

Introduction to the STM32MP1 Microprocessor Series

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Product Marketing



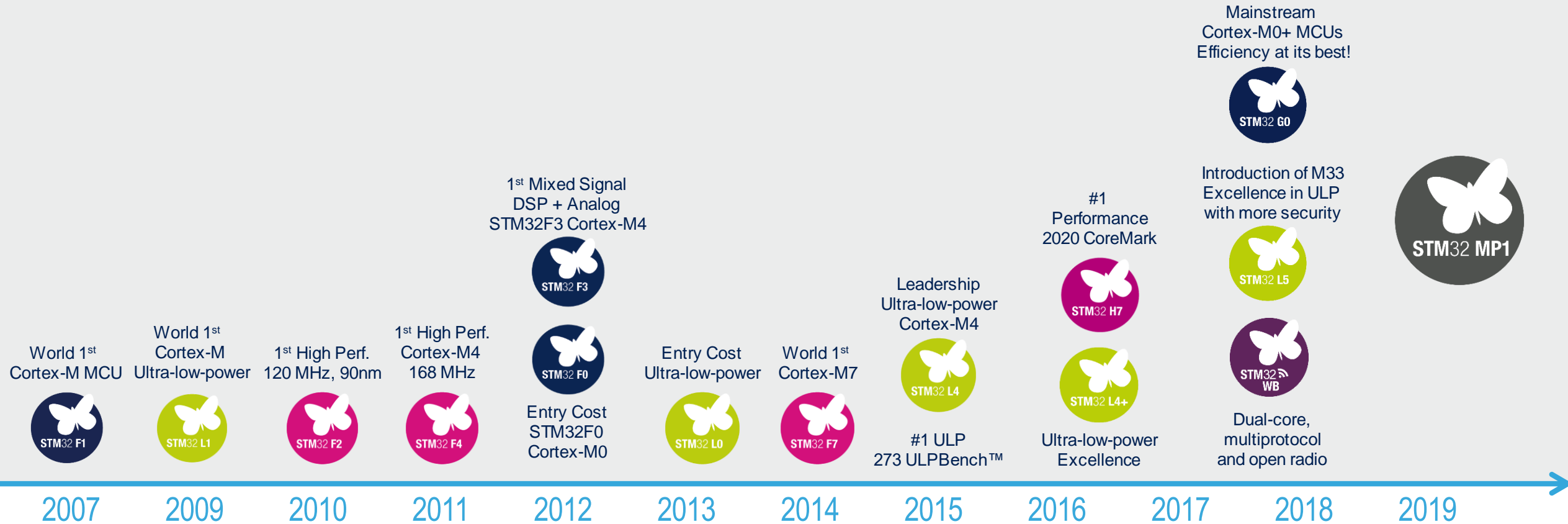
Extending STM32 Success and Commitment with Microprocessors



Continuing the STM32 Success Story

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Leader in Arm Cortex-M 32-bit General Purpose MCU



STM32 Rolling Longevity Commitment

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Longevity commitment is renewed every year



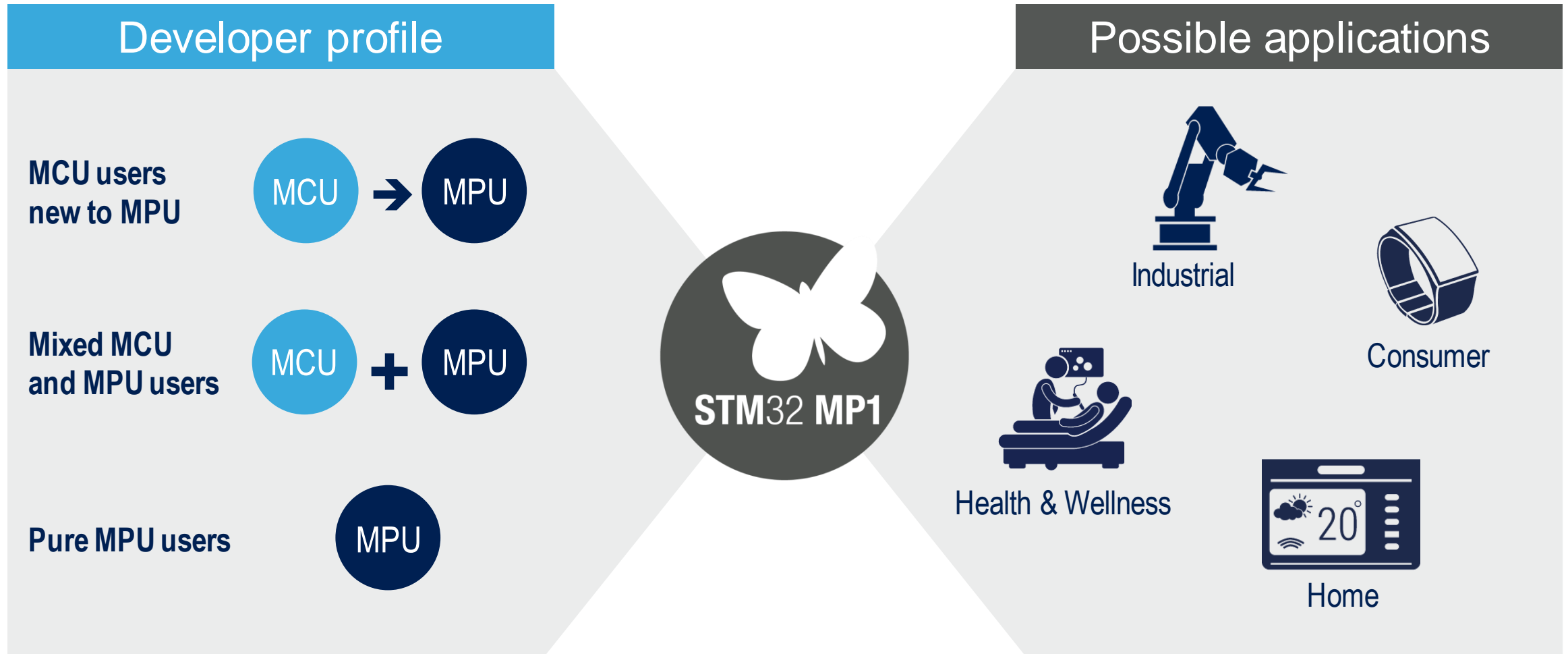
starting January
1st 2019
→ Until 2029

• STM32F1	(launched in 2007)	22 years of commitment
• STM32L1	(launched in 2009)	20 years of commitment
• STM32F2	(launched in 2010)	19 years of commitment
• STM32F4	(launched in 2011)	18 years of commitment
• STM32F0	(launched in 2012)	17 years of commitment
• STM32F3	(launched in 2012)	17 years of commitment
• STM32L0	(launched in 2013)	16 years of commitment
• STM32F7	(launched in 2014)	15 years of commitment
• STM32L4	(launched in 2015)	14 years of commitment
• STM32L4+	(launched in 2016)	13 years of commitment
• STM32H7	(launched in 2016)	13 years of commitment
• STM32WB	(launched in 2018)	11 years of commitment
• STM32G0	(launched in 2018)	11 years of commitment

STM32MP1: A General Purpose MPU

Suitable for all Developer Types and Multiple Applications

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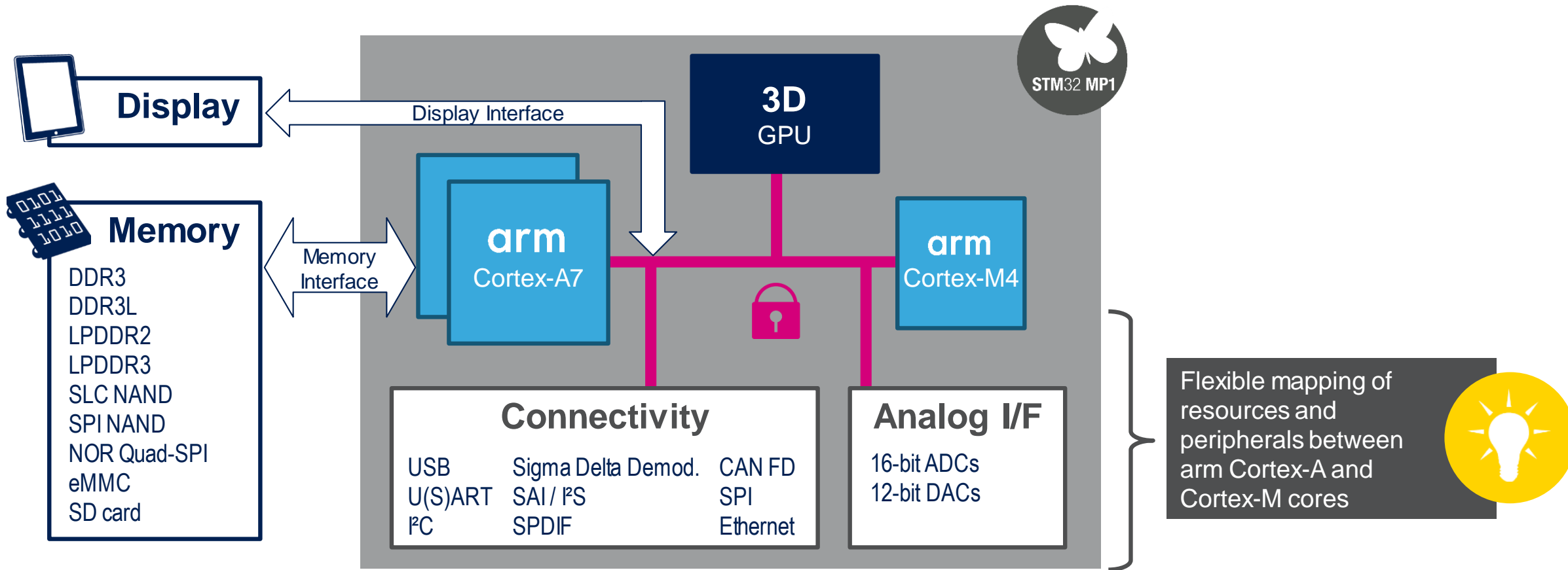


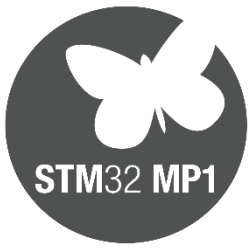
Flexible architecture
for a wide range of applications

STM32MP1 Rich Feature Set

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Advanced & Flexible Architecture with 3D GPU

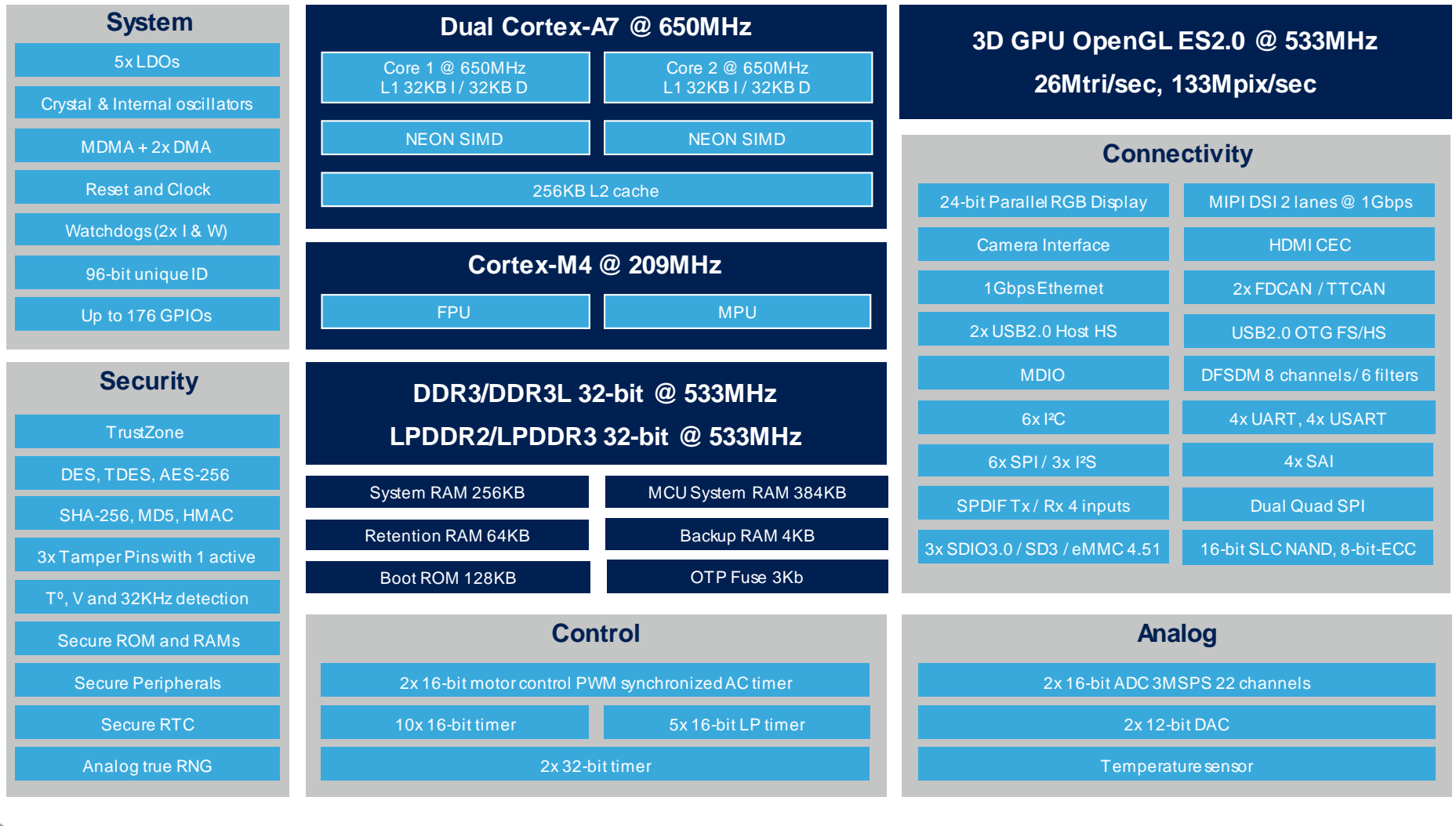




STM32MP1 Block Diagram

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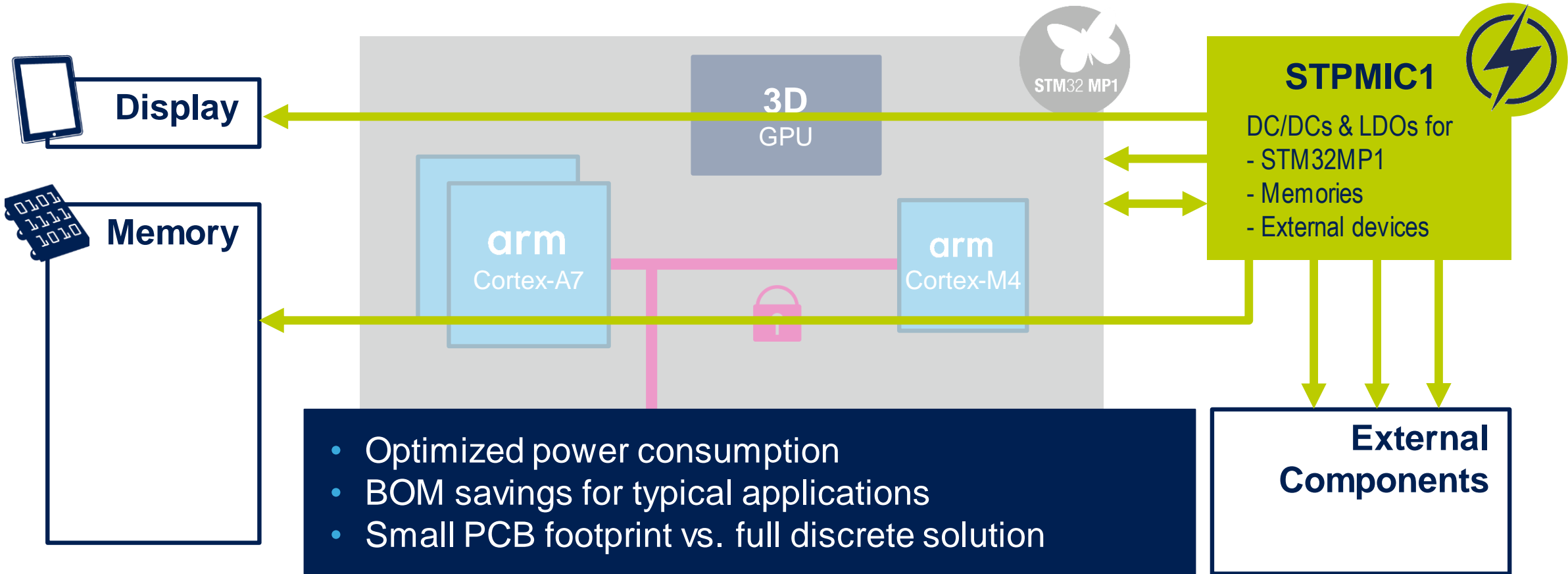
STM32MP157



STPMIC1 Power Management IC

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Simplify your design and optimize power consumption

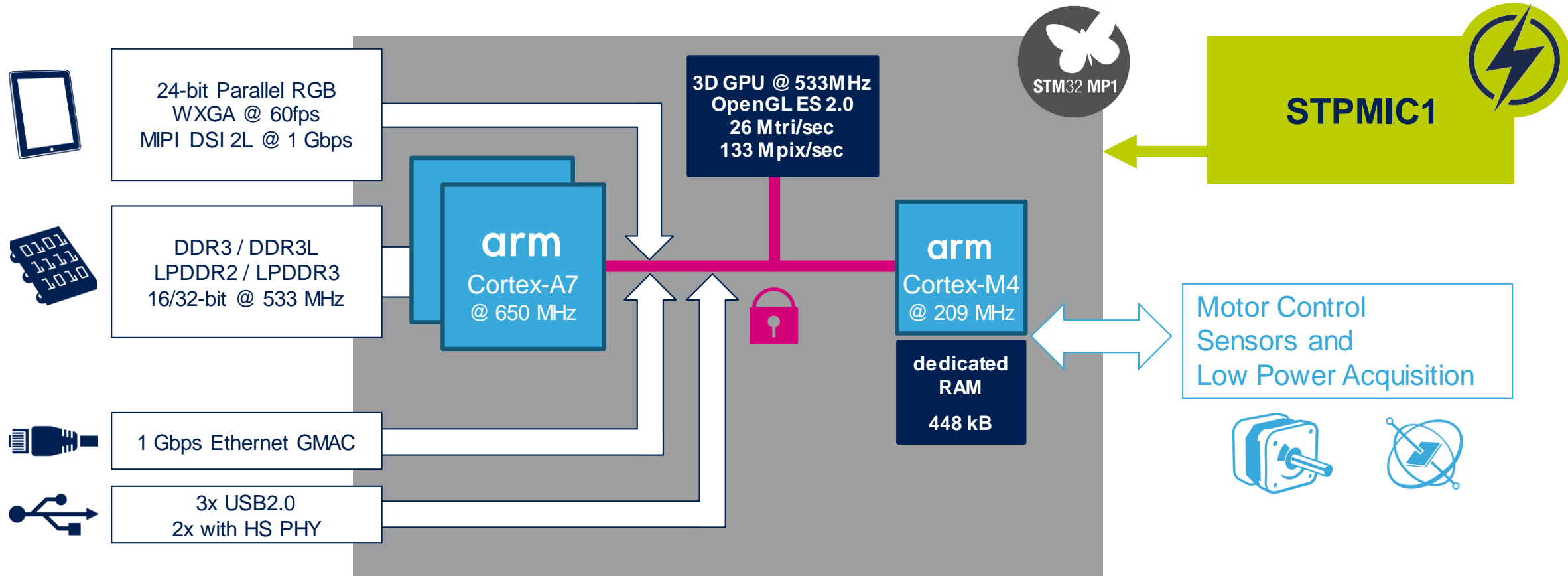


Arm Cortex-A + Cortex-M Architecture

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High Speed I/F and Processing

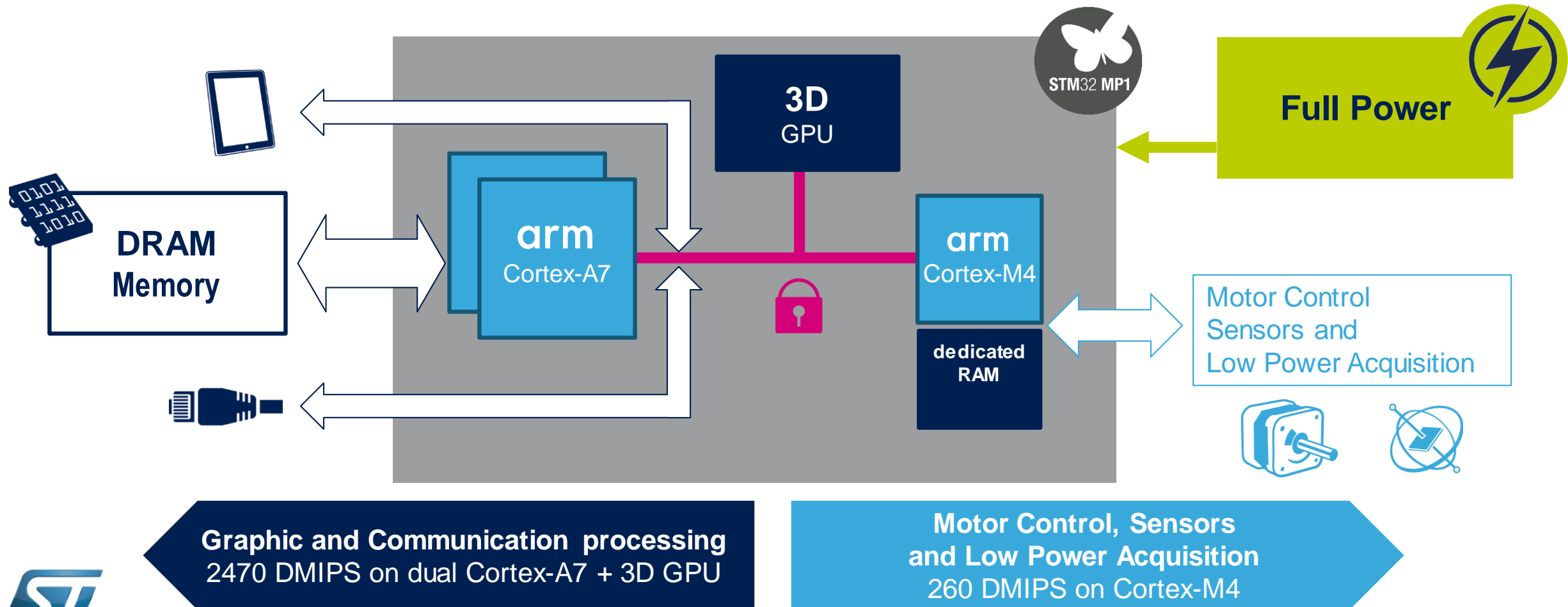
Real Time Operations



Flexible Architecture for Power Efficiency

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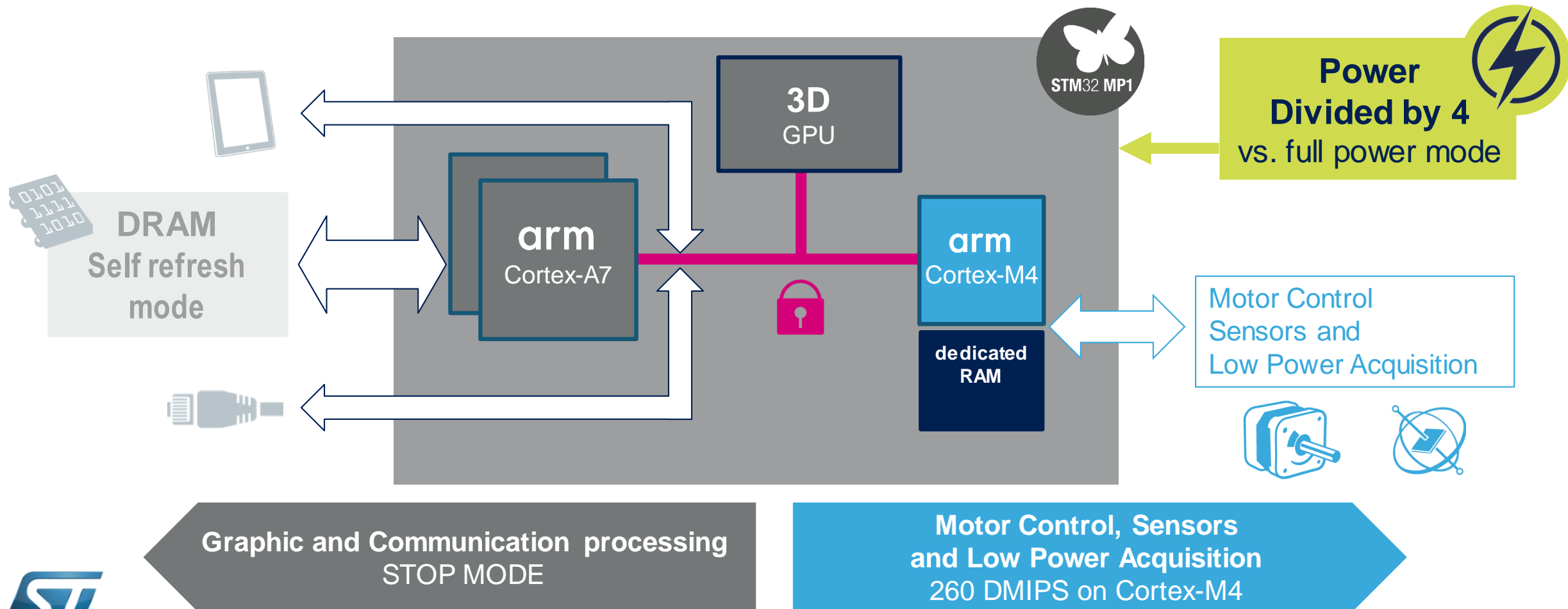
Processing for HMI and Communication + Motor Control and Sensing



Flexible Architecture for Power Efficiency

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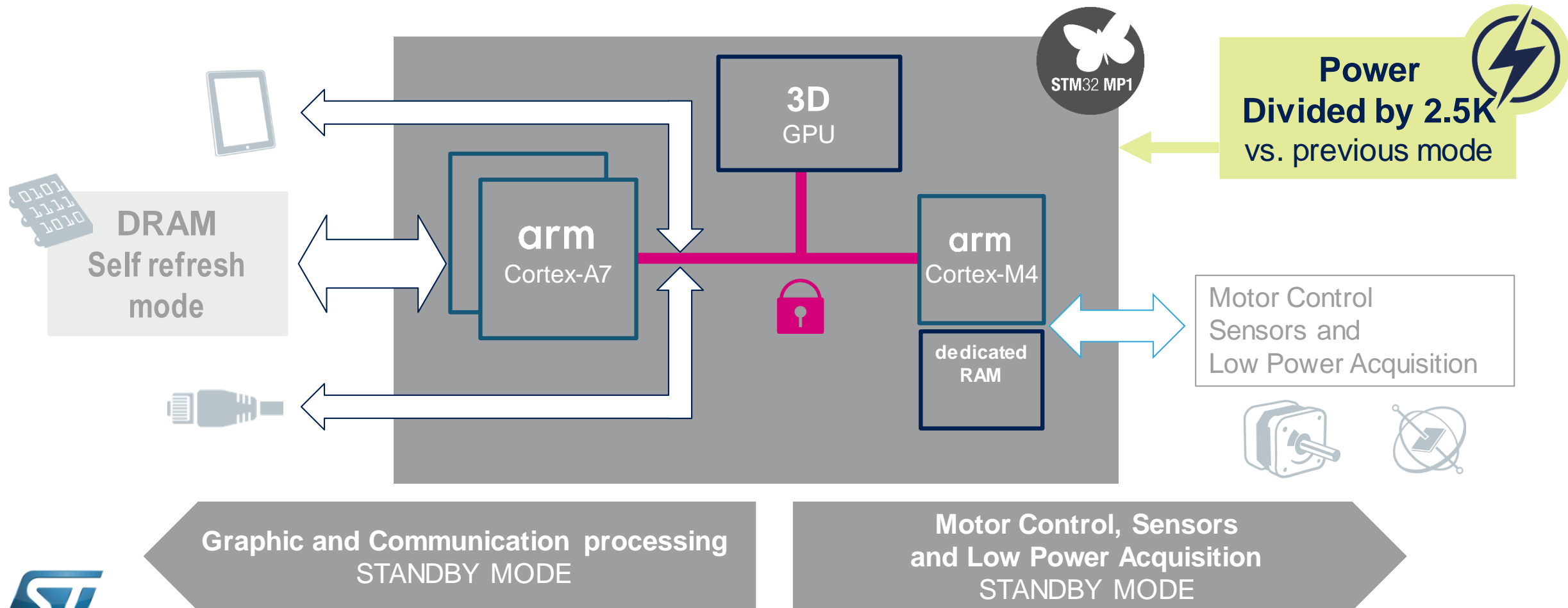
Motor Control and Sensing



Flexible Architecture for Power Efficiency

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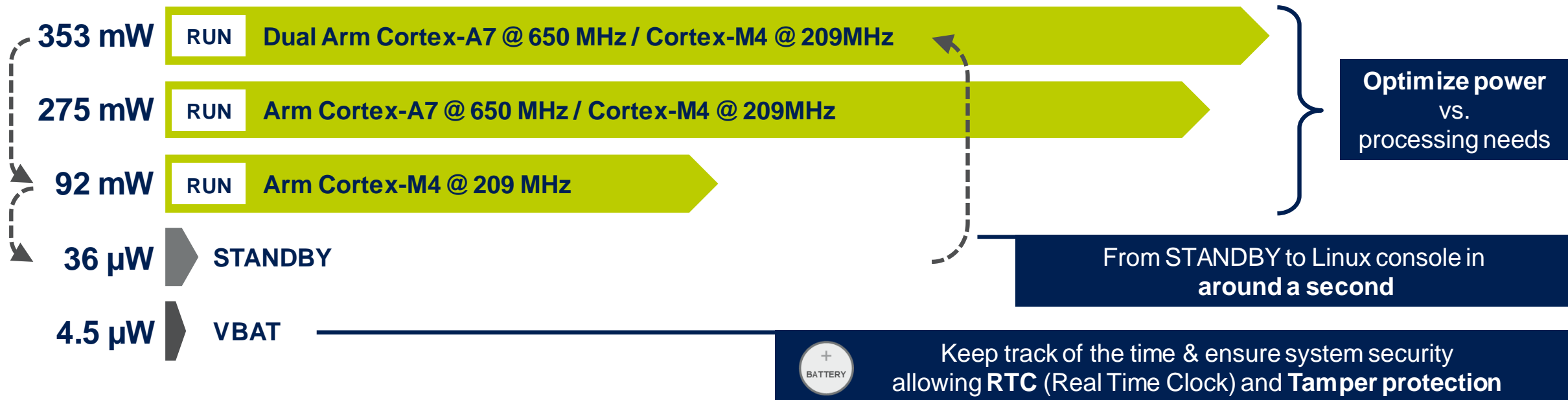
Standby Mode



Flexible Architecture for Power Efficiency

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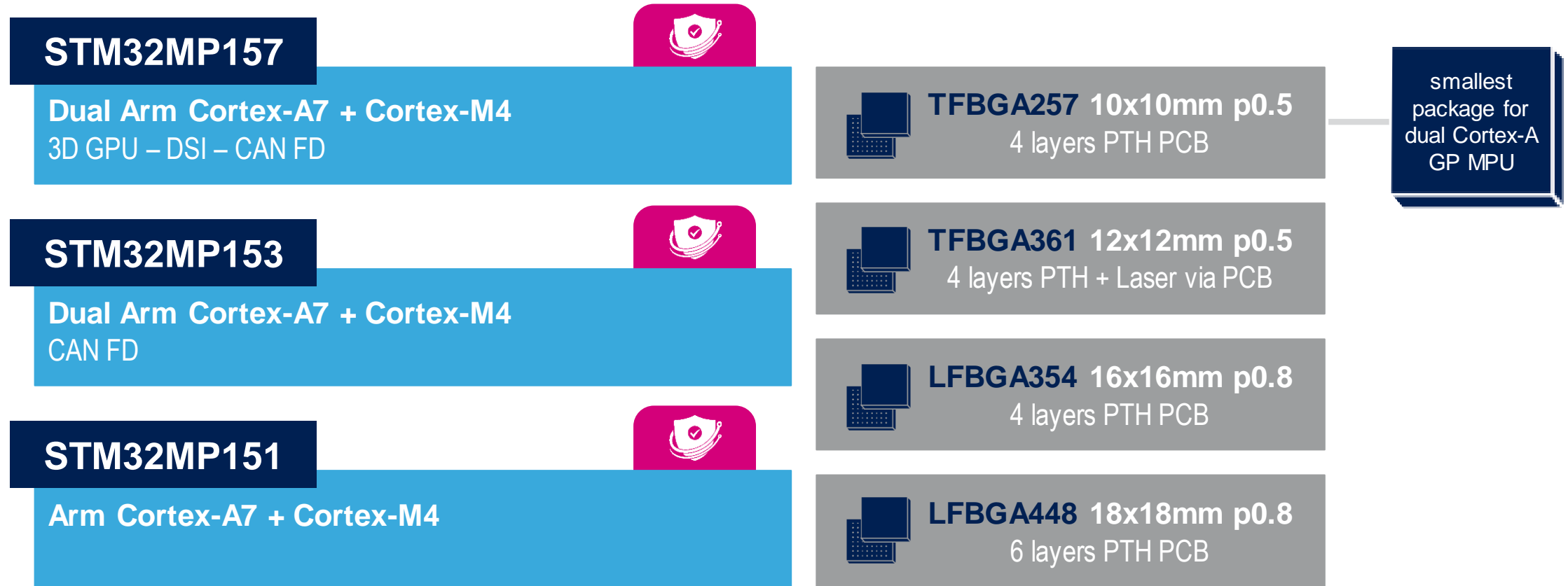
Power Figures



Typ @ VDDCORE = 1.2V, VDD = 3.3V @ 25 °C, Peripherals OFF

STM32MP1 Tailored for Multiple Applications

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3 Product Lines ——— Optional Security ——— 4 Packages



Accelerated development leveraging the STM32 Ecosystem

A Fully Integrated Design Suite

Leveraging the STM32Cube Environment

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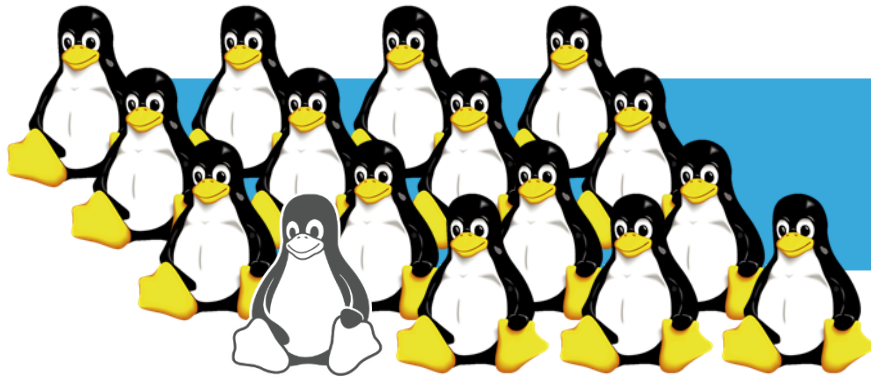


STM32MP1 Embedded Software Distribution

Simplify your Linux Development

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Fully mainlined open source Linux distribution for Arm Cortex-A7



OpenSTLinux
Distribution

STM32MP1 SoC drivers
already adopted by the Linux community

STM32MP1 supported in Linux 4.19 LTS

Fully compliant
with
open-source
standards



yocto
PROJECT



Pre-integrated
Secure OS



OP-TEE
.org

Benefit from Field-Proven RTOS Tools

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Full re-use of STM32Cube Firmware on Arm Cortex-M



Several APIs to access peripherals



Collection of Middleware components for Cortex-M



Hundreds of Examples



Production-ready Quality



Business-friendly license terms

Supported by the STM32 Ecosystem

All the Tools for Successful MPU Development

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Software



STM32
CubeMX

STM32
CubeProgrammer



Hardware



Discovery boards



Evaluation boards

Customer support



FAE - Worldwide
Customer Support



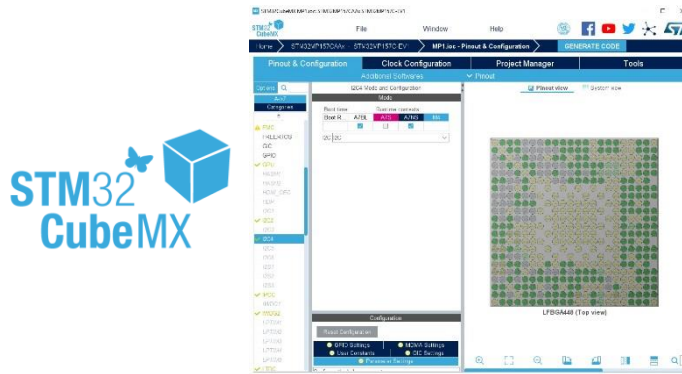
community.st.com



STM32MP1 Software Tools

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Complete support of Arm Cortex-A + Cortex-M architecture



All-in-one STM32 programming tool
Multi-mode, user-friendly



STM32CubeMX

STM32CubeMX enhanced for MPU

- Configure and generate code
- DRAM interface tuning tool
- Device Tree generation

IDEs Compile and Debug

Multi-Core Solutions

- Partners IDE
- Free IDE based on Eclipse
- Multi-core debugging

STM32 Programming Tool

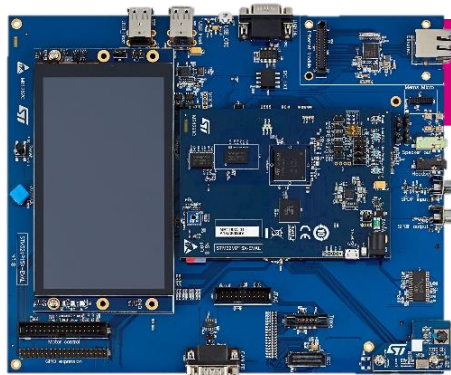
STM32CubeProgrammer

- Flash, DRAM and/or system memory
- OTP programming
- Signing tool & Keys generation

STM32MP1 Hardware Solutions

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Speed-up evaluation, prototyping and design



Available at
\$399



Available at
\$99

Available at
\$69



Evaluation Board

Full feature STM32MP1 evaluation

- STM32MP157A-EV1
- STM32MP157C-EV1

Discovery Board

Flexible prototyping & demo

- STM32MP157A-DK1
- STM32MP157C-DK2
 - + MIPI DSI WVGA display
 - + Wi-Fi/BT combo module

Boards & SoM*s

3rd Parties Boards for prototyping and production

- Board Specification from Linaro (96boards.org)
- Commercial SoM w/ different forms

Software, Training and Services

a Broad Ecosystem to Support Development

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ST's **wiki** user guide
for beginners and experts
<https://wiki.st.com/>

Large selection of partners
already engaged for:

- Graphics UI
- Security
- Training and services



STM32MP1 - Your New Companion

for Advanced Applications

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Extending STM32 success and commitment
with **Microprocessors**



Flexible architecture
for a wide range of applications



Accelerated development
leveraging the **STM32 Ecosystem**

Releasing Your Creativity

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