

# STM32MP23 MPU lines

# Cost-optimized 64-bit microprocessors with Neural Processing Unit



Boost ML edge computing capabilities with the cost-optimized STM32MP23 for secure IoT applications

Like the STM32MP25, the STM32MP23 lines are built around single or dual Arm<sup>®</sup> Cortex<sup>®</sup>-A35 cores running up to 1.5 GHz and a single Arm<sup>®</sup> Cortex<sup>®</sup>-M33 core running up to 400 MHz.

The STM32MP23 lines are optimized for cost and performance, providing the same processing level as the previous MP2 without highspeed connectivity.

The STM32MP23 MPUs meet the demands of industrial applications, offering extended temperature tolerance up to 125°C.

#### ADVANCED COMPUTE CAPABILITIES

Embedded neural network accelerator (0.6 TOPS) for advanced AI/ML for HMI/machine vision or predictive maintenance at the industrial and IoT edge

### ENHANCED MULTIMEDIA CAPABILITIES

- Multimedia capabilities for advanced HMI with 3D GPU (up to 1080p, including Vulkan support)
- H.264 HW video decoder and flexible display interfaces with RGB, MIPI DSI and LVDS (for high-quality video & versatile display options)
- MIPI CSI-2 camera interface with

image signal processor for raw Bayer camera sensor (enabling high-quality image processing & computer vision applications)

#### STRONG SECURITY

- SESIP3 and PSA certified level 3 Target certifications
- TrustZone<sup>®</sup> on Cortex<sup>®</sup>-A and Cortex<sup>®</sup>-M
- Secure provisioning ecosystem
- Secure isolation for edge confidential computing thanks to resource isolation framework

## Extended ecosystem maintenance to meet industry and security challenges



#### Strong STM32 ecosystem

With the fully mainlined OpenSTLinux distribution and the STM32Cube ecosystem, developing your next industrial design has never been easier. Users can now rely on STM32CubeMX, Multi-Core IDE solutions, and STM32CubeProgrammer to configure, develop, debug, and program their MPUs. The STM32CubeMP2, part of the STM32Cube MPU Packages offer, provides BSP, HAL, middleware components, and application packages in source code for development. With the **OpenSTLinux Expansion** packages offer, users can enhance their MPU-based applications using graphics, real-time, and other features.

#### Extended maintenance

Our Linux distributions (Yocto -OpenSTLinux, Buildroot, OpenWRT, OpenSTDroid\*) maintenance is now extended from 2 to 5 years. This provides longer support for industrial customers, thus reducing maintenance costs. It will also help in being compliant with upcoming CRA (European Cyber Resilience Act) regulations' needs during the whole product lifecycle.

#### 10 years longevity program

Like all STM32 products, the STM32MP23 is part of the **10year longevity program**, providing customers with confidence for new product developments.

#### ST Partner Program

Hardware tools

Customers can trust on a strong collaboration with partners offering products and solutions to faster time-to-market with STM32 MPUs, especially **system-on-modules** and software solutions providers.



# A full set of evaluation boards enables flexible prototyping **Discovery kit** STM32MP257F-DK To help you get started with the evaluation of the STM32MP23x product lines, you can rely on the STM32MP257F-DK Discovery kit and the applicable STM32 MPU embedded software, running with the STM32MP23 configuration (peripherals, features, and performance). It comes with a set of hardware accessories (camera, display...). These solutions enable faster time-to-market with STM32 MPUs. **Dedicated STPMIC25** for power management **STPMIC**

#### STM32MPU Wiki

Explore articles about the STM32MPU family and its associated ecosystems at: **wiki.st.com/stm32mpu/** 

\*only available on STM32MP25x product lines



© STMicroelectronics - April 2025 - Printed in the United Kingdom - All rights reserved ST and the ST logo are registered and/or unregistered trademarks of STMicroelectronics International NV or its affiliates in the EU and/or elsewhere. In particular, ST and the ST logo are Registered in the US Patent and Trademark Office. 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.

