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STM32L0x0 Value Line





STM32 MCUs and MPUs portfolio



STM32MP1
 4158 CoreMark
 Up to 800 MHz Cortex-A7
 209 MHz Cortex-M4

MPU

High Perf MCUs

Mainstream MCUs

Ultra-low Power MCUs

Wireless MCUs

			STM32F2 Up to 398 CoreMark 120 MHz Cortex-M3	STM32F4 Up to 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	
	STM32F0 106 CoreMark 48 MHz Cortex-M0	STM32G0 142 CoreMark 64 MHz Cortex-M0+	STM32F1 177 CoreMark 72 MHz Cortex-M3				
			STM32F3 245 CoreMark 72 MHz Cortex-M4	STM32G4 569 CoreMark 170 MHz Cortex-M4			<i>Mixed-signal MCUs</i>
	STM32L0 75 CoreMark 32 MHz Cortex-M0+	STM32L1 93 CoreMark 32 MHz Cortex-M3	STM32L4 273 CoreMark 80 MHz Cortex-M4	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+	STM32WB 216 CoreMark 64 MHz Cortex-M4 32 MHz Cortex-M0+ ●			

■ Latest product generation ● Radio co-processor only





STM32L0x0 Value Line

Our new cost-efficient solution with 20- to 64-pin packages

STM32 Cortex-M0+ 32Mhz



- Up to 128Kbytes of FLASH memory
- up to 512B Internal EEPROM

No compromise on low power



- Standby:
down to 230 μA
- Stop mode with RAM retention:
down to 340 μA
- Run mode:
down to 76* $\mu\text{A}/\text{MHz}$

Available in Mass production



- From 20 to 64 pins
- From 16 to 128 Kbytes
- Pin-to-pin compatible with STM32 portfolio

* Down to 49 $\mu\text{A}/\text{MHz}$ with external SMPS



STM32L0 series portfolio

Up to four lines for more flexibility

<ul style="list-style-type: none"> • Ultra low leakage process • Dynamic voltage scaling • 14 to 100-pin • 5 clock sources • Advanced RTC w/ calibration • 12-bit ADC 1.14 Msp/s • Multiple USART, SPI, I²C • Multiple 16-bit timers • LP UART1 • LP Timers1 • 2 watchdogs • Reset circuitry POR/PDR • Brown-out Reset • DMA • AES-128 	Product line	Flash (KB)	RAM (KB)	EE - PROM (Bytes)	Power supply	PVD ²	TEMP sensor	2x ULP COMP	2x 12-bit DAC	Touch sense	TRNG	USB 2.0 FS Crystal-less	Segment LCD Driver
	STM32L0x0 Value line	Up to 128	Up to 20	Up to 512	Down to 1.8V								
	STM32L0x1 Access	Up to 192	Up to 20	Up to 6K	Down to 1.65V	•	•	•					
	STM32L0x2 USB	Up to 192	Up to 20	Up to 6K	Down to 1.65V	•	•	•	•	•	•	•	
	STM32L0x3 USB & LCD	Up to 192	Up to 20	Up to 6K	Down to 1.65V	•	•	•	•	•	•	•	Up to 4x52 or 8x48

New Value line

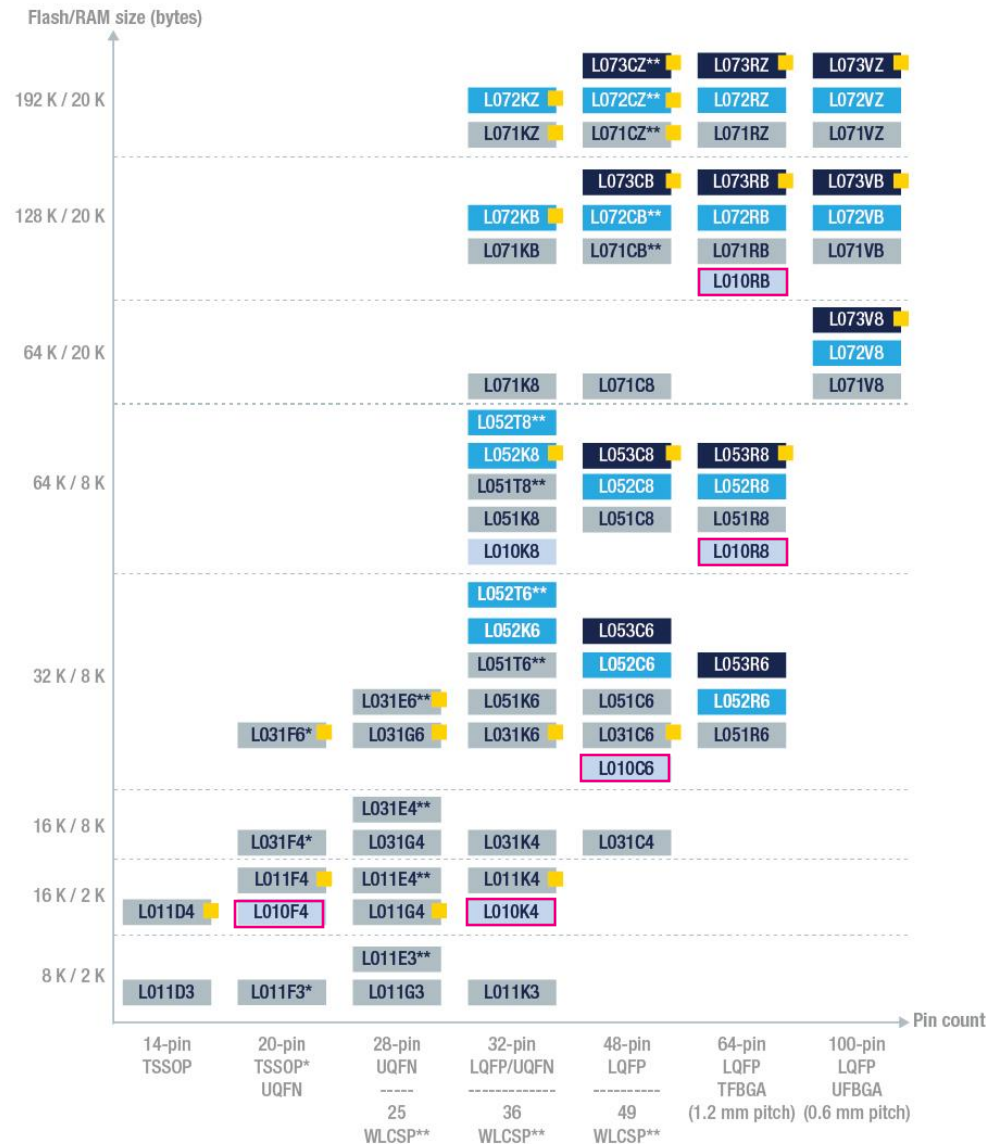
Note 1: Low-power peripherals available in ultra-low-power modes

Note 2: PVD = Programmable voltage detector





STM32L0 series portfolio



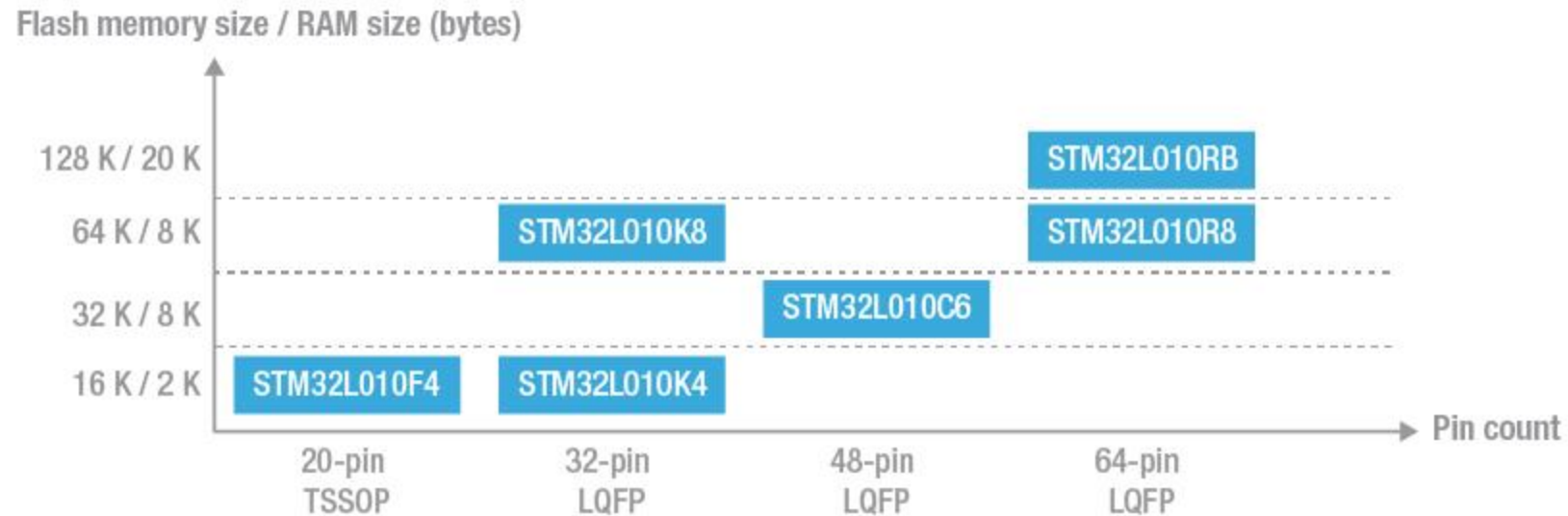
Caption

- **STM32L0x0: Value line** New
- STM32L0x1: Access line
- STM32L0x2: USB 2.0 FS + advanced analog and peripherals
- STM32L0x3: STM32L0x2 + LCD
- 128-bit AES hardware encryption



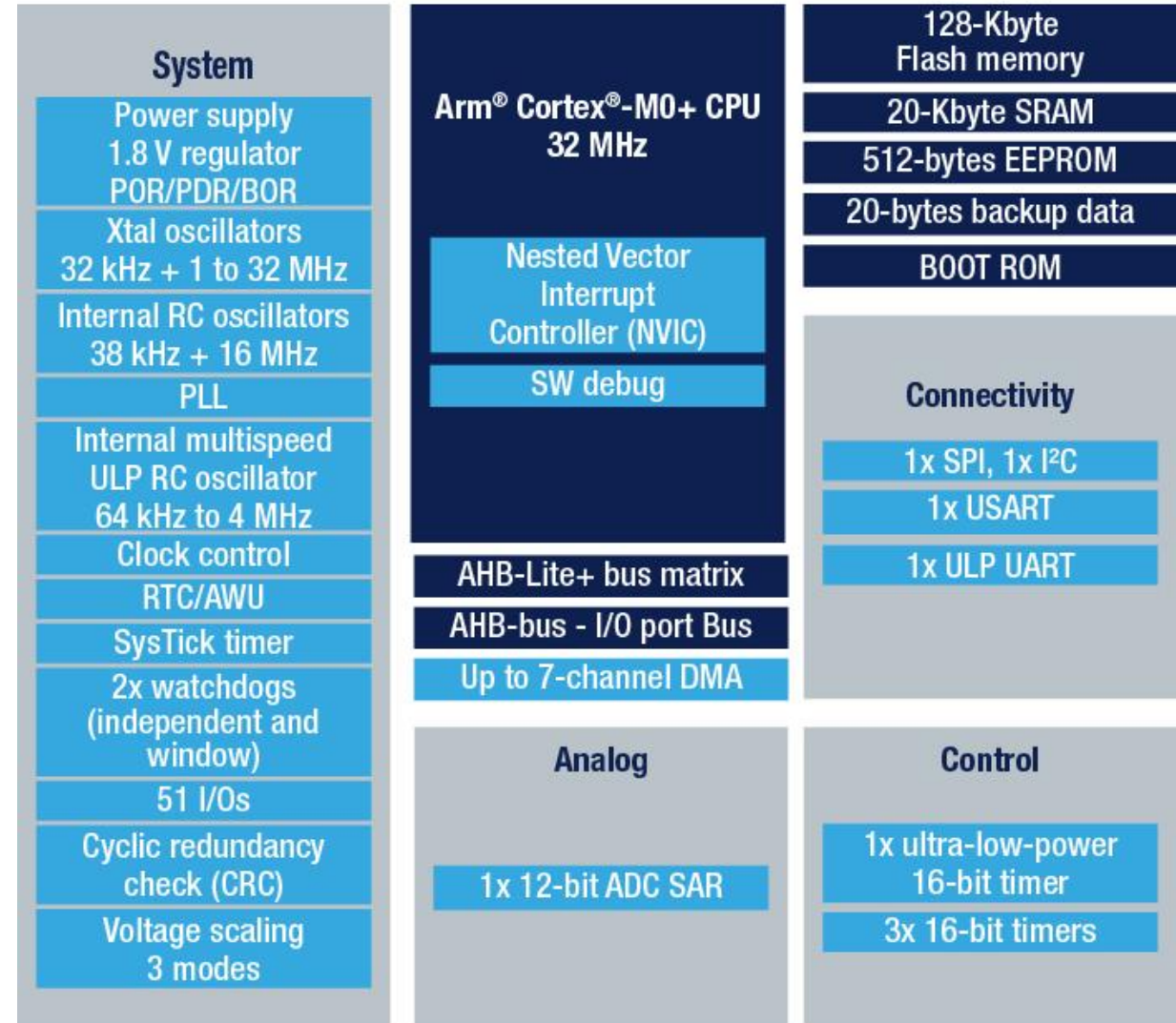
STM32L0x0 Value Line portfolio

Simple, affordable ultra-low-power STM32 MCUs



STM32L0x0 Value Line ultra-low-power basics

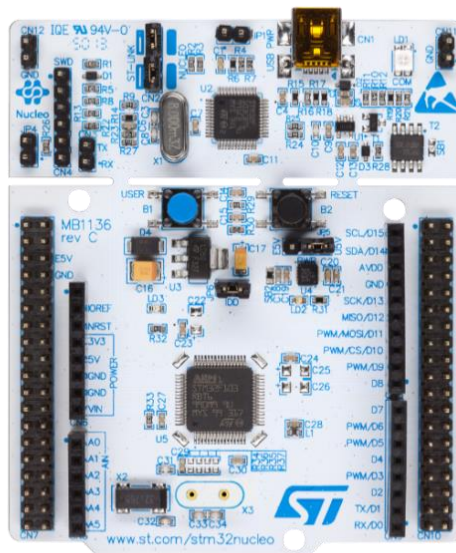
- Core
 - Arm® Cortex® M0+ @ 32 MHz
- Ultra-low-power peripherals
 - LPUART (down to stop mode)
 - LPTIMER (down to stop mode)
 - RTC (down to standby mode)
- Supply
 - 1.8V to 3.6V
- 6 Part Numbers
- Package
 - 20-pin TSSOP
 - 32-, 48-, 64-pin LQFP



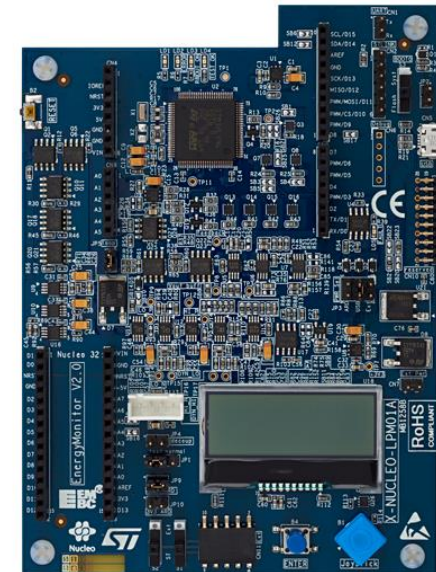
STM32L0x0 Value Line ecosystem hardware development tools

Development tools adapted to your needs

arm
MBED
Enabled



Nucleo board

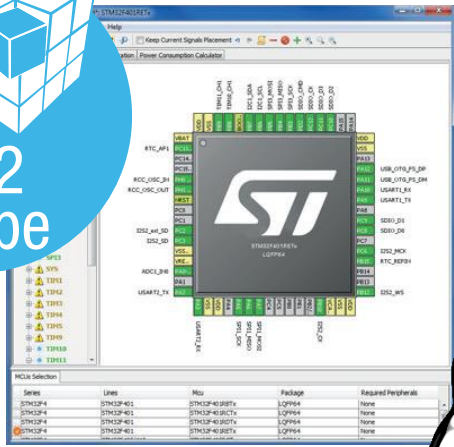
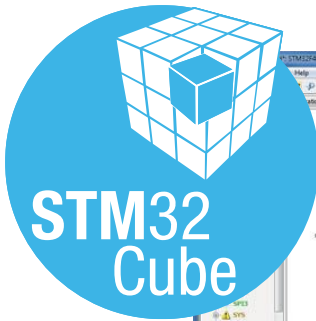


Nucleo expansion board



STM32L0x0 Value Line ecosystem software development tools

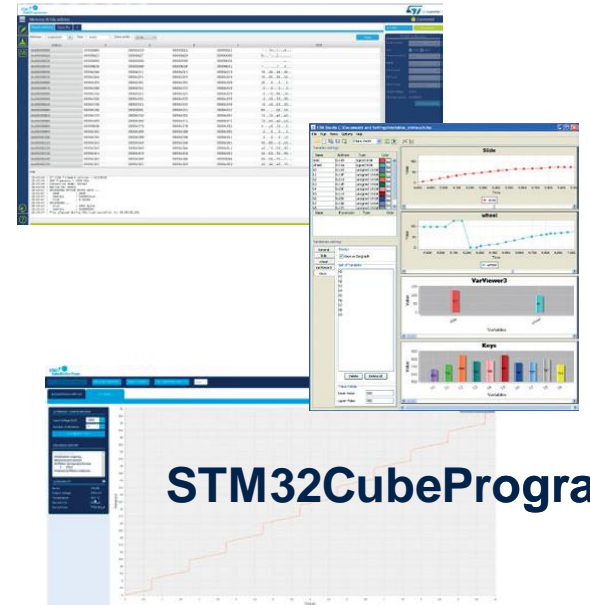
A complete flow, from configuration up to monitoring



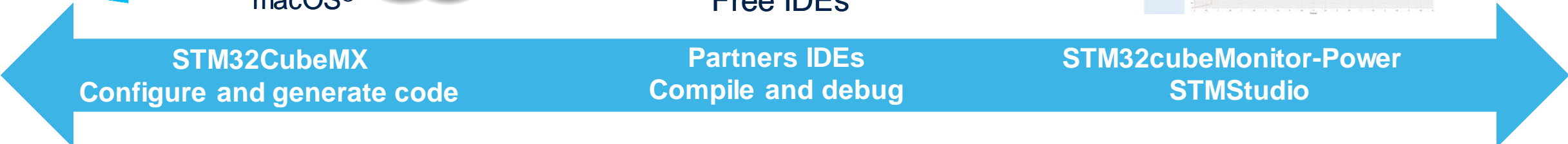
Windows macOS®



Free IDEs



STM32CubeProgrammer



STM32CubeMX
Configure and generate code

Partners IDEs
Compile and debug

STM32cubeMonitor-Power
STMStudio



Releasing your creativity



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Our technology starts with You



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