STM32H723/733
STM32H725/735
STM32H730 Value lines
MCUs for rich and complex applications

Marketing presentation

STM32H7 single core - Building a factory automation product

High performance for optimized control or HMI

Large embedded memory and external memory support
- Up to 2 MB of Flash & up to 1.4 MB of SRAM
- Fast multiple Octo-SPI interface

Extended connectivity with Ethernet MAC, Multiple FD-CAN and USB

Fast 16-bit and 12-Bit ADC, and extended Temp range support up to 125 °C

**SIL ready enabled by native hardware features and safety library**

" **If only**
I could run deeply embedded applications with advanced performance at minimum cost

STM32H7 - Creating a smartphone-like graphic UI for your embedded device
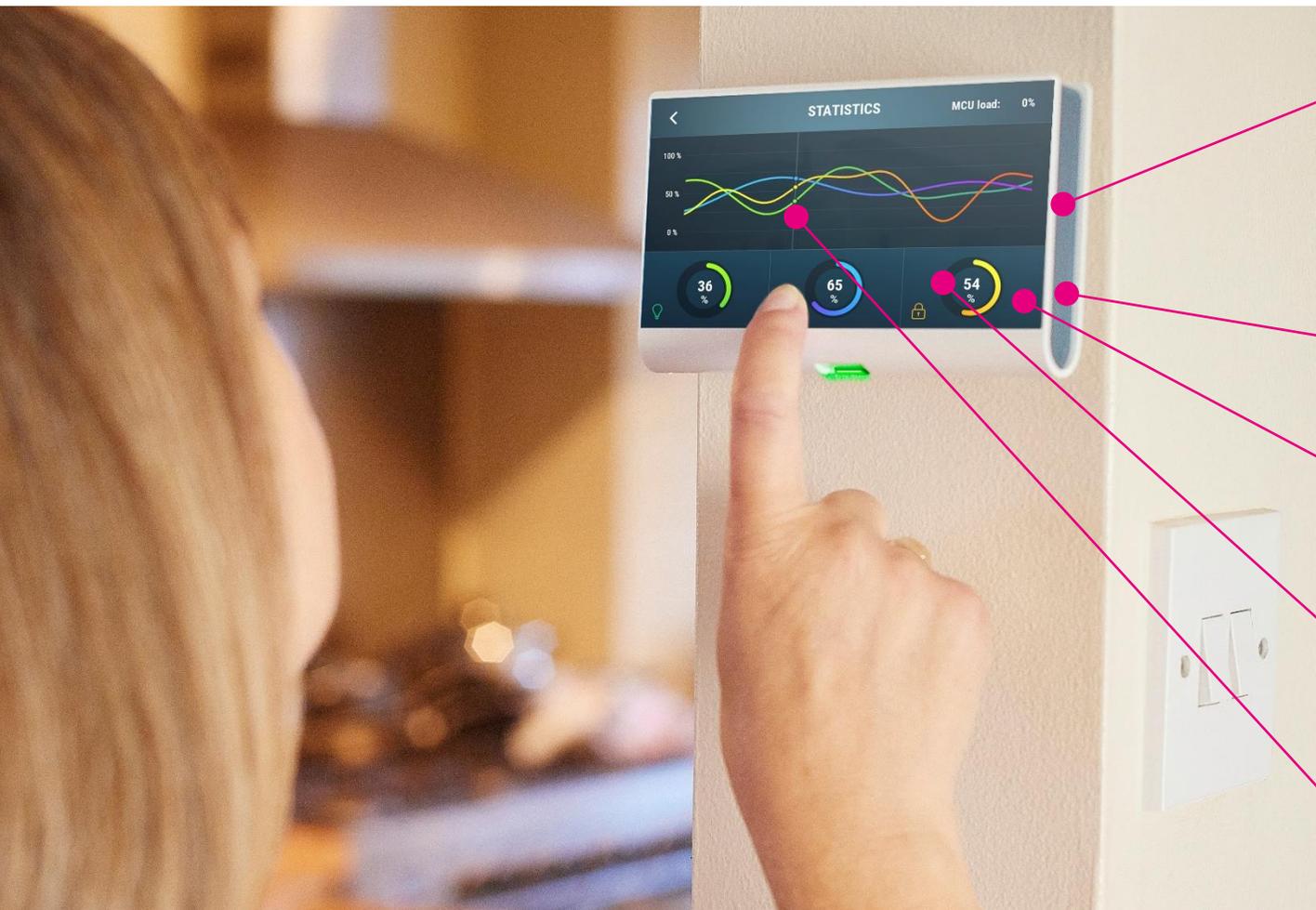
Graphic hardware accelerations for better effects, transitions and fluidity

Up to 1.4 MB SRAM (frame buffer) for integrated and cost-effective single chip solution

Multiple high-speed external memory interface

Graphic support from 64-pin LQFP packages (improved cost effectiveness)

TouchGFX free graphic tool suite for stunning HMI and simplified development

life.augmented
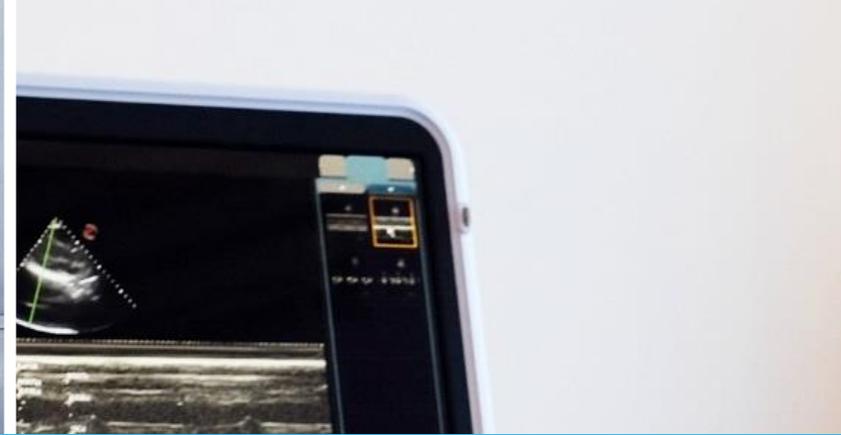
STM32

STM32H7

STM32H723/725 lines & STM32H730 Value line

New product lines expanding the STM32 portfolio

New Performance Record
Up to 2778 CoreMark (Cortex$^{©}$-M7 @550MHz)

Flexible architecture for industrial, security or AI applications
Accelerated graphics, fast data transfer, advanced peripherals

Advanced security features
Crypto Hash, Cortex$^{©}$-M7 Security services

Rich eco-system to speed-up your design
SW tools, HW boards, community and partners

Performance record

STM32H723/725 lines & STM32H730 Value line
High performance range

CoreMark

Chart values (CoreMark):
- STM32**F2**: 298
- STM32**F4**: 608
- STM32**F7**: 1082
- STM32**H7**: 1414 — Arm Cortex-M7 @ 280 MHz
- STM32**H7**: 2400 — Arm Cortex-M7 @ 480 MHz
- STM32**H7**: 2778 — Arm Cortex-M7 @ 550 MHz
- STM32**H7**: 2424+800 — Arm Cortex-M7 + M4 Dual Core @ 480 MHz & 240 MHz
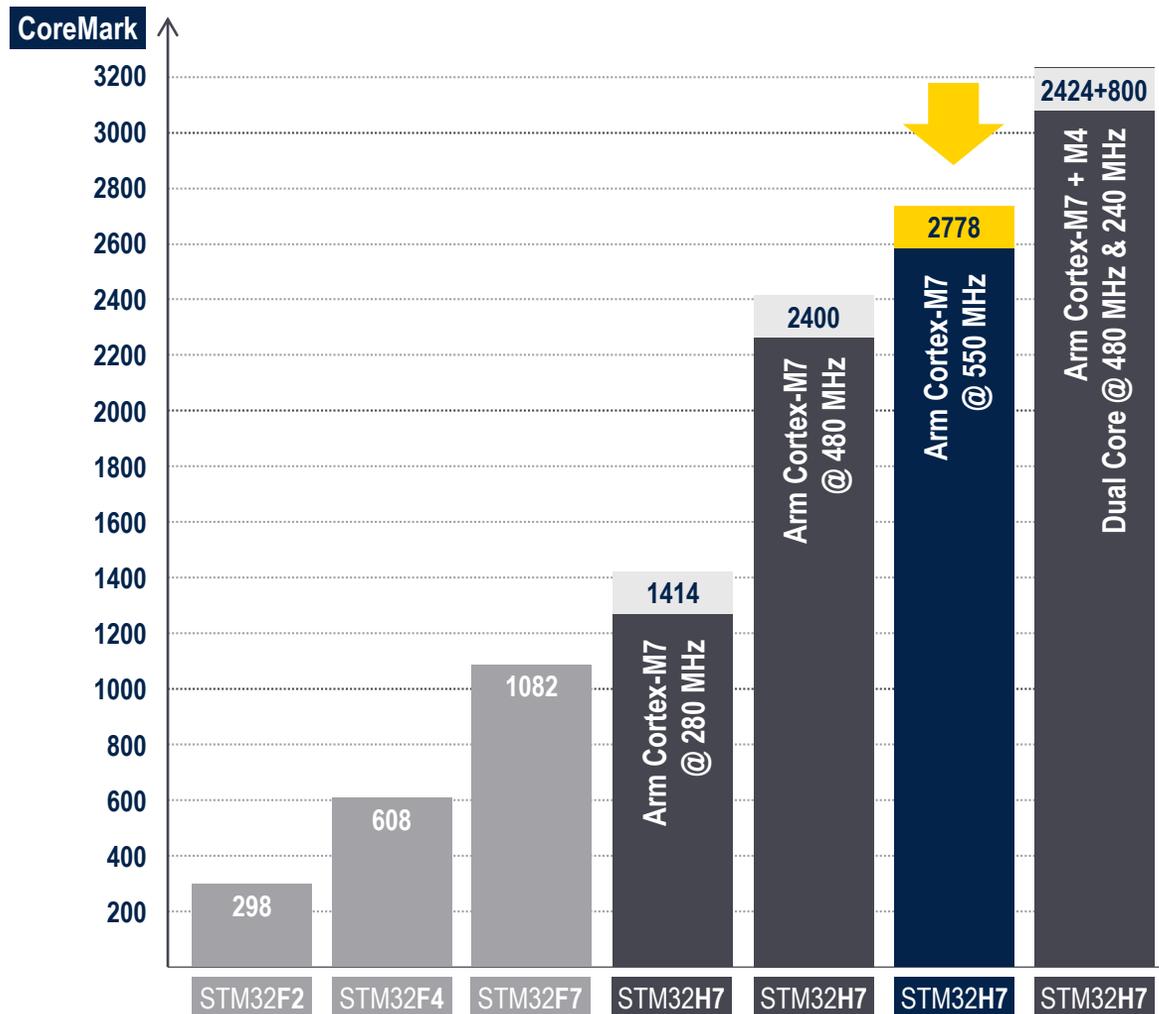
Arm® Cortex® -M7 up to 550 MHz

Most powerful Cortex core with double precision FPU, MPU, advanced DSP and L1 cache

Single Core Architecture Approach for performance and advanced HMI

Factory automation	Connectivity & security
Cortex-M7 = HMI, process control, power management	**Cortex-M7** = Alarm panel, Wireless Modules
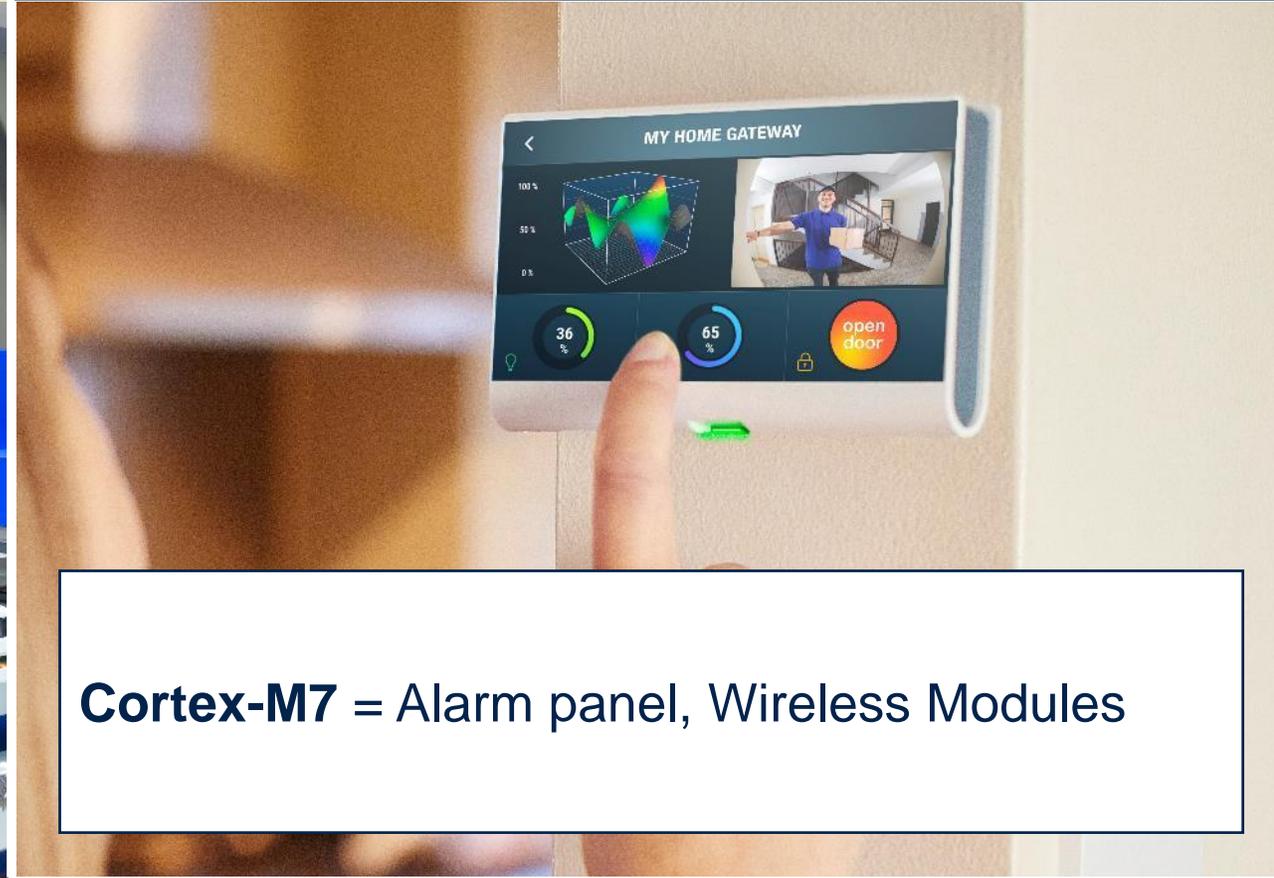
Create a rich human machine interface

Cortex-M7 - handling audio and rich HMI, Real Time control tasks

STM32**H7**

Display
High Resolution

LCD-TFT

Display Interface

Memory

NOR, PSRAM-
Octo-SPI
eMMC
SDRAM, SD card

Memory
Interface

arm
Cortex-M7

Chrom-ART
Accelerator™
JPEG codec

Crypto
Hash

RAM

RAM

FLASH

Main
DMA

Audio decoding and output

optional

life.augmented
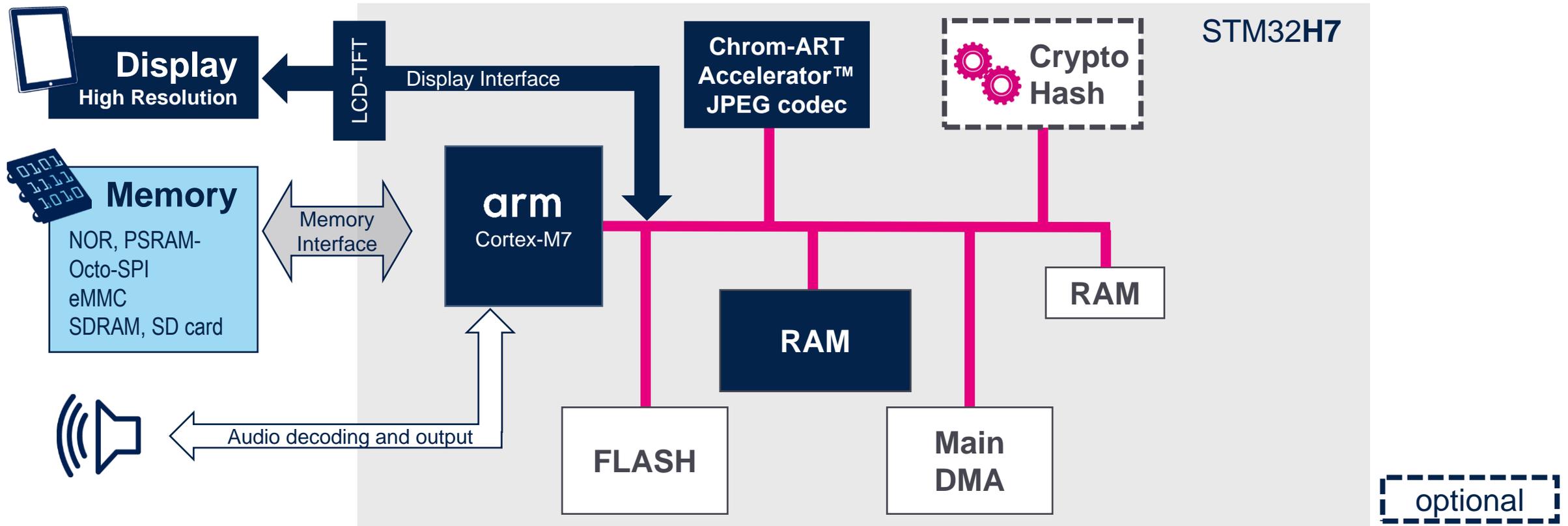
Powerful core supported by a powerful architecture

Display nice graphic
The Chrom-ART Accelerator™
and MJPEG codec
offload the CPU by more than 90%

Manage security
Use dedicated **cryptography**
and **Hashing** HW acceleration
to **offload the CPU by more than 90%**

STM32H7

Transfer data efficiently across peripherals
The Main DMA takes care
of the most complex schemes
between memories and peripherals
with **up to 16 channels to offload the CPU**
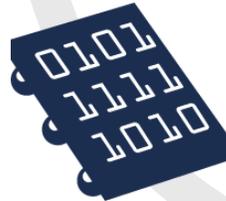
Generate complex wave forms
High-Resolution timer (2.1ns)
can generate complex wave forms
synchronized on multiples events,
with no CPU assist
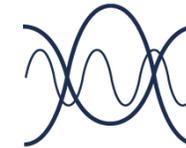
STM32H7 line-up

Extensive STM32H7 portfolio

LONGEVITY 10 YEARS COMMITMENT

Dual-core Line					STM32**H745/755** **480+240 MHz** SMPS 1027 + 300 DMIPS RAM 1 MB Flash up to 2 MB	STM32**H747/757** **480+240 MHz** SMPS 1027 + 300 DMIPS RAM 1 MB Flash up to 2 MB

NEW

Single-core Line	STM32**H7A3/B3** 280 MHz LDO 599 DMIPS RAM 1.4 MB Flash up to 2 MB	STM32**H742** 480 MHz LDO 1027 DMIPS RAM 692 KB Flash up to 2 MB	STM32**H743/753** 480 MHz LDO 1027 DMIPS RAM 1 MB Flash up to 2 MB	STM32**H723/733** **550 MHz** LDO 1177 DMIPS RAM 564 KB Flash up to 1 MB	STM32**H725/735** **550 MHz** SMPS 1177 DMIPS RAM 564 KB Flash up to 1 MB

Extended temperature range 125 ° C ambient

$ Value Line	STM32**H7B0** 280 MHz LDO 599 DMIPS RAM 1.4 MB Flash 128 KB		STM32**H750** 480 MHz LDO 1027 DMIPS RAM 1 MB Flash 128 KB	STM32**H730** **550 MHz** LDO 1177 DMIPS RAM 564 KB Flash 128 KB	STM32**H730Q** **550 MHz** SMPS 1177 DMIPS RAM 564 KB Flash 128 KB

Arm® Cortex® core   Cortex-M7   Cortex-M7 & -M4

life.augmented

Tailored for your needs

CORE, MEMORIES AND ACCELERATION
- Single-core Cortex-M7 up to 550 MHz
- Flash and RAM acceleration
- SP-FPU and DP-FPU
- 4 x DMA
- Mathematics

CONNECTIVITY
- Up to 2 x USB2.0 OTG FS/HS
- 2 x SDMMC
- USART, UART, SPI, I²C
- Up to 3 x CAN (2 x FD and 1 x TT)
- HDMI-CEC
- FMC, Dual-mode Quad-SPI or 2 x Octo-SPI
- Camera I/F

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

GRAPHIC
- Chrom-ART Accelerator™

OTHER
- Crypto/Hash option[1]
- Security services option
- TRNG
- DFSDM
- 16- and 32-bit timers
- Up to 3 x 16-bit ADC (up to 3.6 MSPS)
- Analog (compt,AOP)
- Voltage range 1.62 to 3.6 V (except 100-pin and VFQFPN68 packages : 1.71 to 3.6 V)
- Multi-power domains
- -40°C up to 105°C ambiant
- -40°C up to 125°C ambiant[2]

Product line	f_CPU (MHz)	Dual-Bank Flash memory (bytes)	RAM (bytes)	Octo-SPI & OT - FDEC	Ethernet	Graphic	Power supply	Stop mode (typical) / RAM reten-tion
Single-core lines								
STM32H725/735[3]	550	Up to 1 Mbyte	564KB (incl.128K DTCM, 432KB Syst + 4K bckup)		•	TFT-LCD	SMPS[5] + LDO	200 µA / 564KB
STM32H723/733[3]	550	Up to 1 Mbyte	564KB (incl.128K DTCM, 432KB Syst + 4K bckup)		•	TFT-LCD	LDO	520 µA / 564KB
Value line								
STM32H730	550	128 Kbytes	564KB (incl.128K DTCM, 432KB Syst + 4K bckup)		•	TFT-LCD	SMPS[4] + LDO	200 µA / 564KB 520 µA / 564KB

Notes :
1. Optional - dedicated CPN, STM32H733 and STM32H735 for the Crypto Variants
2. 125 °C ambiant / 140 °C junction. Dedicated part numbers on STM32H725/H735
3. Crypto and Security services on CPN : STM32H733, STM32H735 and STM32H730
4. SMPS available only on STM32H730Q CPN
5. SMPS only on the QFN68 variant (no LDO)

- High performance up to 550 MHz in Single core Arm® Cortex ® -M7
- 128 KB to 1 MB embedded Flash
- 564 KB RAM
- Security features (Boot, Tamper …), OTFDEC on external memories, Crypto/Hash and security services (optional)
- Graphic support with TFT-LCD controller and Chrom-ART Accelerator™
- 35 communication peripherals
- 16-bit ADC up to 3.6 MSPS, up to 5 Msps in 12-bit, Comparators, Op Amp
- TT-FD-CAN and FD-CAN
- Low-Power Timers
- LDO and SMPS option
- Up to 140 °C junction temperature / 125 °C ambient (optional)
- Available in Value Line version

Example of block diagram STM32H735xG

System

- SMPS, LDO, USB and backup regulators POR/PDR/PVD/BOR
- Multi-power domains
- Xtal oscillators 32 kHz + 4 ~48 MHz
- Internal RC oscillators 32 kHz + 4, 48 & 64 MHz
- 3x PLL
- Clock control
- RTC/AWU
- 1x SysTick timer
- 2x watchdogs (independent and window)
- 46/67/97/119/121/128 I/Os
- Cyclic redundancy check (CRC)
- Unique ID
- Digital Temperature sensor

Control

- 2x 16-bit motor control PWM synchronized AC timer
- 10x 16-bit timers 4x 32-bit timers
- 5x Low-power timer
- Optional extended temperature range support (125°C)

Crypto/Hash processor

- 3DES, AES 256, GCM, CCM
- SHA-1, SHA-256, MD5, HMAC
- Security services SFI and SB-SFU

Chrom-ART Accelerator™

Cache I/D 32+32 Kbytes

Arm® Cortex® -M7 550 MHz

- Floating point unit (DP-FPU)
- Nested vector interrupt controller (NVIC)
- JTAG/SW debug/ETM
- Memory Protection Unit (MPU)
- ROP, PC-ROP anti-tamper

AXI and Multi-AHB bus matrix

- 4x DMA
- True random number generator (RNG)

- 1-Mbyte single-bank Flash memory
- RAM 560KB incl. Up to 256KB ITCM
- FMC/SRAM/NOR/NAND/SDRAM
- 2x Octo-SPI
- 1024-bit + 4-Kbyte backup SRAM

Connectivity

- TFT LCD controller
- HDMI-CEC
- 6x SPI, 4x I²S, 5x I²C
- Camera interface, PSSI
- Ethernet MAC 10/100 with IEEE 1588
- MDIO slave
- 3x FDCAN (Flexible Data rate)
- 1x USB 2.0 OTG FS/HS
- 2x SDMMC
- 5x USART + 5 UART LIN, smartcard, IrDA, modem control
- 1x Low-power UART
- 2x SAI (Serial audio interface)
- SPDIF input x4
- DFSDM (8 inputs/4 filters)
- SWP (Single Wire Protocol)

Analog

- 2x 12-bit, 2-channel DACs
- 2 x 16-bit ADC (up to 3.6 MSPS) 18 channels
- 1 x 12-bit ADC (up to 5 MSPS) 12 channels
- 2x COMP
- 2x OpAmp

- STM32H735 is the crypto variant of the STM32H725
- It offers the Security services (SFI and SB-SFU) for secure programing or secure firmware update
- LDO and SMPS
- Optional 125 °C ambient Temp support / Max 140 °C junction temperature(*)

(*) : on dedicated part numbers

16

Typical 25°c data in RUN and LOW POWER modes

Wake-up time

	CM7 RUN (VOS0) at 550 MHz - PERIPH OFF 147 µA / MHz*
	CM7 RUN (VOS1) at 400 MHz - PERIPH OFF 117 µA / MHz*
2.6 µs	BAM mode** (D3 RUN, D1 and D2 STDBY) 25 µA / MHz
38 µs	STOP Mode (D3 STOP, D1 and D2 STDBY) 74 µA***
400 µs	STANDBY + 4 KB RAM 4.0 µA / 4.3 µA****
400 µs	STANDBY 2.5 µA / 2.8 µA****
	V_{BAT} 25 nA / 0.75 µA****

Typ @ V_{DD} =3.3 V, @ 25 °C

Notes:
* from Flash (Cache ON and Reg. ON)
** Autonomous Mode - run at 64MHz, I2C4 and BDMA
*** VOS5; Flash OFF, no IWDG
**** without and with RTC. At 3V
Numbers are typical. More details available in product Sheet available at www.st.com

ST's new STM32H7 microcontrollers combine the high performance of a single core with/and rich feature integration

Flash memory size / RAM size (bytes)

1 M / 564 K					
STM32H735RG	STM32H735VG	STM32H735VG	STM32H735ZG	STM32H735AG	STM32H735IG
STM32H725RG	STM32H725VG	STM32H725VG	STM32H725ZG	STM32H725AG	STM32H725IG
	STM32H733VG		STM32H733ZG		
	STM32H723VG		STM32H723ZG		

512 K / 564 K					
STM32H725RE	STM32H725VE		STM32H725ZE	STM32H725AE	STM32H725IE
	STM32H723VE		STM32H723ZE		

128 K / 564 K					
	STM32H730VB		STM32H730ZB	STM32H730AB	STM32H730IB

Pin count

| 68-pin VFQFPN | 100-pin LQFP/ TFBGA (0.80 mm pitch) | 115-pin WLCSP | 144-pin LQFP/ UFBGA (0.5 mm pitch) | 169-pin UFBGA (0.5 mm pitch) | 176-pin LQFP/ UFBGA (0.65 mm pitch) |

LONGEVITY 10 YEARS COMMITMENT

STM32H7

- System integration
- Advanced connectivity and control
- Security services

Legend:
- ■ STM32H725/735 lines
- ■ STM32H723/733 lines
- ■ STM32H730 Value line
- □ with HW crypto/hash
- ● with internal SMPS

www.st.com/STM32H7

► STM32H723/733 here

► STM32H725/735 here

► STM32H730 here

► ST blog article here

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Performance and smart architecture are yours to innovate

Industrial and health & wellness DNA

Industrial	Health & Wellness

- Error Code Correction on all Flash and RAM

- Large choice of packages

- Advanced digital and analog

  (16-bit and 12-bit ADC, Op-Amp, Ethernet, CANFD…)

- High temperature -40°C up to 140°C junction temperature (125°C ambient)

Industrial and health & wellness DNA

Industrial

- **Inverters**
  Advanced timers and analog peripherals

- **Communication gateway**
  Rich connectivity

- **Human Machine Interface**
  Chrom-ART Accelerator and display interfaces for TFT and MIPI-DSI

Health & Wellness

- **Health and wellness**
  Chrom-ART Accelerator™ and display interfaces for TFT displays

- **Individual assistance** (hearing, respiratory)
  Advanced timers and analog

- **Measurements and Data logger**
  Advanced Analog

Consumer

- Small packages

- Power efficiency and high performance

- Advanced audio and graphic

- High-speed peripherals

- Large expandable memories to support ever increasing communication protocols

STM32

Consumer

- **IoT gateway**
  Large memory and rich communication peripherals

- **Access control**
  Chrom-ART Accelerator™ and display interfaces for TFT

- **Drones**
  High processing architecture, advanced timers and analog peripherals, small packages

Secure your production
and your applications

STM32

STM32Trust on STM32H7 Series

STM32 Trust

www.st.com/stm32trust

Global security
ecosystem and services

STM32 concept
Support customer's
Secure Boot / Root Of Trust

SFI
A Secure Installer of
Secure Boot / Root Of Trust

SBSFU
A reference SW package for **FW Update**
and **Secure Boot / Root Of Trust**

# Secure your production flow with secure firmware install (SFI*)

Manage STM32 authentication, firmware decryption and installation

Customer premises

FW

Encrypted FW

Store encryption key into HSM

ST Hardware Secure Module (HSM)

Encrypted FW transfer

HSM **physical** transfer

Untrusted environment

STM32H7
SFI

Authenticate target STM32
Generate installation license

(*) : optional – SFI service available on specific part numbers
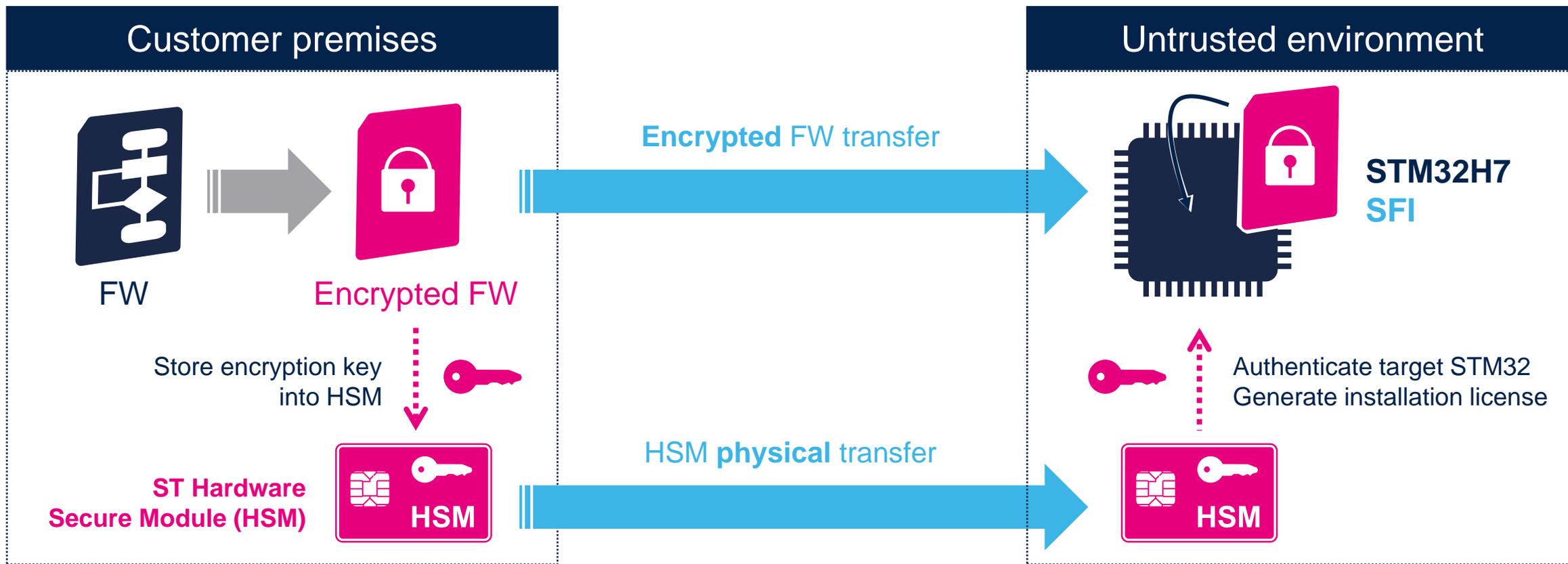
Embedded Secure Firmware Install - SFI

Manage STM32 authentication, firmware decryption and installation

Customer premises

SFI

FW → Encrypted FW

Store encryption key in HSM

Trusted Package Creator

ST Hardware Secure Module (HSM)

3rd Party premises

SMI

Module → Encrypted Module

Store encryption key in HSM

Trusted Package Creator

ST Hardware Secure Module (HSM)

Untrusted environment

Encrypted FW Transfer

HSM Physical transfer

SFI

Authenticate target STM32
Generate installation license

STM32H7

SMI

Authenticate target STM32
Generate installation license

Encrypted Module transfer

HSM Physical transfer

Secure Loader embedded services provisioned by ST ➜ Mass Market approach

ST ecosystem with Encryption, HSM and programming tools

Firmware cloning protection on the first installation via UART / SPI / USB

Protect 3rd party Software IP (SMI)

Secure Boot Secure FW Update - SBSFU

Secure Firmware Update

Secure Boot — Root of trust

Firmware Update — Multi image

Secure Engine — Crypto + key

HAL Libraries

Security Guidance

STM32 CubeIDE

IAR SYSTEMS

OEM Firmware with security and code isolation

Fortified

Disable All Debug Ports

Secure Firmware Update

Secure Boot   Secure Provisioning

Trustworthiness

- Authenticity
- Data Confidentiality
- Firmware Integrity
- Device Integrity

Tamper Detection   Crypto Hardware

Trusted / Certified Libraries

Memory Segmentation / Protection

Reference library source code for IAP

Demonstrate SW modules for:
- Secure Boot
- Secure Engine for Crypto and key
- Firmware Update image management

Ensure authentication and secure programing of in the field products

Reference implementation of STM32H7 hardware memory protections

A full set of security

**Encryption
Decryption
Authentication**

- AES-128/256 Encryption
- DES/TDES crypto engine
- SHA-256 Authentication
- Certified Crypto library
- True Random Number Generator
- Unique ID
- Key provisioning for STM32 authentication

STM32**H7**

**Memory
and
IP protection**

- **Anti-tamper detection**
- Memory Protection Unit (MPU)
- Secure Boot
- Read and Write Protection
- **Secure User Area (Hide Protect)**
- **PC-ROP**
- JTAG fuse
- **Octo-SPI On The Fly Decrypt engine on external NOR Flash**

Some of the above features are optional and require to procure dedicated part numbers. Please refer to product specification

Enhance your product with great graphic

Smart home
Watch video

Kitchen appliances
Watch video

Industrial
Watch video

Smart home
Watch video

Smart home
Watch video

Industrial
Watch video

Industrial
Watch video

Enhanced graphic UI for any resolution

24bpp 16bpp 8bpp

2" – 3"

Display **with GRAM**
Single frame buffer

4" – 5"

Display without GRAM
Double frame buffer

7"

Display without GRAM
Double frame buffer

+10"

Display without GRAM
Double frame buffer

Internal RAM

STM32H7A3/7B3/7B0

STM32H723/725/730

STM32H743/745/747/750

External RAM

STM32H7A3/7B3/7B0

STM32H723/725/730

STM32H743/745/747/750
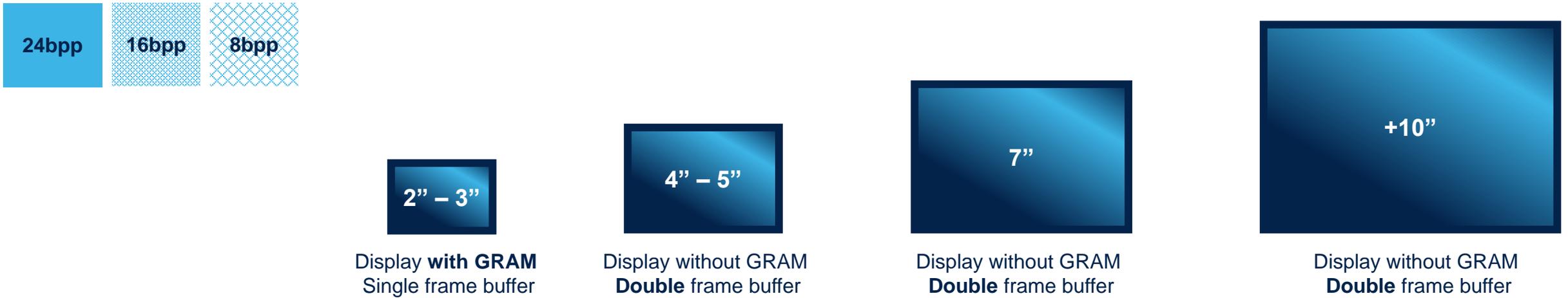
STM32H7 detailed graphic features

	Features	STM32H7A3/7B0	STM32H723/725/730	STM32H745/747	STM32H743/750
Hardware acceleration	**Chrom-ART Accelerator™** Hardware acceleration for graphical operations	●	●	●	●
	Chrom-GRC™ Minimizing memory usage for round displays	●	-	-	-
	JPEG CODEC Optimized video playback	●	-	●	●
Memory interfaces	**Quad-SPI** Connecting QSPI Flash	●	●	●	●
	Octo-SPI Connecting Octo SPI flash or Octal RAM	●	●	-	-
	FMC Connecting parallel flash, SDRAM, PSRAM	●	●	●	●
	SDMMC Connecting eMMC, MMC,	●	●	●	●
Display interfaces	**LCD-TFT display controller**	●	●	●	●
	MIPI-DSI	-	-	●	-
	Parallel 8080/6800	●	●	●	●
Embedded memory	**Embedded SRAM** for framebuffers	Up to 1024 Kbytes	Up to 364 Kbytes	Up to 512 Kbytes	Up to 512 Kbytes
	Embedded flash for code and data	128 Kbytes to 2048 Kbytes	128 Kbytes to 1024 Kbytes	1024 Kbytes to 2048 Kbytes	128 Kbytes to 2048 Kbytes

Faster and easier GUI Development

Free for all STM32 Developers

Maximum Performance on minimum footprint

Interoperable with STM32Cube Ecosystem

Simplify your GUI development with TouchGFX

- STM32H7 is included in the X-CUBE-TouchGFX toolchain
  - Available through STM32CubeMX on STM32CubeIDE, Arm® Keil and IAR Embedded Workbench ®
- Out-of-the-box support of the STM32H735G-DK Discovery Kit
- Application template and demo available in TouchGFX Designer

X-CUBE-TOUCHGFX

TouchGFX GENERATOR → STM32CubeMx plugin
Graphic HW and SW configuration and project generation

TouchGFX DESIGNER → TouchGFX PC tool
Graphic application development and simulation

TouchGFX ENGINE → TouchGFX embedded library
Optimized and Hardware accelerated graphic library
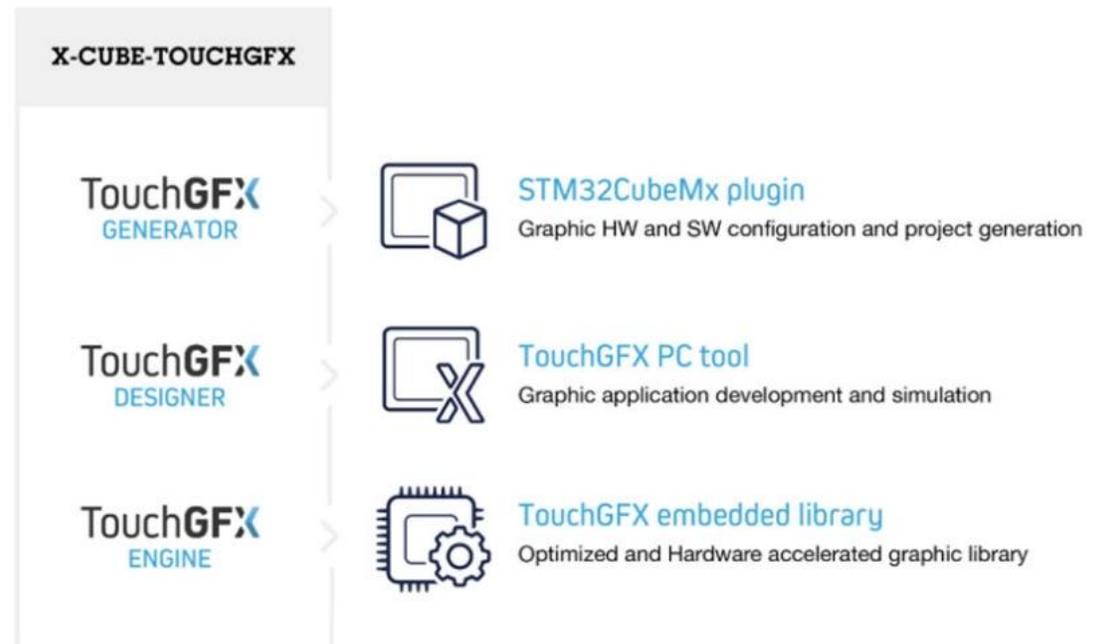
STM32 Graphics Extended Ecosystem

TouchGFX Implementers
World-wide network for TouchGFX expertise and design services

Advanced Graphics Solutions
Software partners taking the full advantages of STM32 graphic capabilities

Solutions for STM32H7
Artificial Intelligence

Embed AI in your applications with STM32H7

People detection	Food classification	Voice recognition	Industrial applications

The key steps behind Neural Networks on STM32

Optimized C code generated by STM32Cube.AI
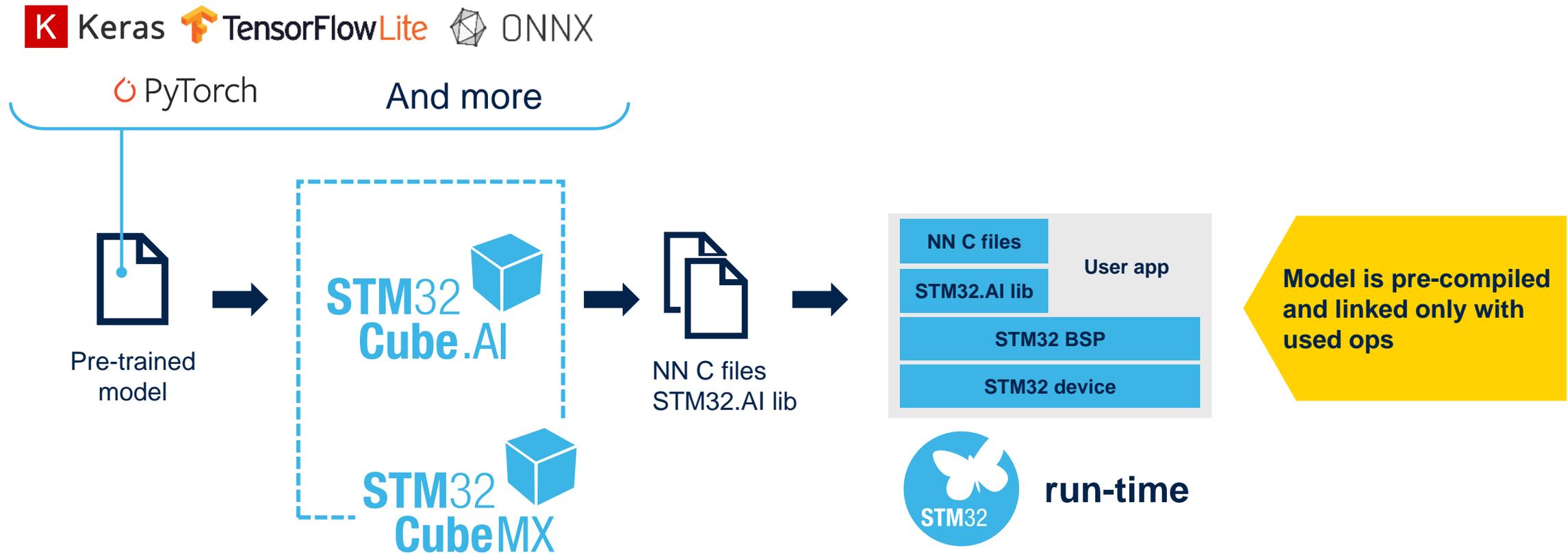
Solutions for STM32H7 Functional safety

Safety Ready

STM32

life.augmented

STM32 high performance built-in safety features

Features	STM32F2/F4	STM32F7	STM32H7
Dual watchdogs: Independent watchdog and system window watchdog	●	●	●
Backup clock circuitry with clock security system (CSS)	●	●	●
Hardware CRC unit / Programmable polynomial	● / -	● / ●	● / ●
Supply monitoring (POR, BOR, PVD)	●	●	●
I/O function locking	●	●	●
PWM critical register protections (write-once registers)	●	●	●
Memory protection unit (MPU) 8 zones – to ensure data integrity from invalid behavior	●	●	●
Multiple Flash memory protection levels	●	●	●
ECC Error Code Correction (SECDED) for SRAM	-	-	●
ECC Error Code Correction (SECDED) for Flash memory	-	-	●

Note: Arm Cortex-M cores also have built-in safety features (dual stack pointer, fault exceptions, and debug module).

SIL functional safety package for STM32

Reduce time and cost to build STM32-based systems certified to IEC 61508 industrial safety standard

SIL Ready

TÜVRheinland® CERTIFIED

SIL2/SIL3 SIL ✓

Customer Development

STM32

Certified STM32 Self-Test Library X-CUBE-STL

Safety Documentation

MCU Safety Features

Product Portfolio

ST Quality foundations

This Safety solution will be available on STM32H723/33; STM32H725/35 & STM32H730 Value line in Q1-2021

SIL Ready

without design package

MCU Hardware Level failure mode coverage

Certification body assessment

MCU Software level failure mode coverage

Application level failure mode coverage

ST provides a complete, certified offering to

- Lower project costs

- Reduce design complexity

- Ease SIL certification assessment

with design package

MCU Hardware Level failure mode coverage
with STM32 Embedded Safety Features

Certification body assessment
Certified STM32 Self-Test Library X-CUBE-STL

with STM32 Self-Test Library X-CUBE-STL
MCU Software level failure mode coverage
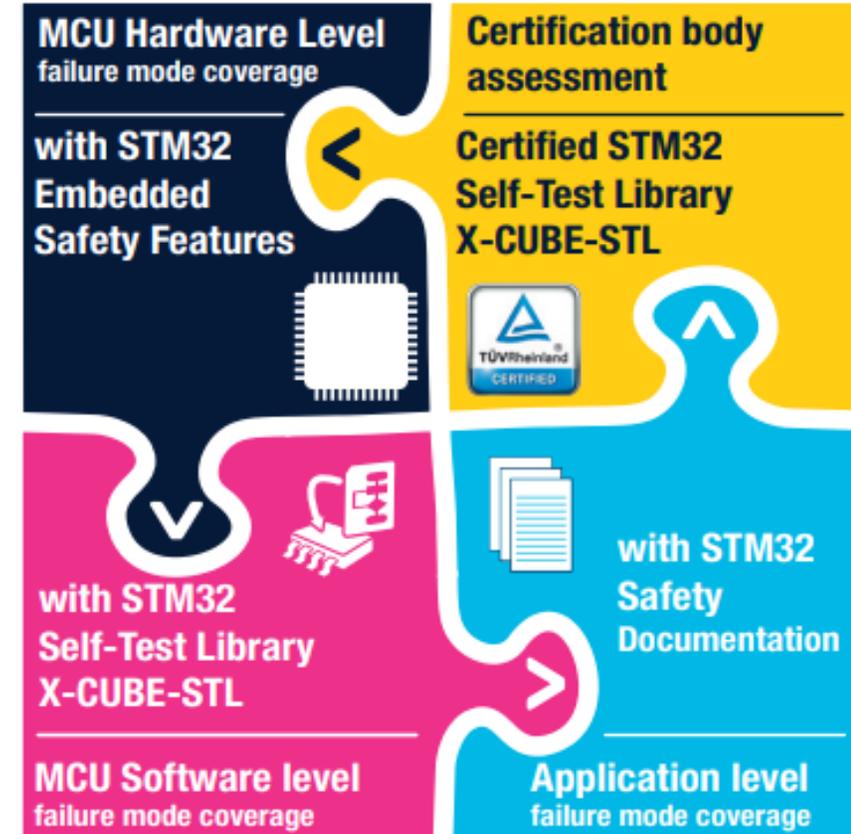
with STM32 Safety Documentation
Application level failure mode coverage

Solutions for STM32H7 Motor control

Drive your motor with STM32H7

Robotic	High end Appliance	Servo motor - Industrial	Medical

FOC (field-oriented control) for BLDC/PMSM motors

STM32 tools and software provide an in**tegrated development environment** to ease and support the design of motor control solutions.

ST-MC-SUITE
Motor Control
Solution Finder

STM32Cube
Generic Software
Toolset

X-Cube-MCSDK
Software
Development Kit

STM32

Dedicated Motor Control
Software Tool
Motor Profiler

STM32CubeH7
Generic Embedded
Software Library
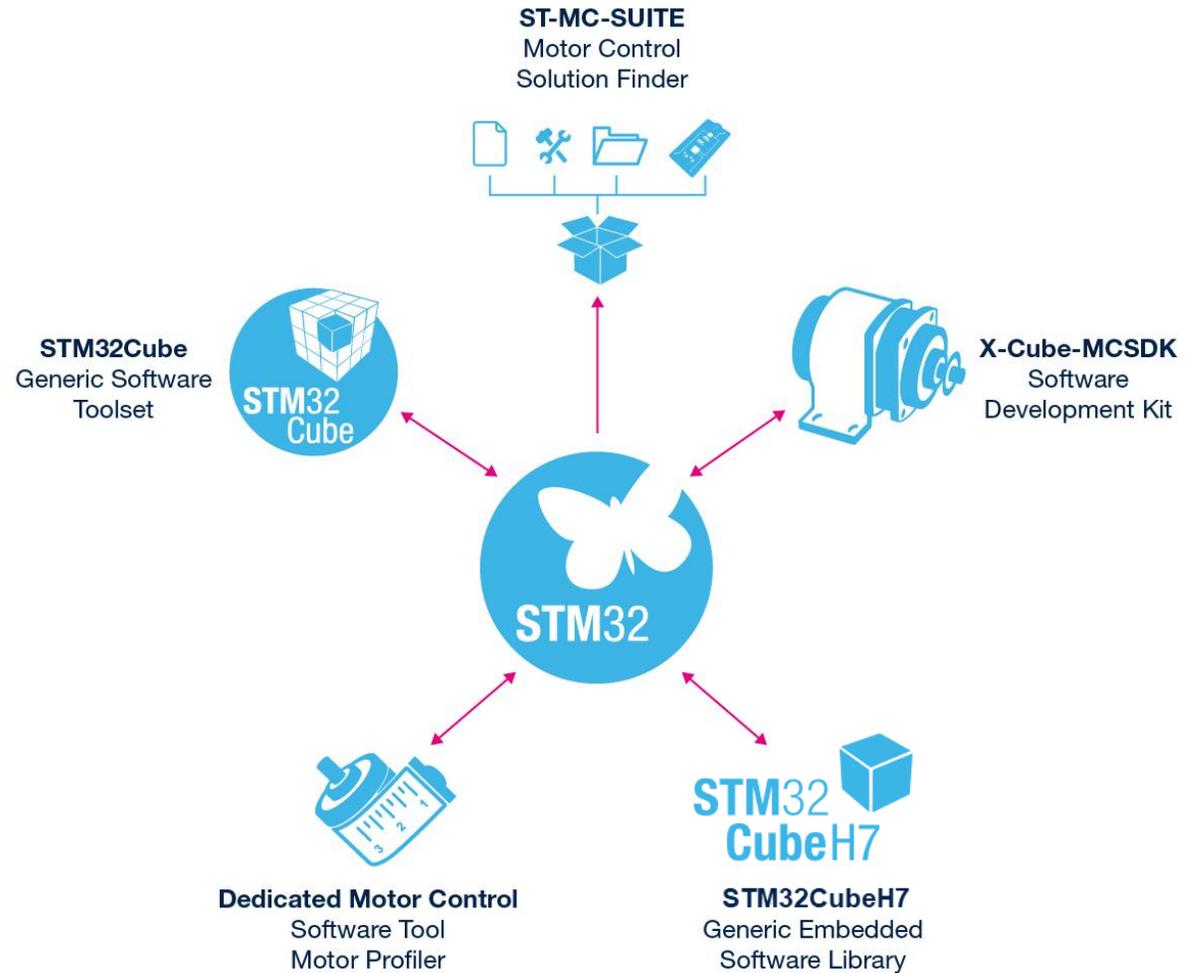
STM32H7 features for Motor control

Features	STM32H723/733/725/735/730	Benefit
Core	Cortex-M7	Performance and efficiency
FPU	yes	Performance and efficiency
MPU	yes	Safety
Freq CPU max	550MHz	Performance and efficiency
DMIPS	1177	Performance and efficiency
Flash / SRAM data size	128KB to 1MB / 564KB	Performance and integration/cost
Including : ITCM/DTCM RAM	*Up to 256KB (configurable) / 128KB*	*Performance and efficiency*
Error Code Correction	SECDED on full memory map	Safety
ADC SAR	2x16bit 3.6Msps, 1x12bit 5Msps	Efficiency
Other Analog	2x Comp, 2x PGA, 2xDAC, 1xDFSDM	Integration/cost
Advanced Motor Control timer	2x (275MHz)	Performance and efficiency
Cache and Accelerator	32KB+32KB L1 cache Graphic, Cordic, FMAC, Crypto(**)	Performance and efficiency
Security Services (SFI and SB-SFU)	yes(*)	System Integrity
Package	VFQFPN68 LQFP100/144/176 BGA100/144/169/176 WLCSP115	Cost/Integration/flexibility
Max Temperature range °C	[-40 .. +125] Tj max 140 ° C	Integration and cost

(*) : on crypto part numbers

A complete ecosystem
for single and dual-core architecture
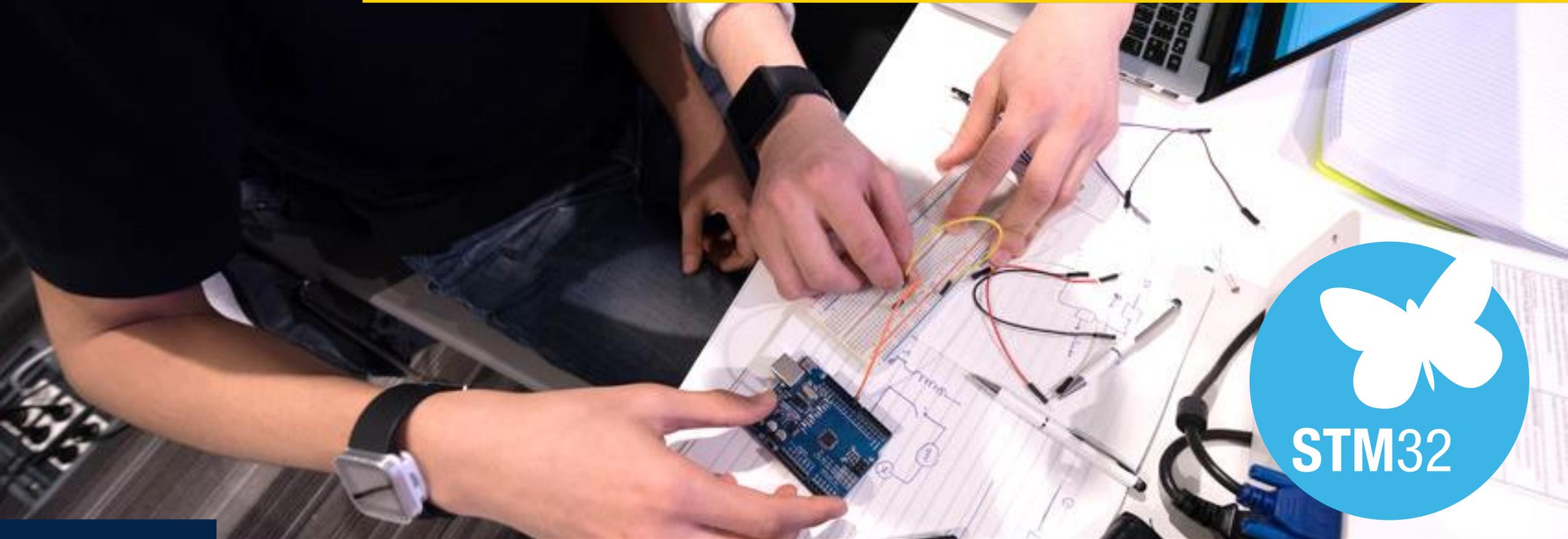
STM32

Supported by the STM32 ecosystem

Software

Software Tools

Embedded Software

STM32 CubeMX
Configuration

STM32 CubeMCU Packages

Packages

STM32 CubeIDE
Development

STM32 Cube

STM32 CubeProgrammer
Programming

STM32 CubeMonitor
Monitor

Expansions

STM32 CubeExpansion

Hardware

STM32 Nucleo-144 boards

STM32 Nucleo

Discovery kits

Customer support

FAE - Worldwide Customer Support
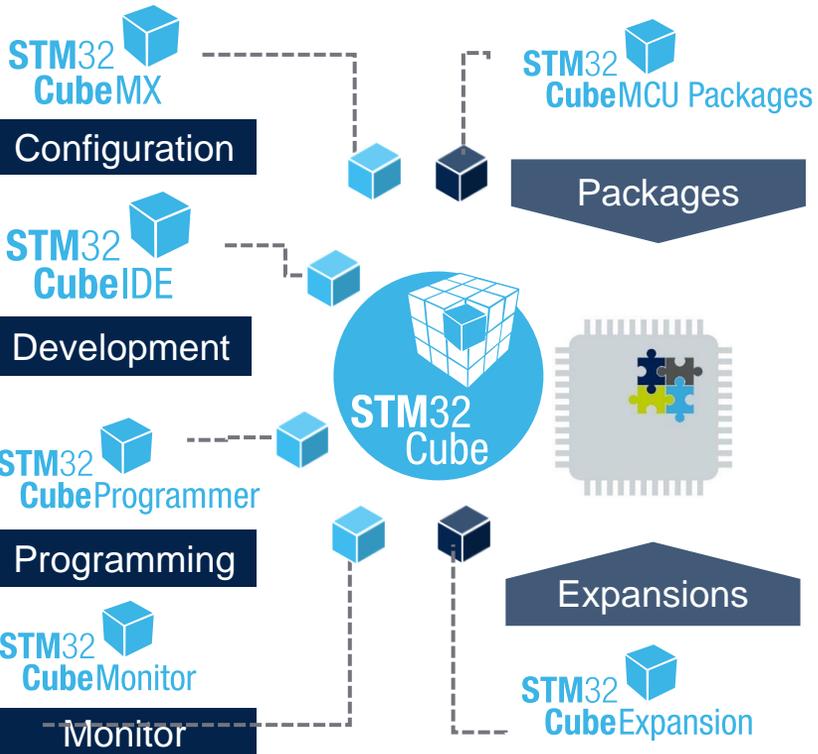
community.st.com

MOOC

Partner Program

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Software tools for STM32H7

Complete support of Arm Cortex-M architecture
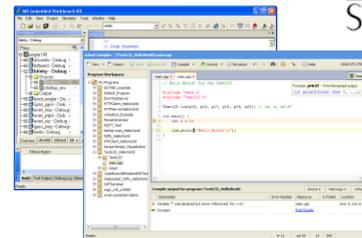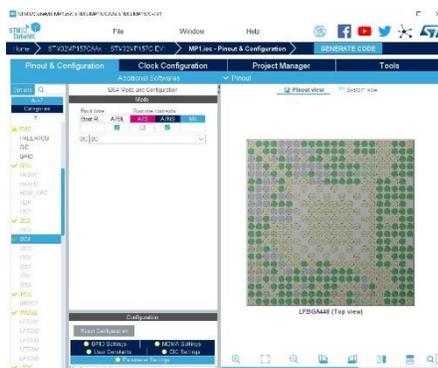
STM32CubeMX	IDEs Compile and Debug	STM32 Programming & Monitoring tools
Graphical tool for easy configuration	**Simple and powerful Solutions**	**STM32CubeProg STM32CubeMonitor**
• Configure and generate Code • Peripherals configuration	• Partners IDE • Free IDE based on Eclipse	• Program the application into the chip • Sign the application and generate license • Monitor variables at run-time

Speed-up evaluation, prototyping and design
(board selection guide available at the end of this presentation)

Starting at **$29**
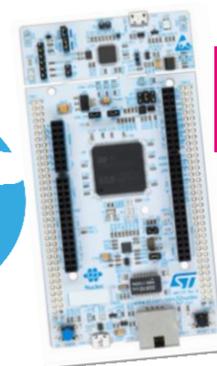
Starting at **$87**

STM32H7 class	Cores/Speed	Part numbers	Discovery Kit	Nucleo-144 board
STM32H72x/3x	Single Core 550 MHz	**STM32H723/733**	-	NUCLEO-H723ZG
		STM32H725/735	STM32H735G-DK	-
		STM32H730, Value line, Crypto enabled	*STM32H735G-DK ***	-

* Recommended board (no dedicated board for this part number)

1 Discovery Kit → **1 Nucleo-144 Board**

Flexible prototyping & demo | **Affordable and quick prototyping**

Large selection of partners already engaged for:

- Embedded software
- Software tools
- Graphics UI
- Security
- Training and services

STM32 Partner Ecosystem

and many more …

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github.com/STMicroelectronics

🎓 STM32H7 online training

📰 STM32H7 blog article

STM32

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Thank you

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