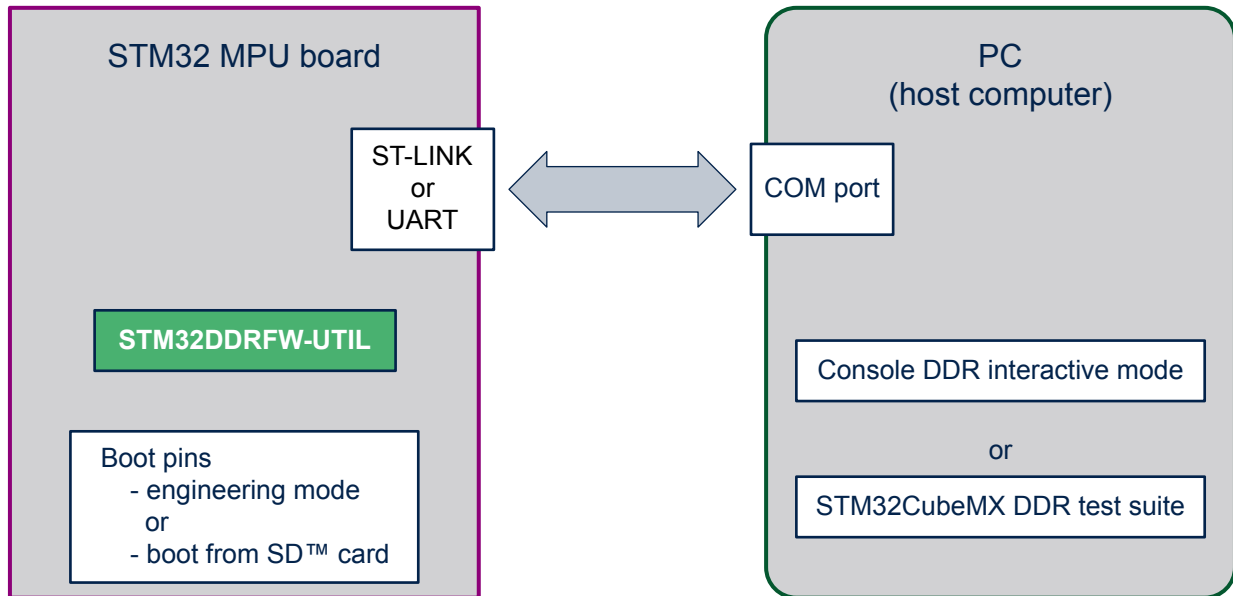


## Firmware package for DDR initialization and test on STM32 microprocessors



DT72001V1

Product status link

[STM32DDRFW-UTIL](#)

### Features

- Applicable to hardware board projects based on the STM32 microprocessors
- DDR initialization
  - Set of [STM32CubeIDE](#) project files
  - Readout of DDR general information
- DDR tests
  - Basic tests to capture rapidly the major configuration or hardware issues
  - Intensive tests to cover data and address patterns for noise and high SSO conditions, high-throughput traffic, or interleaved read/write
  - Stress tests executed under stretched conditions such as a frequency increase, a skew of parameters, or specific frequency-selective patterns
- Two modes of activation
  - From the [STM32CubeMX](#) tool
  - With a console in the DDR interactive mode

## Description

STM32DDRFW-UTIL initializes and tests the DDR of hardware boards based on STM32 microprocessors. It allows the users to configure and test the DDR in their own STM32 MPU-based designs.

The STM32DDRFW-UTIL firmware is proposed in a software package that includes BSP, CMSIS, and HAL drivers, STM32CubeIDE hardware project examples, and binaries including boot ROM image headers. STM32DDRFW-UTIL features the DDR\_Tool full source code to run basic, intensive, or stress DDR tests. It contains a readme file that details how to customize a project configuration and run the DDR tests.

The STM32DDRFW-UTIL firmware also implements a console to operate in an interactive mode in addition to using the tool from within the STM32CubeMX framework.

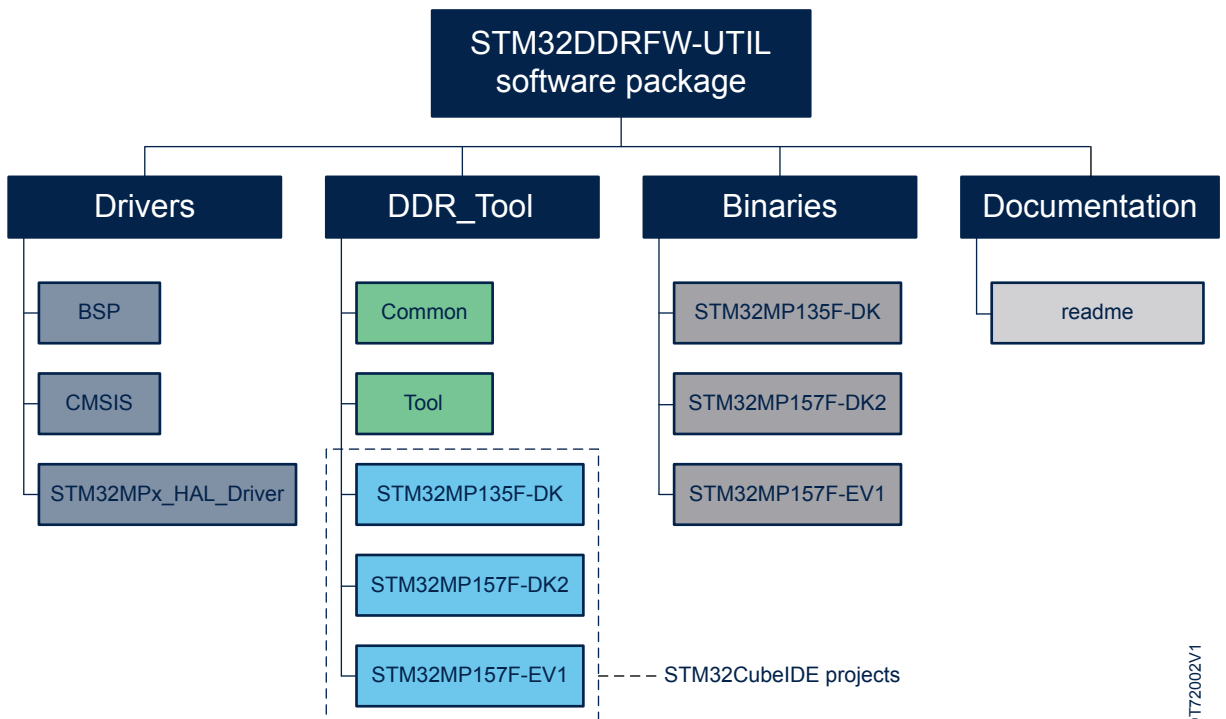
# 1 General information

## 1.1 Ordering information

STM32DDRFW-UTIL is available for free download from the [www.st.com](http://www.st.com) website. It is also available from GitHub at [github.com/STMicroelectronics](https://github.com/STMicroelectronics).

## 1.2 Package structure

Figure 1. STM32DDRFW-UTIL package structure



DT72002V1

## 2 License

STM32DDRFW-UTIL is delivered as a full open-source package.

The software components provided in this package come with different license schemes as shown in Table 1.

**Table 1. Software component license agreements**

| Software component          | Copyright                        | License            |
|-----------------------------|----------------------------------|--------------------|
| Arm® Cortex®-A CMSIS        | Arm Limited                      | Apache License 2.0 |
| STM32MPx CMSIS              | Arm Limited - STMicroelectronics | Apache License 2.0 |
| STM32MPx HAL                | STMicroelectronics               | BSD-3-Clause       |
| Board support package (BSP) | STMicroelectronics               | BSD-3-Clause       |
| DDR_Tool                    | STMicroelectronics               | BSD-3-Clause       |

*Note:* Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.



## Revision history

Table 2. Document revision history

| Date       | Revision | Changes          |
|------------|----------|------------------|
| 5-Mar-2023 | 1        | Initial release. |

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