

STM32G0 SERIES

32-bit Mainstream MCUs



Entry-level Arm® Cortex®-M0+ Microcontrollers - Efficiency at its best

The STM32G0 Series is not simply another Arm® Cortex®-M0+ MCU. It is setting a new definition of what an efficient microcontroller must offer. This is all about best optimization, down to each and every detail, to offer the best value for money and allow you to achieve your goals with the minimum BOM cost and the maximum flexibility for upgrades. The STM32G0x0 Value Line embeds an accurate internal clock allowing further cost saving, and makes no compromise on what matters. The STM32G0x1 line provides upgraded features in analog, timer resolution up to 2xfcpu (7.8ns) and is IoT ready with enhanced security features. It supports FDCAN, USB crystal-less and the latest USB type-C specification including Power Delivery 3.0.

EFFICIENT

- Arm® Cortex® M0+ at 64 MHz
- Compact cost: maximum I/Os count
- Best RAM/Flash Ratio
- Smallest possible package down to 8-pin
- Large platform up to 512 Kbytes Flash in small packages
- 500 nA in standby with RTC, 3.5 µA in stop mode, <100 µA/MHz
- Accurate internal high-speed clock 1% RCI
- Offers the best value for money
- Free tool suite

ROBUST

- Low electromagnetic susceptibility, EMC
- Clock Monitoring and 2 Watchdogs
- Voltage monitoring with interrupts and reset
- Error correction on Flash, parity on RAM
- IoT ready with embedded security
- Hardware AES-256 encryption
- Safe Firmware upgrade / Install

SIMPLE

- Easy to configure thanks to the intuitive and graphic STM32CubeMX configuration tool.
- Easy to develop based on the Hardware Abstraction Layer library (HAL) or the lowlayer library (LL) allowing maximum re-use and faster

STM32G0C1 block diagram



Hardware Tools

A full set of evaluation boards enables flexible prototyping as well as full STM32G0 evaluation.



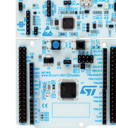
STM32G081B-EVAL
STM32G0C1E-EV
Evaluation boards



STM32G0316-DISCO /
STM32G071B-DISCO (USB Type-C™)
Discovery Kits



NUCLEO-G031K8
(32-pin Nucleo)



NUCLEO-G070RB / NUCLEO-G071RB
NUCLEO-G0B1RE
(64-pin Nucleo)

Software Tools

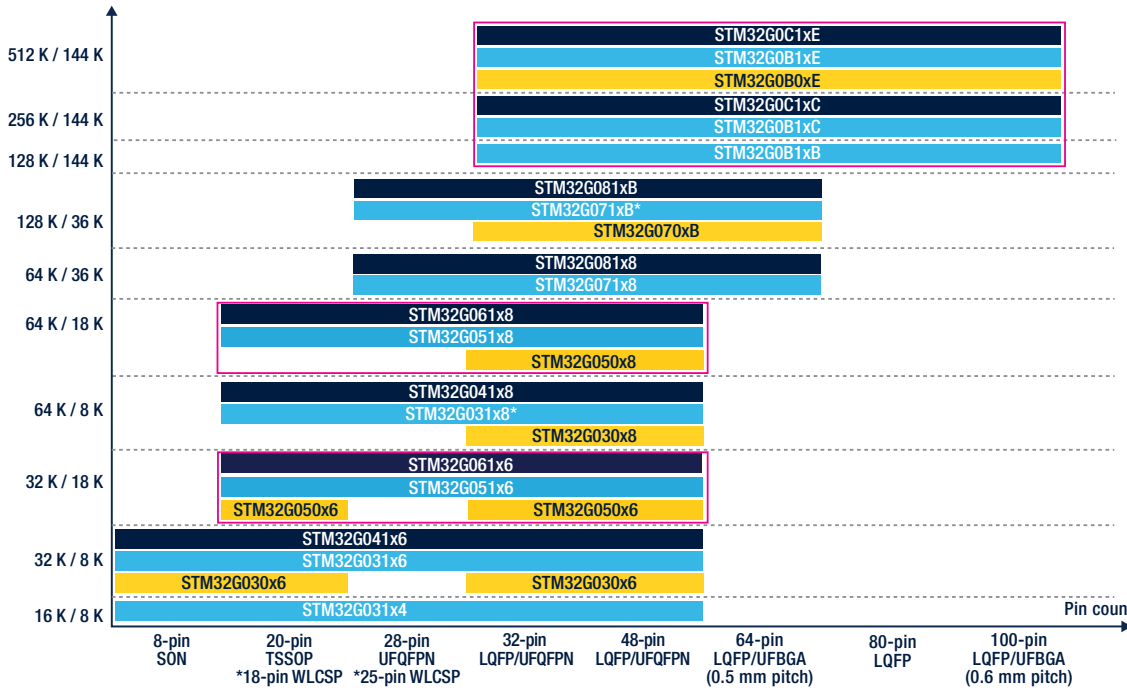
STM32CubeMX enables fast development thanks to its MCU clock configurator, power consumption calculator and code generation tools.

Embedded Software

The STM32CubeG0 package includes the STM32Cube HAL and low-layer (LL) APIs peripheral drivers, plus a consistent set of middleware components (RTOS, USB, USB Power Delivery, FatFS, graphics and STM32 touch sensing). All embedded software utilities come with a full set of examples running on ST boards.

STM32G0 portfolio

Flash memory size / RAM size (bytes)



Legend :

- STM32G0x1 Access line With 128-/256-bit AES Hardware Encryption
- STM32G0x1 Access line Without 128-/256-bit AES Hardware Encryption
- STM32G0x0 Value line
- New product introduction



STM32G0 ONLINE TRAINING
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