L/AL (64kb)

Standard Peripheral Library for STM8A/S

▶ More embedded software

Hardware tools

STM8 Discovery kits, Nucleo and evaluation boards

ST-LINK in-circuit debugger/programmer

32-Bit MCU



STM32 MCUs 32-bit Arm® Cortex®-M



High
Performance

STM32F2

398 CoreMark
120 MHz Cortex-M3

STM32F4

608 CoreMark
180 MHz Cortex-M4

STM32F7

1082 CoreMark
216 MHz Cortex-M7

STM32H7

Up to 3224 CoreMark
Up to 550 MHz
Cortex-M7
240 MHz Cortex-M4



Mainstream

STM32G0

142 CoreMark
64 MHz Cortex-M0+

STM32G4

569 CoreMark
170 MHz Cortex-M4

STM32F0

106 CoreMark
48 MHz Cortex-M0

STM32F1

177 CoreMark
72 MHz Cortex-M3

STM32F3

245 CoreMark
72 MHz Cortex-M4

Optimized for
mixed-signal applications



Ultra-low
power

STM32L4+

409 CoreMark
120 MHz Cortex-M4

STM32U5

651 CoreMark
160 MHz Cortex-M33

STM32L0

75 CoreMark
32 MHz Cortex-M0+

STM32L1

93 CoreMark
32 MHz Cortex-M3

STM32L4

273 CoreMark
80 MHz Cortex-M4

STM32L5

443 CoreMark
110 MHz Cortex-M33



Wireless

STM32WL

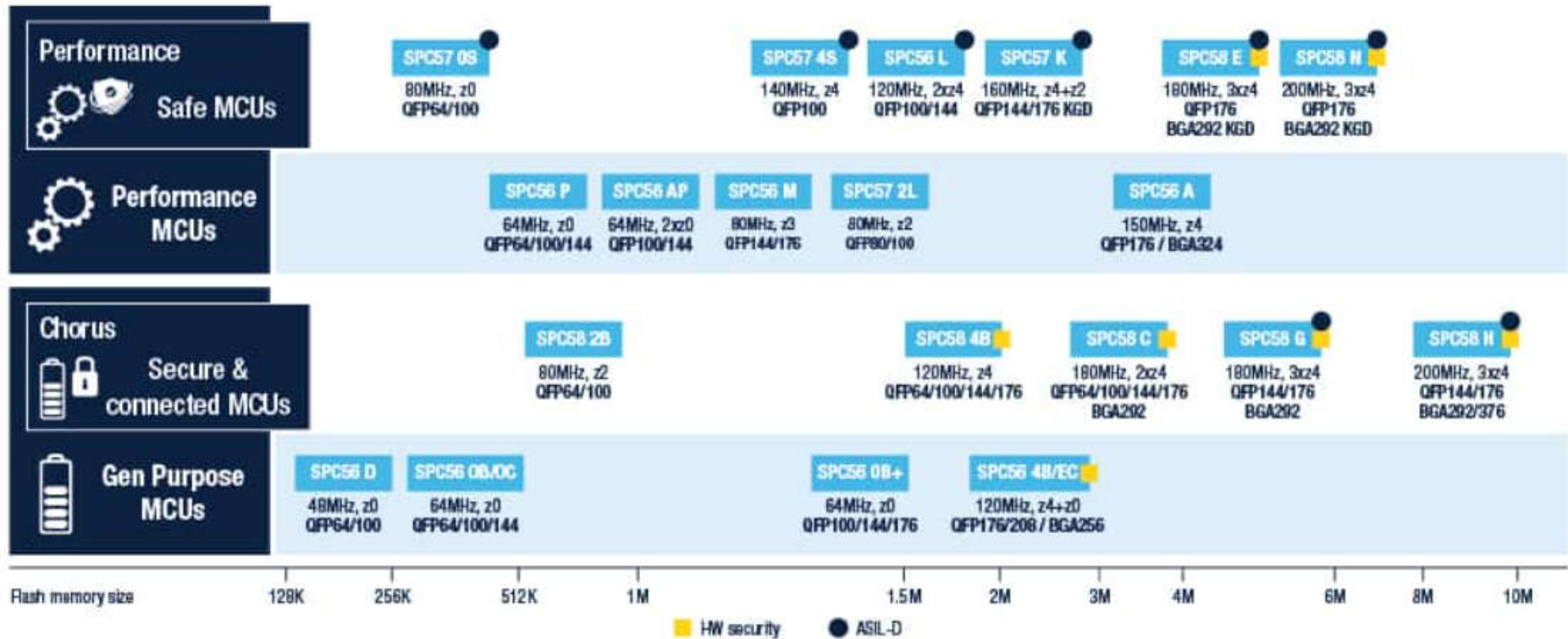
162 CoreMark
48 MHz Cortex-M4
48 MHz Cortex-M0+

STM32WB


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

Cortex-M0+
Radio co-processor

32-Bit Automotive MCU





32-Bit MPU



STM32 MPUs


32-bit Arm® Cortex®-A & -M





MPU
@ 800 MHz

STM32MP151D	STM32MP151F	STM32MP153D	STM32MP153F	STM32MP157D	STM32MP157F
1520 + 260 DMIPS 800 MHz Cortex-A7 209 MHz Cortex-M4	- - - Security	3040 + 260 DMIPS 800 MHz 2x Cortex-A7 209 MHz Cortex-M4 CAN FD	- - - Security	3040 + 260 DMIPS 800 MHz 2x Cortex-A7 209 MHz Cortex-M4 CAN FD - 3D GPU - DSI	- - - Security



MPU
@ 650 MHz


STM32MP151A	STM32MP151C	STM32MP153A	STM32MP153C	STM32MP157A	STM32MP157C
1235 + 260 DMIPS 650 MHz Cortex-A7 209 MHz Cortex-M4	- - - Security	2470 + 260 DMIPS 650 MHz 2x Cortex-A7 209 MHz Cortex-M4 CAN FD	- - - Security	2470 + 260 DMIPS 650 MHz 2x Cortex-A7 209 MHz Cortex-M4 CAN FD - 3D GPU - DSI	- - - Security


Arm® Cortex® core


Cortex-A7 + Cortex-M4


Dual Cortex-A7 + Cortex-M4


STM32 Ecosystem


STM32Cube



Evaluation tools



Software tools


Embedded Software



Hardware Tools



Security
STM32 Trust



MadeFor STM32



ST Partners



STM32 Solutions


Artificial Neural Networks



Audio/Voice


Graphical User Interface


Motor Control


Safety
Safety Ready


USB Type-C


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Reference

<https://www.st.com/en/microcontrollers-microprocessors.html#overview>



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Terima kasih



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