# STM32MPU Embedded Software for Android architecture overview

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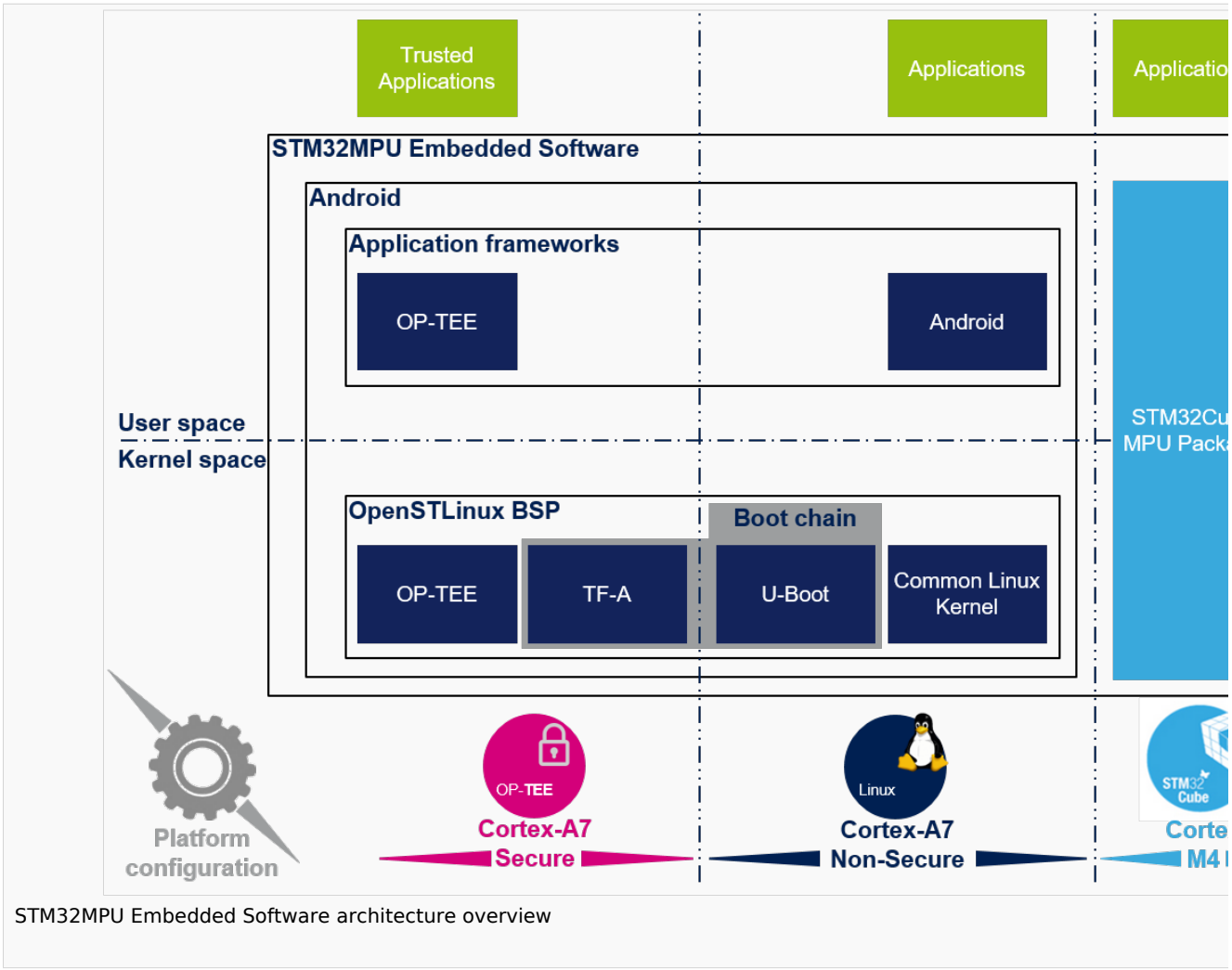
The diagram below shows STM32MPU Embedded Software distribution for Android main components:

- The **STM32MPU distribution for Android™** running on the Arm® Cortex®-A core. It includes:
  - The **OpenSTLinux BSP** consisting of:
    - The boot chain based on TF-A and U-Boot.
    - The OP-TEE secure OS running on the Arm® Cortex®-A in Secure mode.
    - The **Linux® kernel** running on the Arm® Cortex®-A in Non-secure mode.
  - **Application frameworks** composed of middleware components relying on the BSP and providing a set of APIs:
    - **OP-TEE** APIs to run **Trusted Applications (TA)** that allow manipulating secrets (information not visible from Linux® and from the STM32Cube MPU Package)
    - **Android** APIs to run **Applications** that typically interact with the user via a display or a touchscreen.
- The **STM32Cube MPU Package**, running on the Arm® Cortex®-M. As for STM32 MCUs, it is based on HAL drivers and middleware components and completed with a coprocessor management module.

The figure below provides an overview of the STM32MPU Embedded Software architecture. Click a sublevel block to jump to the corresponding article.

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# 1 Open Source Software (OSS) philosophy

The **Open source software** source code is released under a license in which the copyright holder grants users the rights to study, change and distribute the software to anyone and for any purpose[1].
STMicroelectronics maximizes the usage of open source software and contributes to open source software communities. Due to the software review life cycle, it can take some time before getting all developments accepted in the communities, so STMicroelectronics can also temporarily provide some source code on github until it is merged in the targeted repository (see STM32MP1 Distribution Package for Android).

# 2 References

- https://en.wikipedia.org/wiki/Open-source_software

Board support package

Operating System

Open Portable Trusted Execution Environment

Trusted Application

Microprocessor Unit

Hardware Abstraction Layer

Open Source Software