

STM32F730 & STM32F750

High-performance Value lines



Extra flexibility to create affordable performance-oriented systems

Focusing on real-time performance and scalability, ST's new Value lines lower the barrier to access STM32F7 microcontrollers with products keeping just the essential Flash memory.

With execution performance up to 1082 CoreMark at the heart of a secure, power-efficient architecture, the new Value line microcontrollers are the entry point to IoT innovation in medical, industrial and consumer applications.

STM32F730 and STM32F750 devices embed 64-Kbyte Flash memory to accommodate the most critical and secure code, while supporting external memory extension using NOR, NAND, SDRAM and dual-mode Quad SPI Flash memory.

CORE, MEMORIES

- Arm® Cortex®-M7 core up to 216 MHz
- Up to 8-Kbyte data and 8-Kbyte instruction cache
- Up to 2 DMA controllers
- 64-Kbyte Flash memory and up to 320-Kbyte RAM
- ITCM/DTCM¹: 16-Kbyte ITCM RAM + 64-Kbyte DTCM RAM for time-critical routines

CONNECTIVITY

- Up to 2 x USB 2.0 OTG FS/HS with optional embedded HS PHY
- USART, UART, SPI, and I²C
- Ethernet MAC
- FMC (supporting SDRAM in 32-bit mode up to 133 MHz) and dual-mode Quad SPI Flash memory
- 2 x SDMMC

EMBEDDED FLASH

- Secure Boot for customer Root of Trust
- Fast boot time
- High-execution speed from ultra fast embedded memory

ENERGY EFFICIENT

- Flexible power mode
- Gated power domains
- On-chip power management

AUDIO

- 3 x I²S + audio PLL
- 2 x SAI
- 2 x 12-bit DAC
- SPDIF-RX

GRAPHICS

- LCD TFT controller
- Chrom-ART Accelerator™

OTHER

- 8- to 14-bit Camera interface
- Crypto and Hash hardware acceleration
- 16- and 32-bit timers
- 3x ADCs with up to 12-bit resolution (up to 2.4 MSPS)
- Power supply down to 1.7 V

Note:
1. Tightly Coupled Memories

STM32F730 & STM32F750 VALUE LINE BLOCK DIAGRAM

STM32F730	STM32F750
Arm® Cortex®-M7, MPU, ETM	
216 MHz, SFPU	
2 x 8-Kbyte cache	2 x 4-Kbyte cache
Embedded memories	
256-Kbyte RAM including 64-Kbyte DTCM	320-Kbyte RAM including 64-Kbyte DTCM
16-Kbyte ITCM	
64-Kbyte Flash memory	
4-Kbyte backup RAM	
2 x DMAs	
Memory Interfaces	
FMC (SDRAM, NOR, NAND)	
Dual-mode Quad SPI Flash	
2 x SD/SDIO/MMC	
Accelerators	
ART Accelerator™	
-	Chrom-ART Accelerator™
Crypto/Hash accelerator and tamper detection	
Peripherals	
Advanced connectivity	

HARDWARE TOOLS

All existing STM32F7 hardware development tools are fully compatible with the new Value lines.

Evaluation boards



STM32756G-EVAL2

Discovery kits

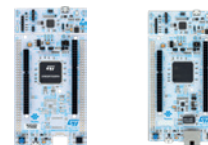


STM32F723E-DISCO



STM32F746G-DISCO, STM32F7508-DK

Nucleo-144 development boards



NUCLEO-F722ZE, NUCLEO-F756ZG



The STM32Trust ecosystem combines knowledge, design tools, and ready-to-use original ST software to build strong cyber-protection into new IoT devices, leveraging industry best-practices. www.st.com/stm32trust

STM32 HIGH-PERFORMANCE VALUE LINES

Flash memory size / RAM size (bytes)

