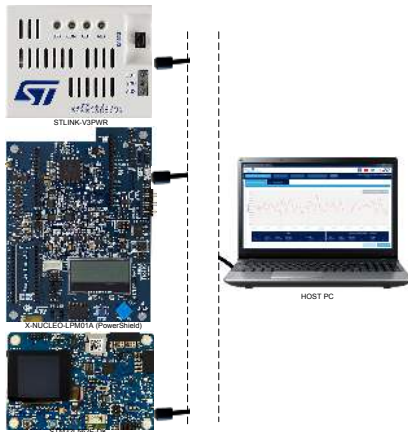


Software tool for power and ultra-low-power measurements



Product status link

[STM32CubeMonPwr](#)

Features

- Reception of power measurements done by the STLINK-V3PWR probe, the X-NUCLEO-LPM01A expansion board, or by the energy meter of the STM32L562E-DK Discovery kit
- Dynamic measurement:
 - From 100 nA up to 500 mA with ~2% accuracy for the STLINK-V3PWR probe
 - From 100 nA up to 50 mA with ~2% accuracy for the X-NUCLEO-LPM01A expansion board
 - From 300 nA up to 150 mA with ~2% accuracy for the energy meter of the STM32L562E-DK Discovery kit
- Sampling rate up to 100 kHz
- Execution of ULPBench™ tests and estimation of ULPMark™ score
- Data subsampling on reception to allow graphical rendering in real time, while not losing any data point
- Recording of power consumption measurements over a predefined or unlimited time
- Intuitive navigation into data samples using mouse-based zoom and move functions
- Control of energy meter functions from the graphical interface, such as acquisition frequency, supply voltage, triggers, and others
- Computing of consumed energy
- Capability to save acquired data and to load previously saved data
- Multi-OS support: Windows®, Linux®, and macOS®

Description

STM32CubeMonitor-Power (STM32CubeMonPwr) enables developers to swiftly analyze the power/low-power consumption of target boards, and optimize the energy efficiency of their applications. This software tool acquires power measurements through the STLINK-V3PWR probe, the X-NUCLEO-LPM01A expansion board, or the energy meter of the STM32L562E-DK Discovery kit specialized intermediate board, and displays these measurements using an intuitive graphical interface. Dynamic measurement of current covers a wide range from 100 nA to 500 mA for STLINK-V3PWR, while STM32CubeMonitor-Power allows updating of acquisition parameters and data rendering in real time. Execution of EEMBC® ULPBench™ tests is also supported to directly provide an accurate ULPMark™ score.



1 Ordering information

STM32CubeMonPwr is available for free download from the www.st.com website.

2 License

STM32CubeMonPwr is delivered under the *Mix Ultimate Liberty+OSS+3rd-party V1* software license agreement (SLA0048).

It supports STM32 32-bit microcontrollers based on the Arm[®] Cortex[®]-M processor. For more details about the license agreement of each component, refer to the release note (RN0108).

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



3 Application pictures

Figure 1. STM32CubeMonitor-Power acquisition and replay screen



Figure 2. STM32CubeMonitor-Power ULPBench™ screen



Revision history

Table 1. Document revision history

Date	Version	Changes
20-Sep-2017	1	Initial release.
19-Feb-2018	2	" <i>Ordering information</i> " and " <i>License</i> " new sections. Root part number of the STM32CubeMonitor-Power software tool changed to STM32CubeMonPwr.
12-Jun-2018	3	Updated " <i>License</i> " chapter.
13-Sep-2018	4	Updated pictures on the cover page and in <i>Application pictures</i> .
26-Sep-2019	5	Added support to the energy meter of the STM32L562E-DK Discovery kit.
9-Mar-2023	6	Added support to the STLINK-V3PWR probe.

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