

Introduction to the STM32MP1 Microprocessor Series

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Product Marketing



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Anaheim, CA | March 26



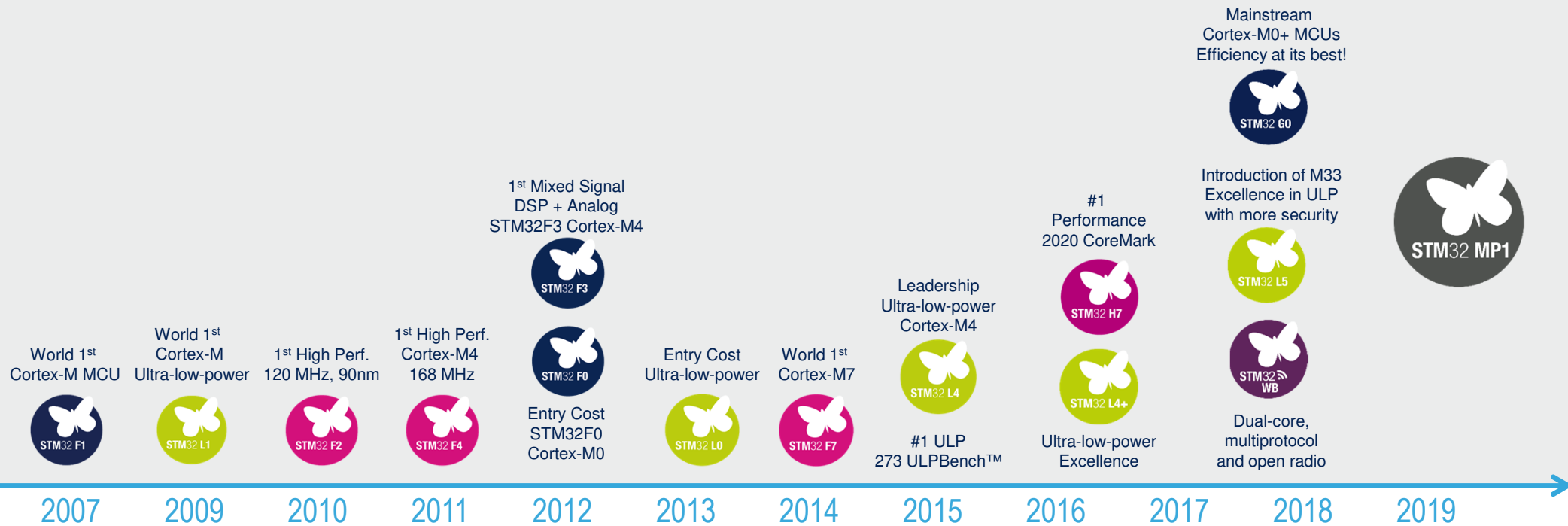
Extending STM32 Success and Commitment with Microprocessors



Continuing the STM32 Success Story

3

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



STM32 Rolling Longevity Commitment

4

Longevity commitment is renewed every year

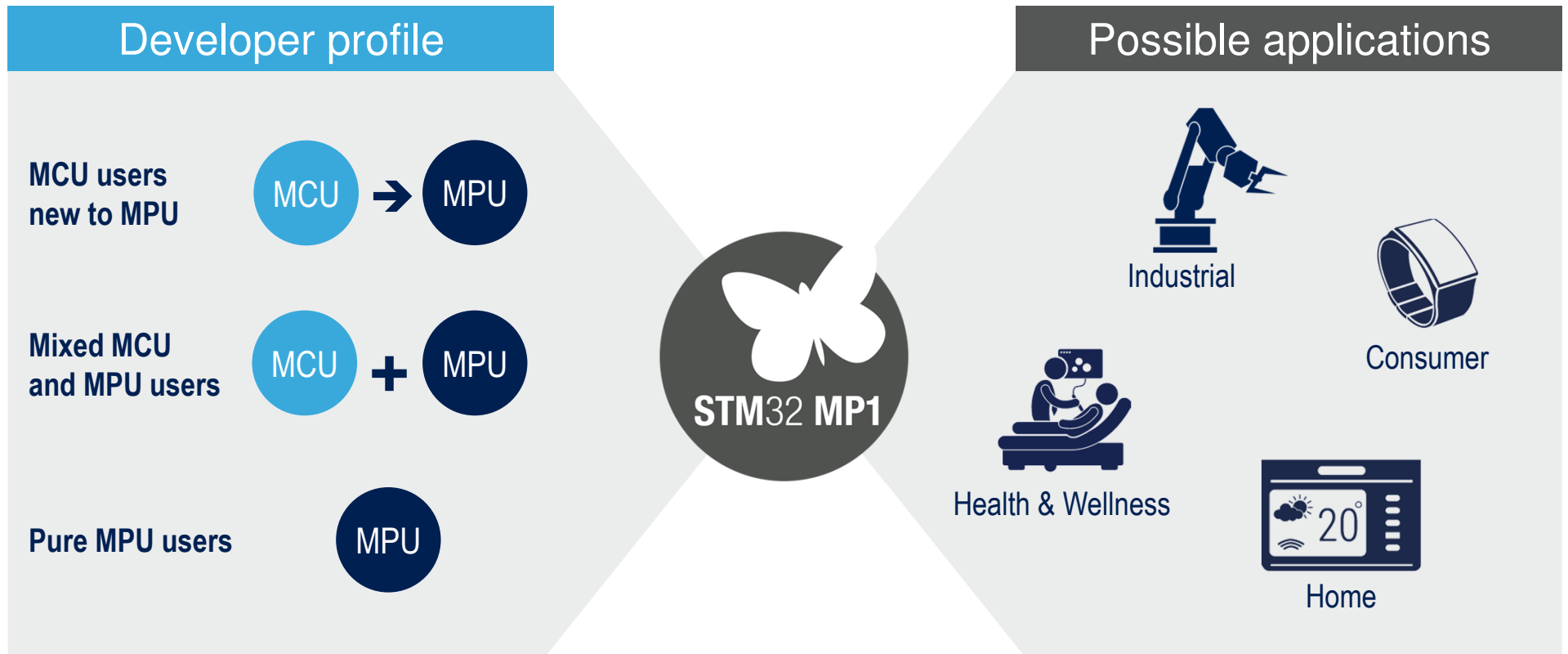


starting January
1st 2019
→ Until 2029

• 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



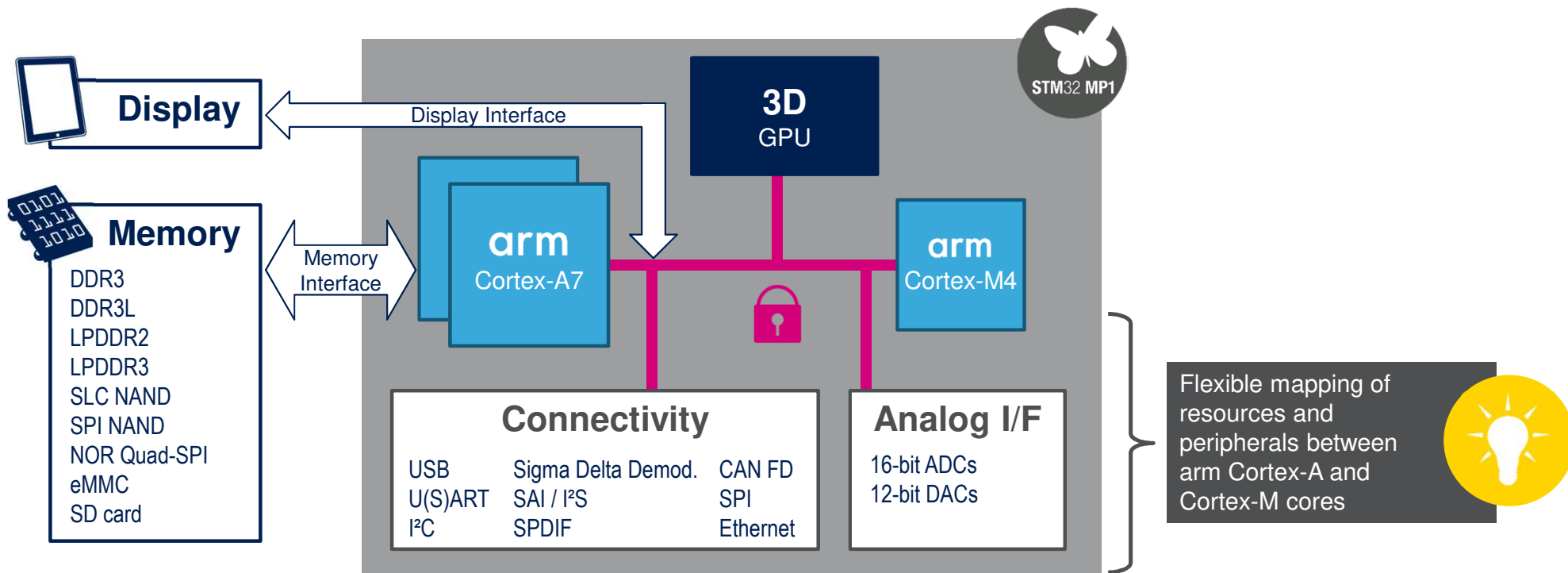


Flexible architecture for a wide range of applications

STM32MP1 Rich Feature Set

7

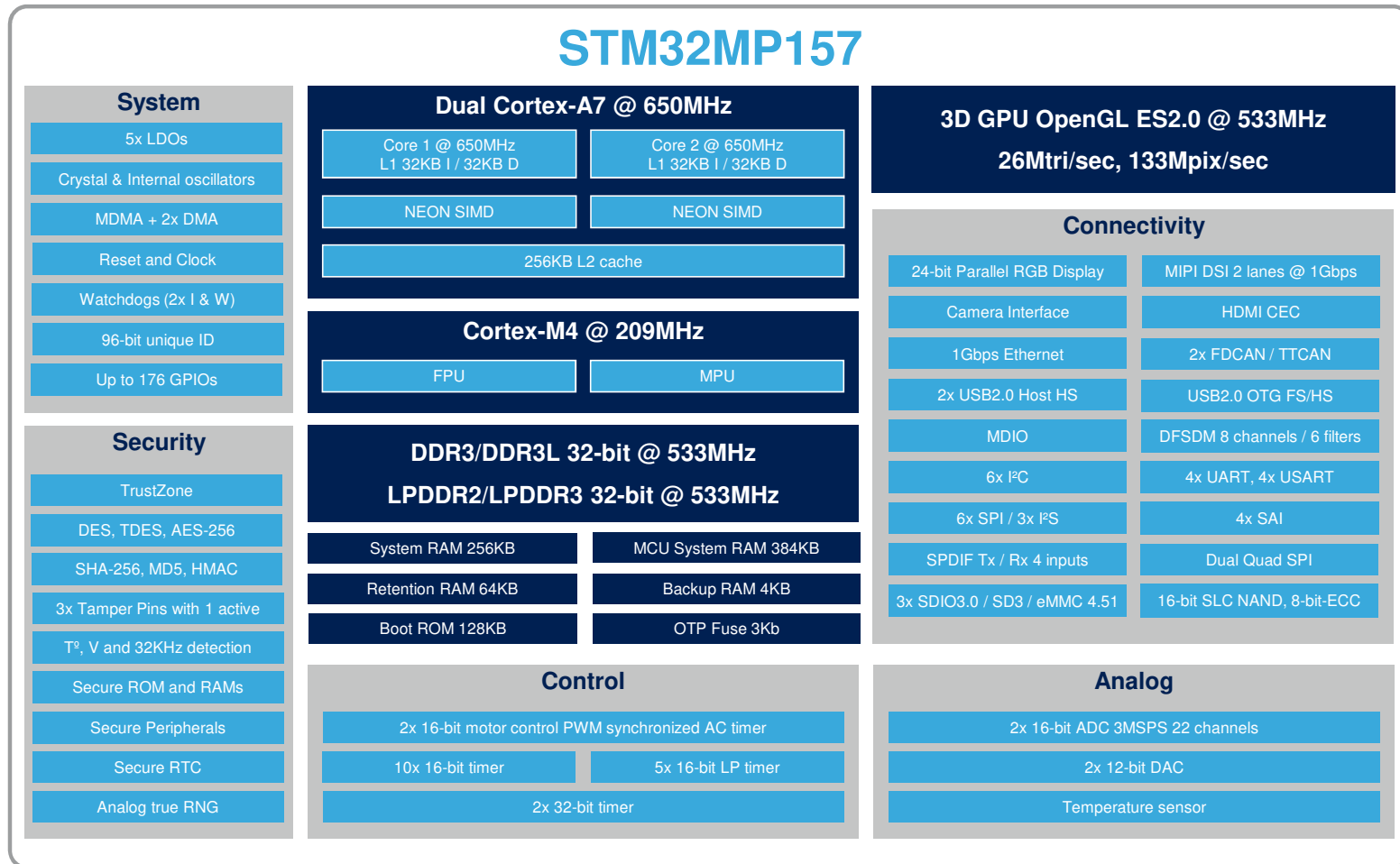
Advanced & Flexible Architecture with 3D GPU





STM32MP1 Block Diagram

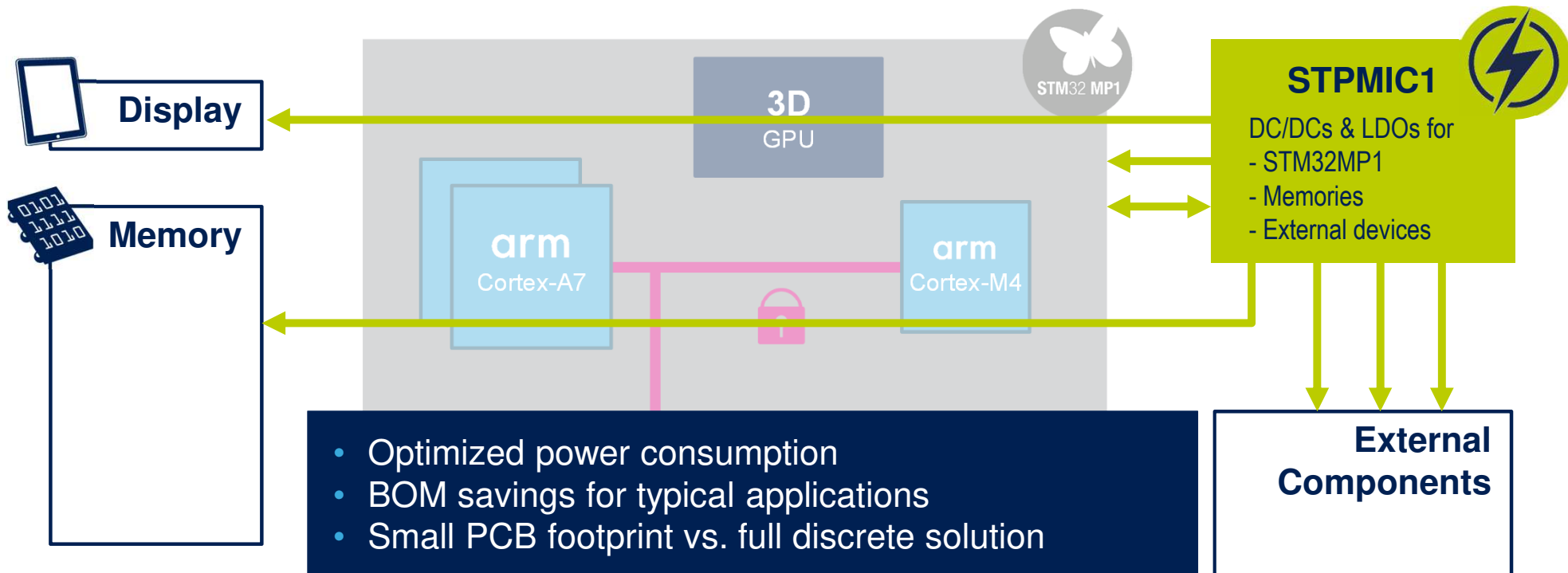
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STPMIC1 Power Management IC

9

Simplify your design and optimize power consumption

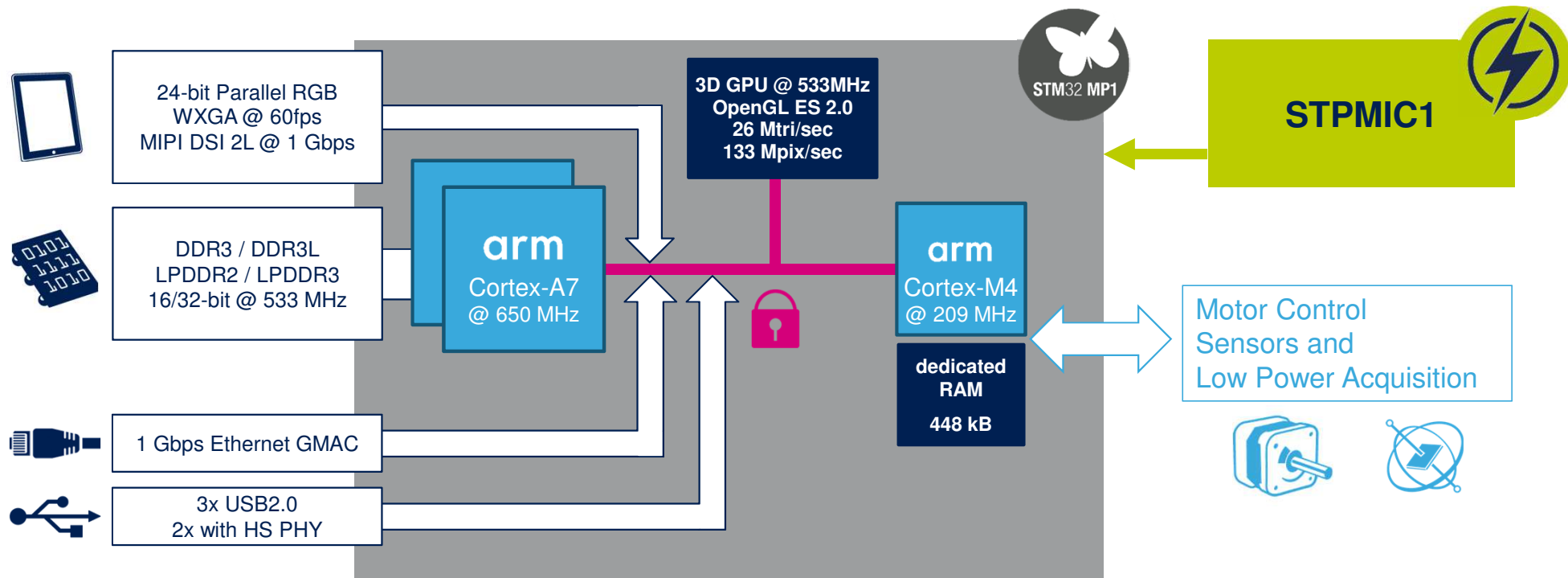


Arm Cortex-A + Cortex-M Architecture

10

High Speed I/F and Processing

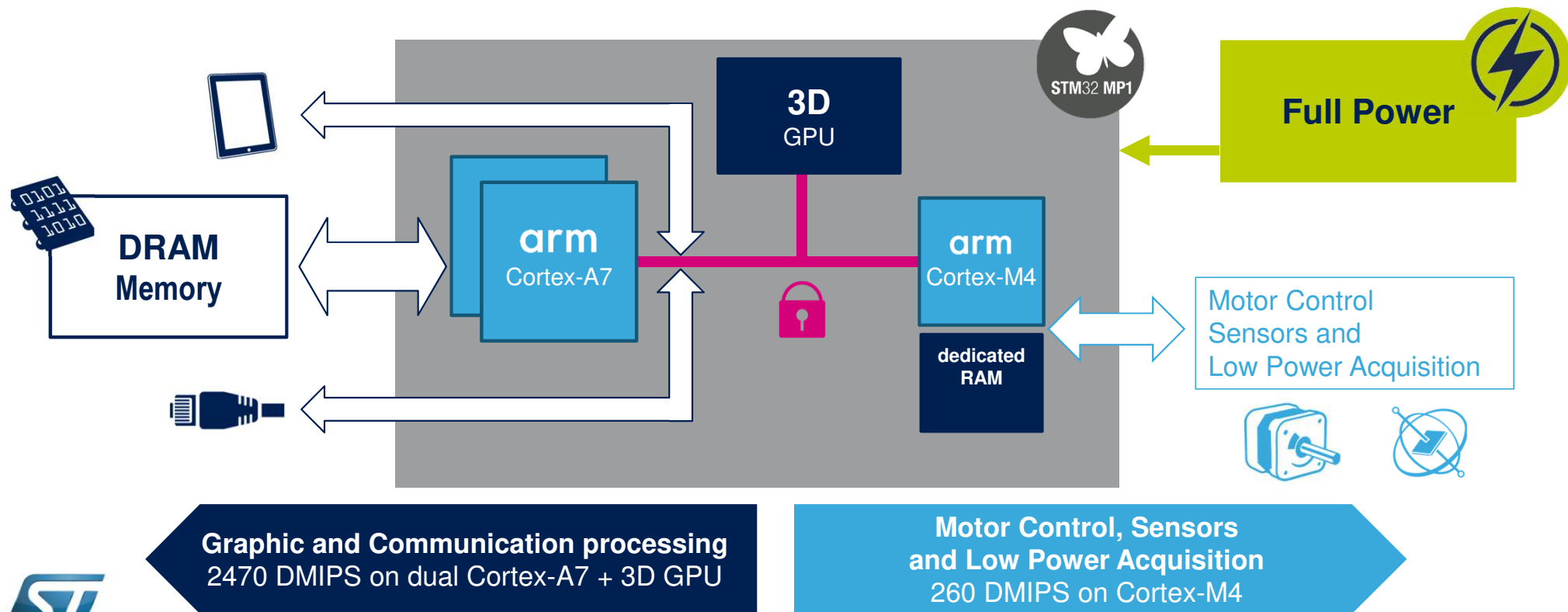
Real Time Operations



Flexible Architecture for Power Efficiency

11

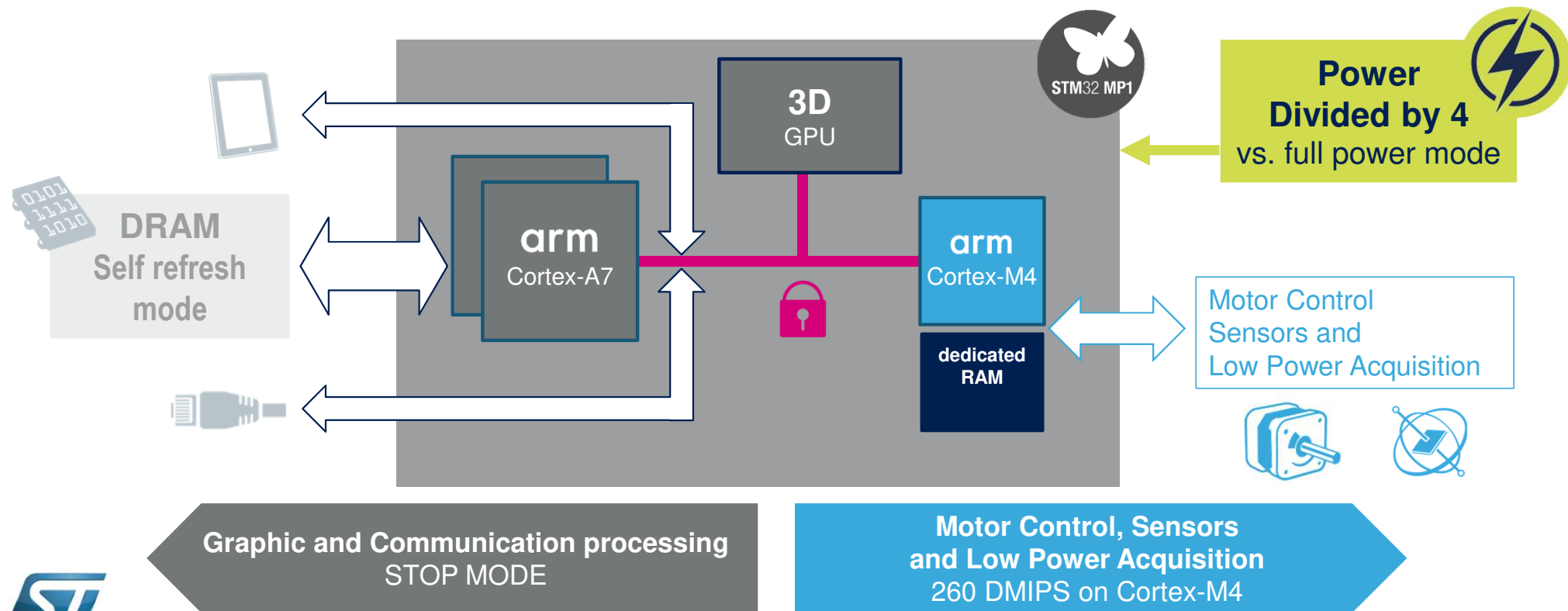
Processing for HMI and Communication + Motor Control and Sensing



Flexible Architecture for Power Efficiency

12

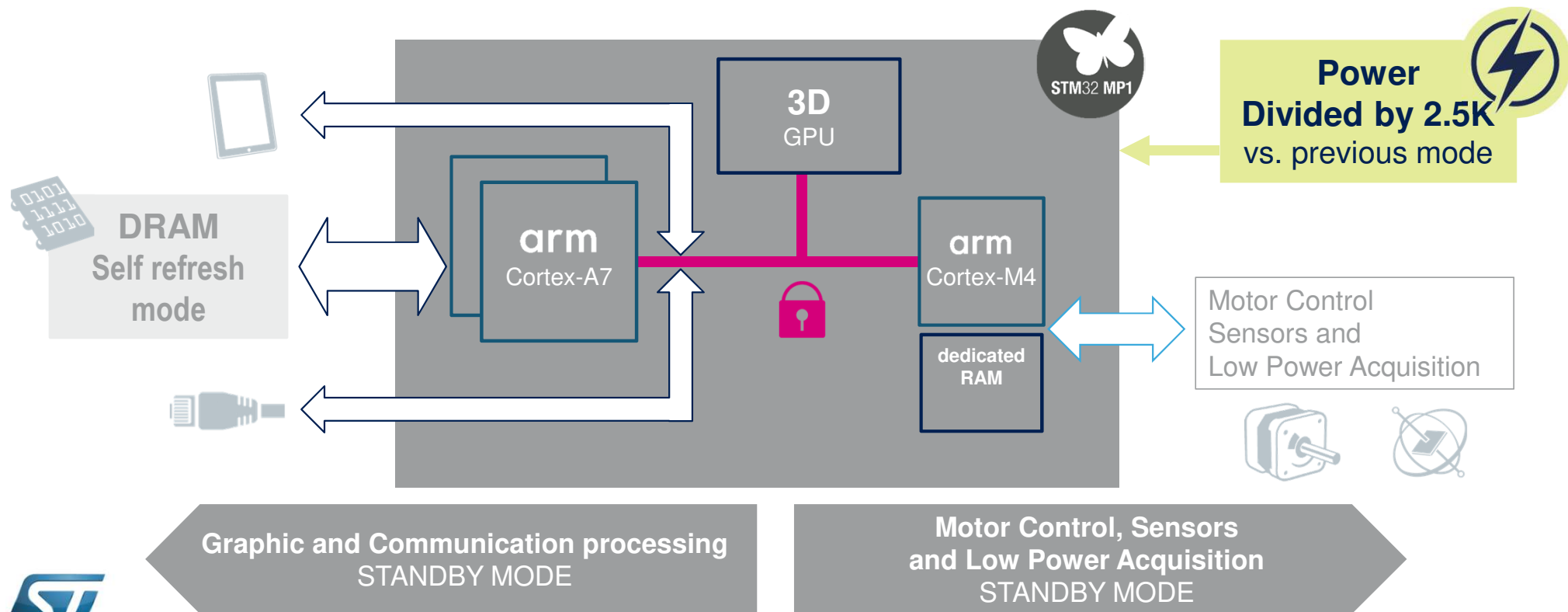
Motor Control and Sensing



Flexible Architecture for Power Efficiency

13

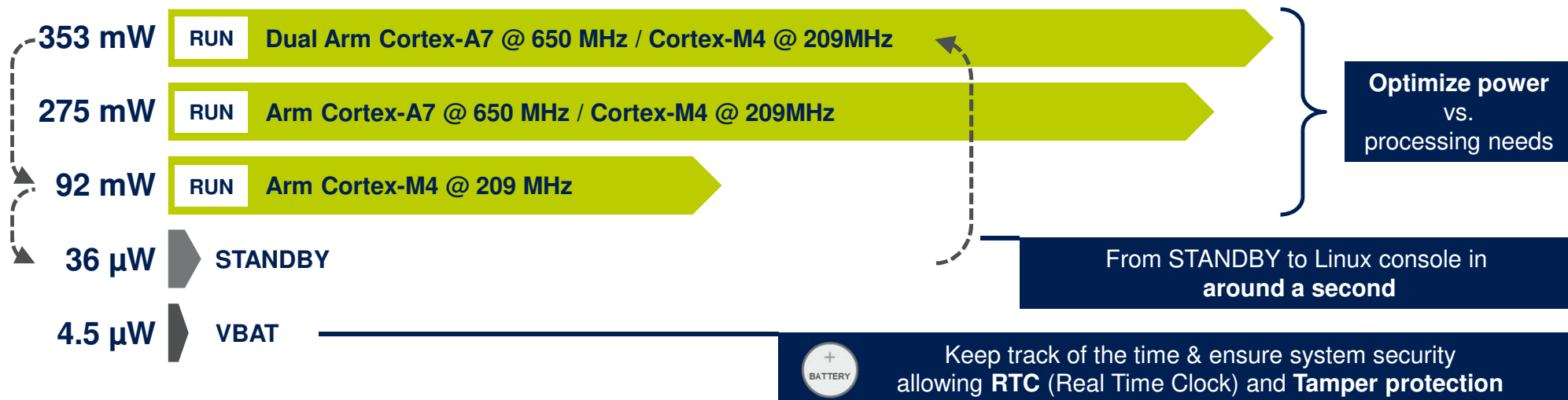
Standby Mode



Flexible Architecture for Power Efficiency

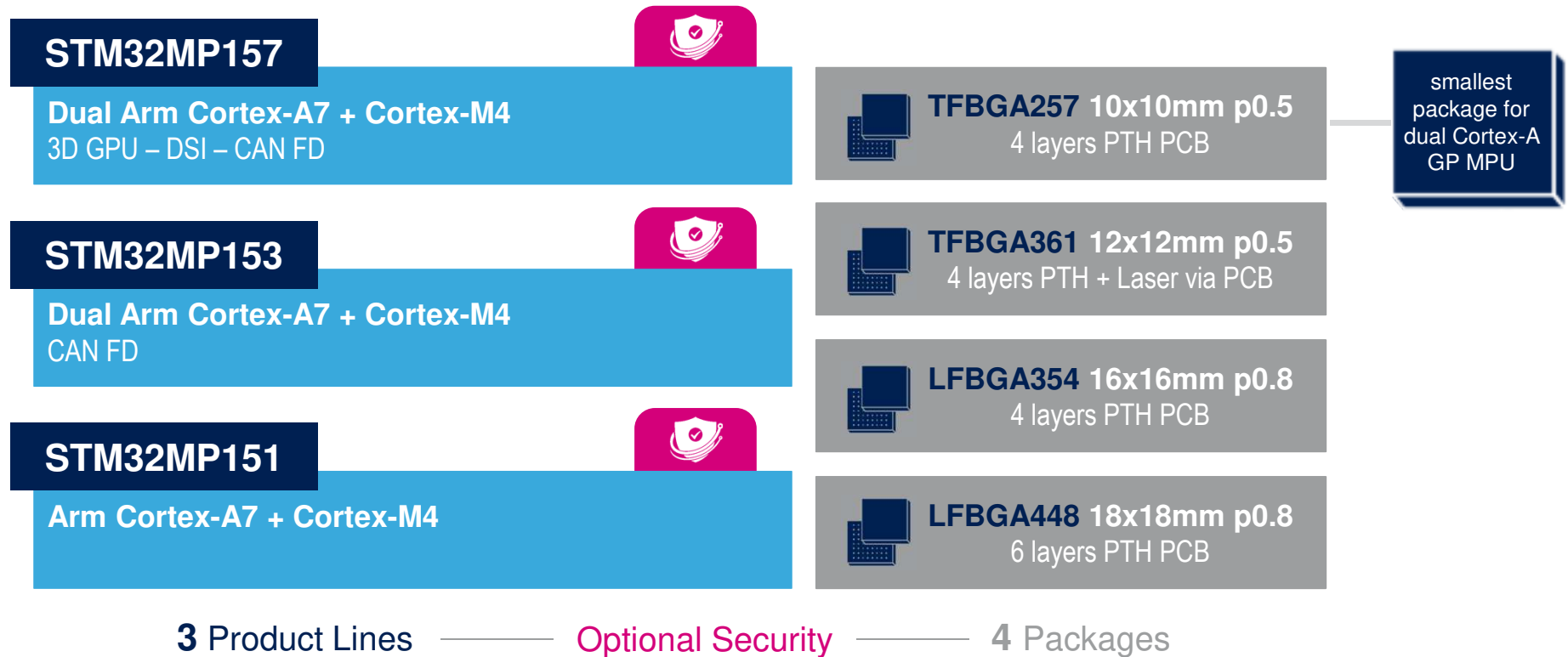
14

Power Figures



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

STM32MP1 Tailored for Multiple Applications



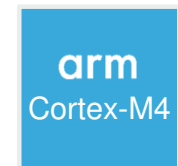


Accelerated development leveraging the STM32 Ecosystem

A Fully Integrated Design Suite

Leveraging the STM32Cube Environment

17

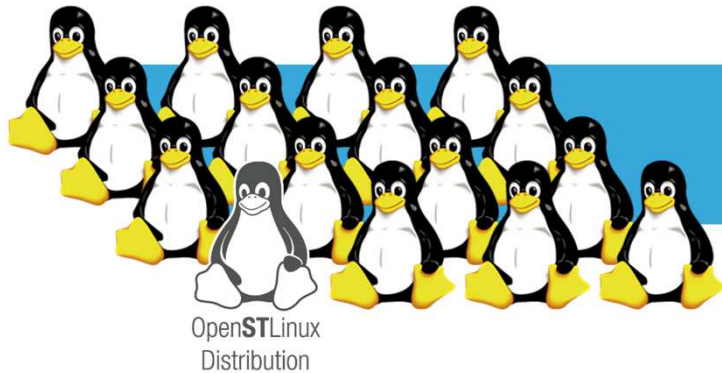


STM32MP1 Embedded Software Distribution

Simplify your Linux Development

18

Fully mainlined open source Linux distribution for Arm Cortex-A7



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

19

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

20

Software



Hardware



Discovery boards



Evaluation boards

Customer support



FAE - Worldwide
Customer Support



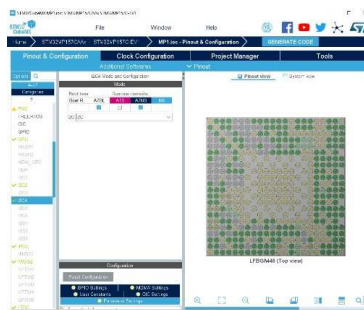
community.st.com



STM32MP1 Software Tools

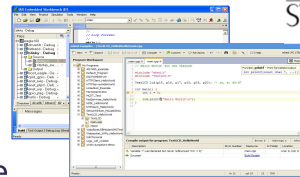
21

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



arm KEIL

eclipse



IAR
SYSTEMS

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

22

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

23



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

24



Extending STM32 success and commitment
with **Microprocessors**



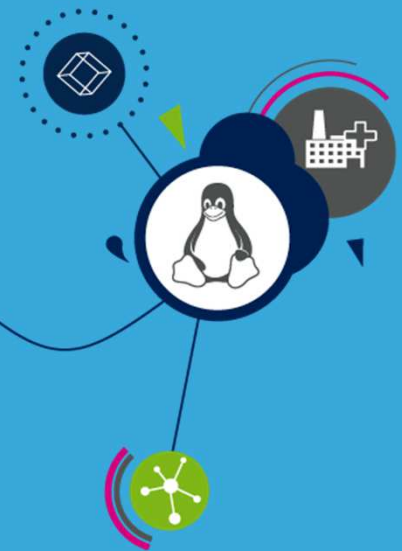
Flexible architecture
for a wide range of applications



Accelerated development
leveraging the **STM32 Ecosystem**

Releasing Your Creativity

25



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 community.st.com/stm32mpu



 www.st.com/STM32MP1