

# STM32U5 SERIES

The flagship of ultra-low power MCUs with advanced performance and security



Discover the secure, high-performance, and ultra-low power STM32 microcontrollers that will revolutionize your design.

The STM32U5 series offers advanced power-saving microcontrollers, based on Arm® Cortex®-M33 to meet the most demanding power/performance requirements for smart applications, including wearables, HMI, personal medical devices, home automation, and industrial sensors.

Offering up to 4 Mbytes of flash memory (dual bank) memory and 2514 Kbytes of SRAM, the STM32U5 series of microcontrollers takes performance to the next level with advanced graphics capabilities.

#### ULTRA-LOW POWER

- Down to 16  $\mu$ A/MHz in active mode,
- Down to 110 nA in low power mode
- Low power background autonomous mode (LPBAM)

#### EMBEDDED SECURITY

- AES and PKA side-channel hardware resistant
- PSA and SESIP level 3 certified
- Arm® Cortex®-M33 with TrustZone®

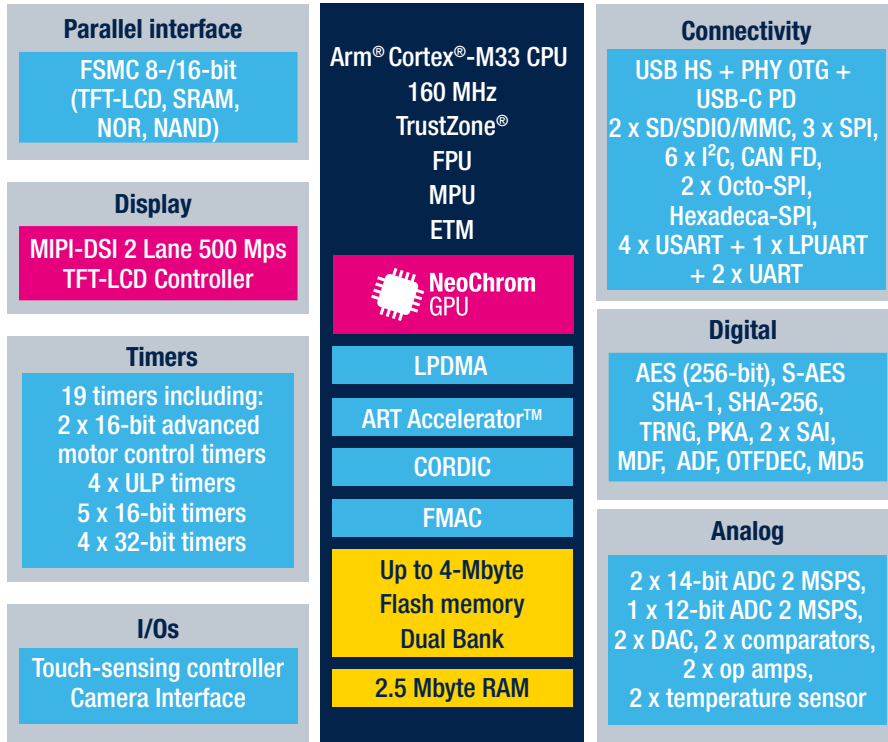
#### HIGH INTEGRATION

- Up to 4 Mbytes of flash memory
- Up to 2.5 Mbytes SRAM
- Rich set of peripherals

#### OUTSTANDING GRAPHICS

- 2.5D graphic accelerator for
- Scaling
  - Rotation
  - Perspective correct texture mapping

## STM32U5A9 block diagram



## Hardware tools

### Evaluation board

Full-featured development platform



STM32U575I-EV

### Discovery kit

Flexible prototyping with wireless connectivity or graphics



B-U585I-I0T02A



STM32U5A9J-DK

### STM32 Nucleo board

An affordable and flexible way to try out new concepts



NUCLEO-U575ZI-Q  
NUCLEO-U5A5ZJ-Q



NUCLEO-U545RE-Q

## SOFTWARE TOOLS

STM32U5 connects smart things to the cloud in a secure way, with STM32Cube packages.



## SECURITY

The STM32Trust framework combines ST's knowledge, design tools, and ready-to-use software to build strong cyber-protection into new IoT devices, leveraging industry best practices.



[www.st.com/stm32trust](http://www.st.com/stm32trust)

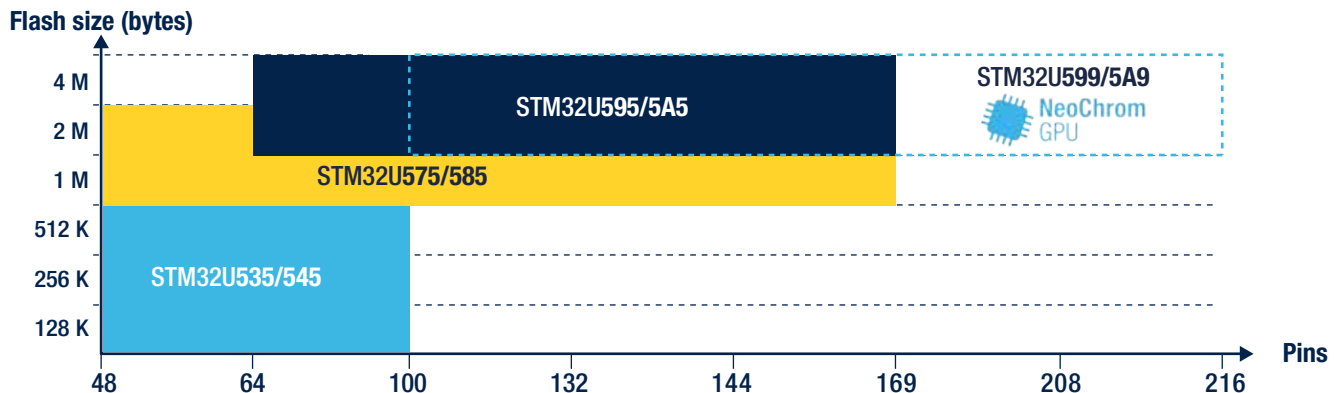
## STM32 COMMUNITY

[community.st.com/stm32](http://community.st.com/stm32)

## STM32U5 ON-LINE TRAINING

[www.st.com/stm32u5-online-training](http://www.st.com/stm32u5-online-training)

## STM32U5 Portfolio



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