STM32F7 Ecosystem

HARDWARE TOOLS
www.st.com/stm32hardwaretools

The highly affordable STM32 144-pin Nucleo boards allow anyone to try out new ideas and to quickly create prototypes with any STM32 MCU.

Flexible prototyping
NUCLEO-F746ZG
NUCLEO-F756ZG*
NUCLEO-F722ZE
NUCLEO-F707ZG

Discovery kits
STM32F746G-DISCO
STM32F756ZG-DISCO
STM32F722ZE-DISCO
STM32F707ZG-DISCO

Creation kits
STM32F746G-DISCO
STM32F756ZG-DISCO
STM32F722ZE-DISCO
STM32F707ZG-DISCO

Evaluation boards
STM32F746G-EVAL2
STM32F769I-EVAL

Hardware Crypto/Hash devices
STM32F756G-EVAL2
STM32F779I-EVAL

The STM32 eval boards have been designed as a complete demonstration and development platform for the Arm® Cortex STM32 MCUs.

STM32F769 Discovery Kit accessories
B-LCDAD-RPI1: 15-pin single-row flexible printed circuit (FPC) adapter board
B-LCD40-DSI1*: 4” WVGA TFT LCD with MIPI-DSI interface and capacitive touch screen (only for STM32F769I-DISC1)
B-LCD40-DSI1*: 4” WVGA TFT LCD with MIPI-DSI interface and capacitive touch screen (only for STM32F769I-DISC1)

STM32F769 Discovery kit accessories
B-LCDAD-HDMI1: DSI to HDMI adapter
Note: on STM32F769 Discovery kits use the dual-row 8-way connector to host a 3rd-party Wi-Fi module available on the market

STM32F769I-DISCO
STM32F769I-DISC1

Creative demos
NUCLEO-F722ZE
NUCLEO-F767ZI

Flexible prototyping
Note: * Hardware Crypto/Hash device

SOFTWARE TOOLS
www.st.com/stm32softwaretools

STM32Cube
STM32CubeMX
Partner IDEs
STM32CubeMonitor
Programmer
STM32CubeMonitor: Power
STM32Cube

Configure and generate code
Compile and debug
Monitor & Program

EMBEDDED SOFTWARE
www.st.com/stm32embeddedsoftware

High optimization
Low portability

STM32Cube HAL and middleware
STM32 Std Peripheral Libraries
STM32Cube LL
STM32Cube IAR Embedded Workbench
STM32Cube MDK
STM32Cube Eclipse
STM32Cube STM8
STM32Cube ST7

Low optimization
High portability

CMSIS and mbed SDK
Virtual machines and models

STM32F7 series
Arm® Cortex®-M7 powered
Releasing your creativity

STM32F7 series
Arm® Cortex®-M7 powered
Releasing your creativity

ST COMMUNITY
Ask, learn, share, discuss, become famous and engage with the community of STM32 enthusiasts on community.st.com/stm32

STM32 EDUCATION
Bring your STM32 project to life with the free educational and training resources on st.com/stm32education

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Order code: BRSTM32F70718
The STM32F7 with its Arm® Cortex®-M7 core is the smartest MCU and has the best performance of the 32-bit STM32 family.

PERFORMANCE
The STM32F7 delivers 1082 CoreMark/INSTRs high performance 32-bit MCU with DSP and FPU.

SMART ARCHITECTURE WITH NEW PERIPHERAL SET
The STM32F7 contains the system performance by combining brand-new peripherals around the Cortex-M7 with a superior interconnect architecture with AXI and multi AXI bus matrix, multiple DMA and the Chrom-ART Accelerator™ hardware.

Benefits:
- Concurrency, high-priority transitions between bus masters and slaves without losing the CPUs
- Large SRAM with overloading architecture

UP TO SEVEN LINES FOR MORE PERFORMANCE

ACCELERATION
- Constant accuracy and high performance

CONNECTIVITY
- USB, SPI, I²C, I²S, CAN, Ethernet
- SDMMC, HDMI-CEC, MIPI®-DSI, MIPI®-DSI-Link, MIPI®-DSI-Lite
- Codec CAN
- Audio PLL
- Ext. PLL

POWER EFFICIENT
- Up to 512 Kbytes including 128 Kbytes of Flash thanks to the ST ART Accelerator™ hardware.
- Multiple audio channel input and output support.
- Multiple audio channel input and output support.

OTHER
- Dual Quad-SPI
- 3x 12-bit ADC
- 2x 16-bit timers
- 10x 16-bit timers

Note (*) : only available on LQFP144 and UFBGA176 packages
Note (**) : only available on STM32F750, STM32F730, STM32F732, STM32F733, STM32F756, STM32F777 and STM32F779 variants:
- Dual QuadSPI interface:
- 512K to 2M bytes

Note (***) : 2x SAI
Note (****) : 16-bit timers and multi AHB bus matrix, multiple DMA and the Chrom-ART Accelerator™ hardware

Note (*****): Support for large data buffers, critical real-time data routines and backup.