



# STM32 32-bit MCU & MPU families

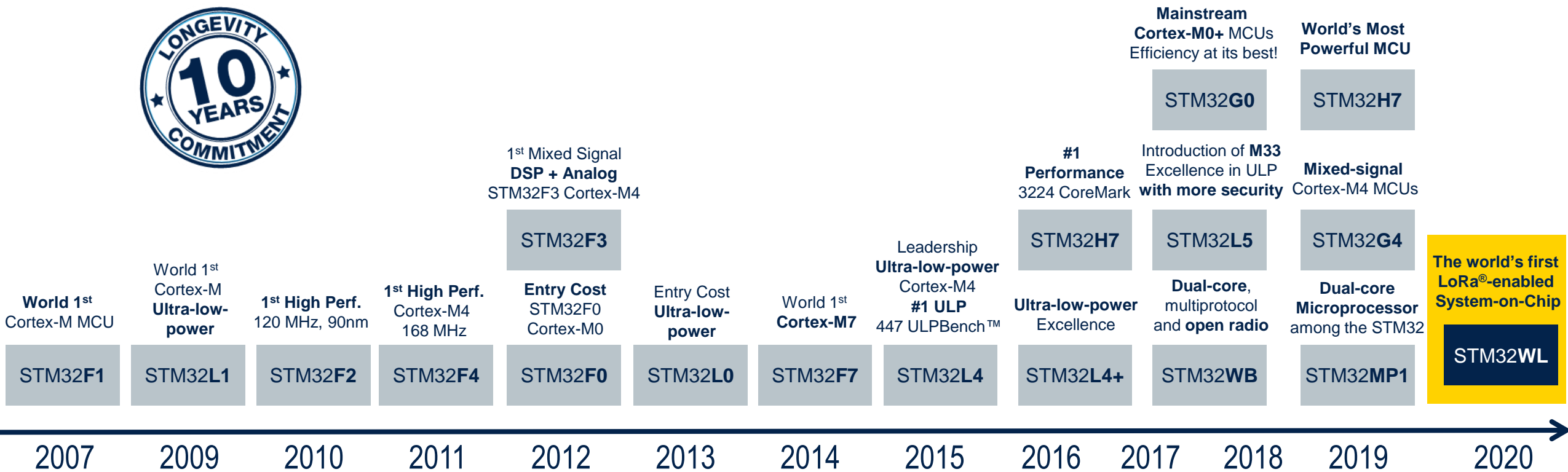
The latest STM32 announcements Q2 2020





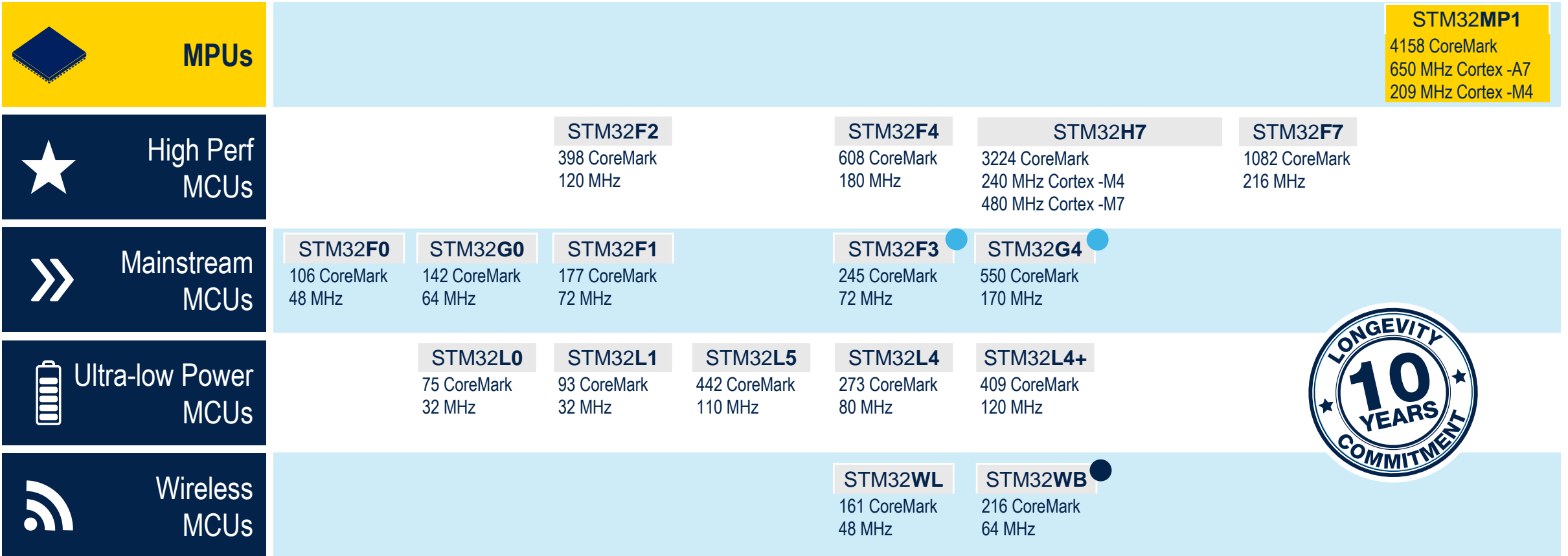
# Continuing the STM32 success story

## Leader in Arm® Cortex® 32-bit MCU & MPU





# STM32 MCUs and MPUs portfolio

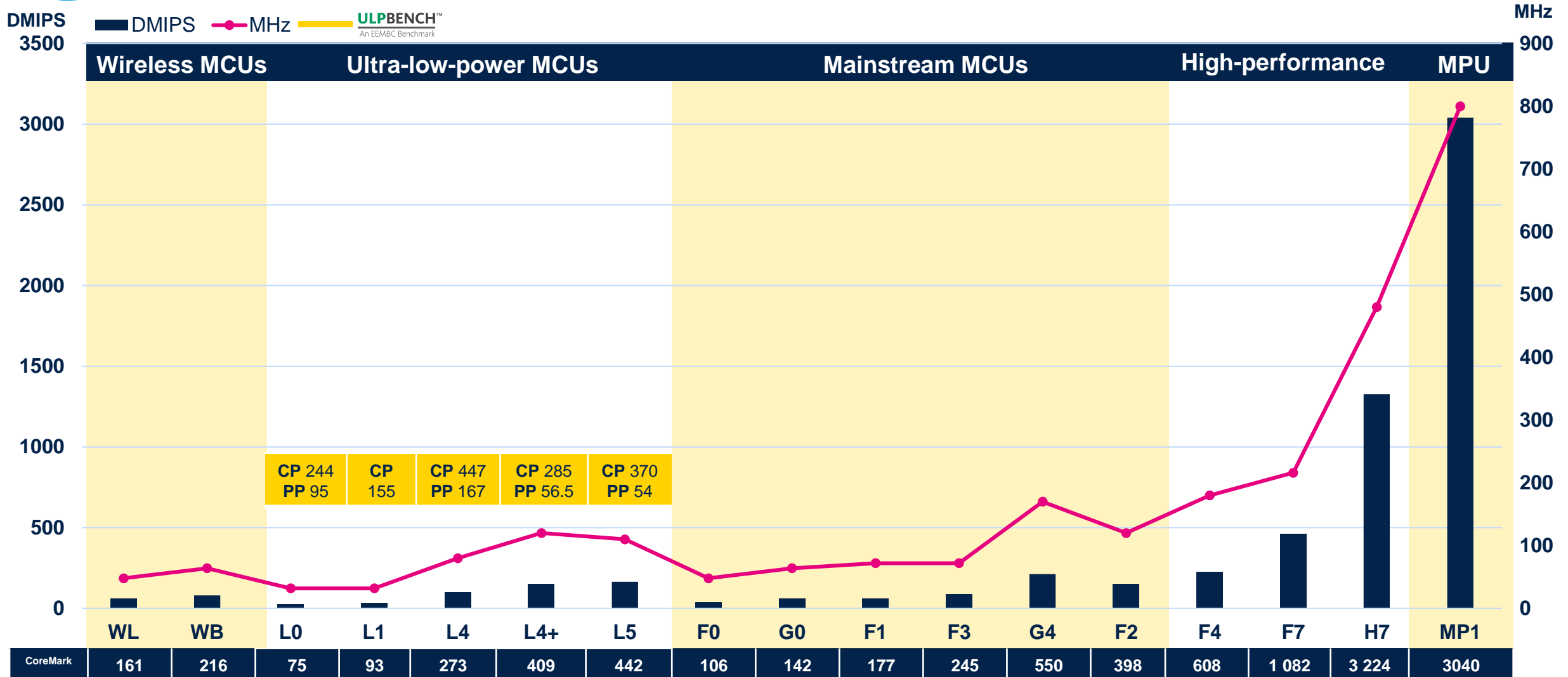


● Optimized for mixed-signal applications      ● Cortex-M0+ Radio co-processor





# Best-in-class power consumption and performance





# 5 reasons to choose STM32

More than 1000 compatible devices

## Real-time performance

- Powerful Arm Cortex Core
- multi-core performance
- High memory size
- Outstanding technical support (local presence)



## Outstanding power efficiency

- Ultra-low dynamic power consumption
- Long life-time, small battery size
- Sustainable technology



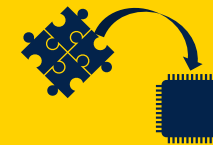
## Superior and innovative peripherals

- Enhanced graphic acceleration
- Digital & Analog smart peripherals
- Wireless
- USB Type-C
- AI and IoT



## Maximum integration

- Best fit versus the application requirements (package size, cost, performance)
- Safety & Security features



## Extensive ecosystem

- Comprehensive development tools to make it easy to turn ideas into products, wide range of partners, community support





# STM32 ecosystem overview

## Software



STM32  
CubeMX

STM32  
CubeProgrammer

STM32  
CubeIDE

STM32  
CubeMonitor



## Hardware



STM32  
Nucleo

Discovery  
kits

Evaluation  
boards

Flexible  
prototyping

Key feature  
prototyping

Full feature  
evaluation



FAE - Worldwide  
Customer Support



community.st.com

MO  
OC



Partner  
Program



[wiki.st.com/stm32mpu](http://wiki.st.com/stm32mpu)

[wiki.st.com/stm32mcu](http://wiki.st.com/stm32mcu)

new

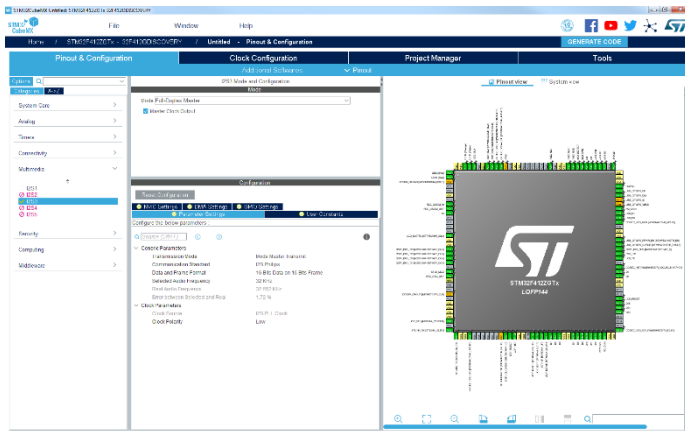


[github.com/STMicroelectronics](https://github.com/STMicroelectronics)

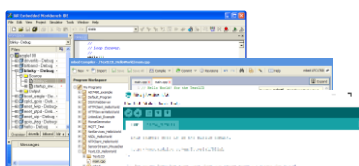


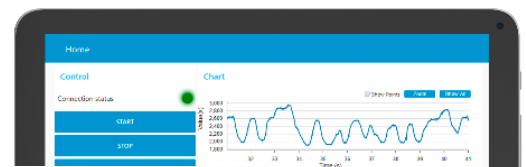
# STM32 software tools portfolio

## A C/C++ flow in three steps



FREE IDEs




STM32CubeMX, GUI Builders  
Configure & Generate Code

ST and Partner IDEs  
Compile and Debug

STM32CubeProg/Monitor  
Monitor, Program & Utilities



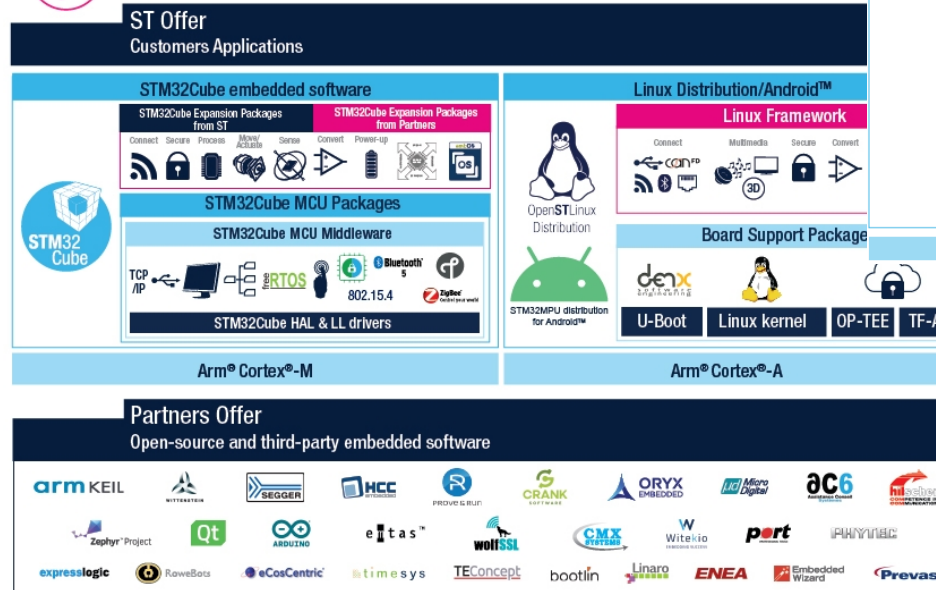


# Embedded software

Several solutions mixing levels of portability and abstraction



## STM32 Embedded Software

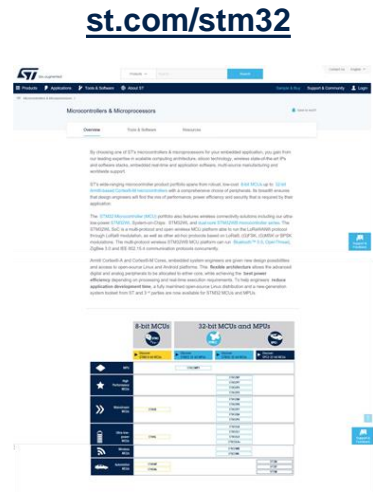






# Information and sharing

## Get connected to STM32 world !



- [facebook.com/stm32](https://facebook.com/stm32)
- [youtube.com/STonlineMedia](https://youtube.com/STonlineMedia)
- [twitter.com/@ST\\_World](https://twitter.com/@ST_World)
- [linkedin.com/stmicroelectronics](https://linkedin.com/stmicroelectronics)
- [21ic](https://www.21ic.com)
- [优酷 YouKu](https://www.youku.com)

Information

Product Selector

Community/GitHub

Social Media

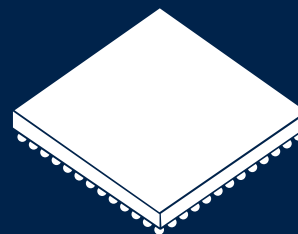
- ▶ STM32 Education is now available [here](#) (MOOC, OLT, Text books, Training Courses)
- ▶ MCD Marketing Divisions-Regions Communication SharePoint [here](#) **new**





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# STM32 microprocessors



Most recent announcement



# STM32MP1 – flexible architecture for a wide range of applications

Constantly improving

▶ February 25<sup>th</sup> , 2020 - [PR](#)

▶ February 20<sup>th</sup> , 2019 - [PR](#)

▶ [Blog articles](#)

▶ [OLT](#)

▶ [Video](#)

▶ [Webinar](#)



[www.st.com/STM32MP1](http://www.st.com/STM32MP1)



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# STM32 high-performance MCU



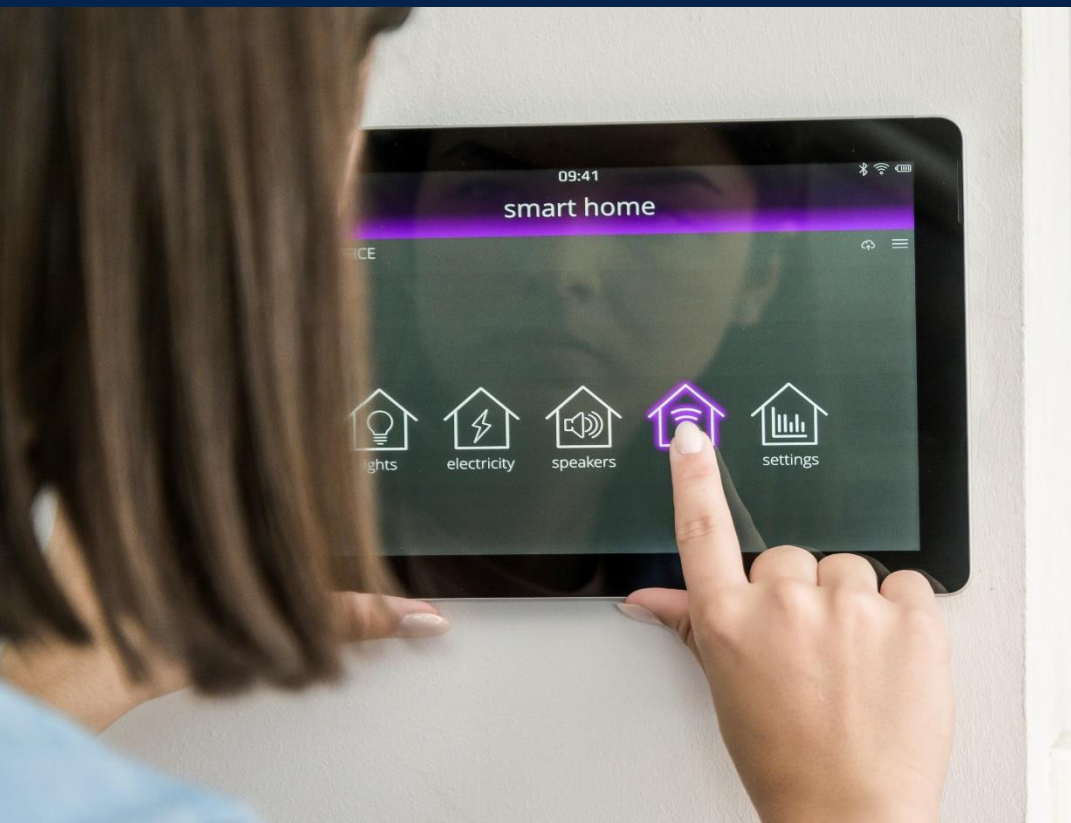
Most recent announcement



# New STM32H7A3/7B3 high-performance lines

## High performance, power saving

STMicroelectronics blends performance, integration and efficiency for smart devices in new STM32H7 product lines



Large RAM for HMI

▶ February 4<sup>th</sup>, 2020 - [Newsbite](#)

▶ [Blog articles](#)

32  $\mu$ A Stop mode

▶ [Product presentation](#)

▶ [Brochure](#)

Extended security

▶ [Online Training \(OLT\)](#)



[www.st.com/stm32h7a3-7b3](http://www.st.com/stm32h7a3-7b3)

[www.st.com/stm32h7b0vl](http://www.st.com/stm32h7b0vl)



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**STM32 mainstream MCU**

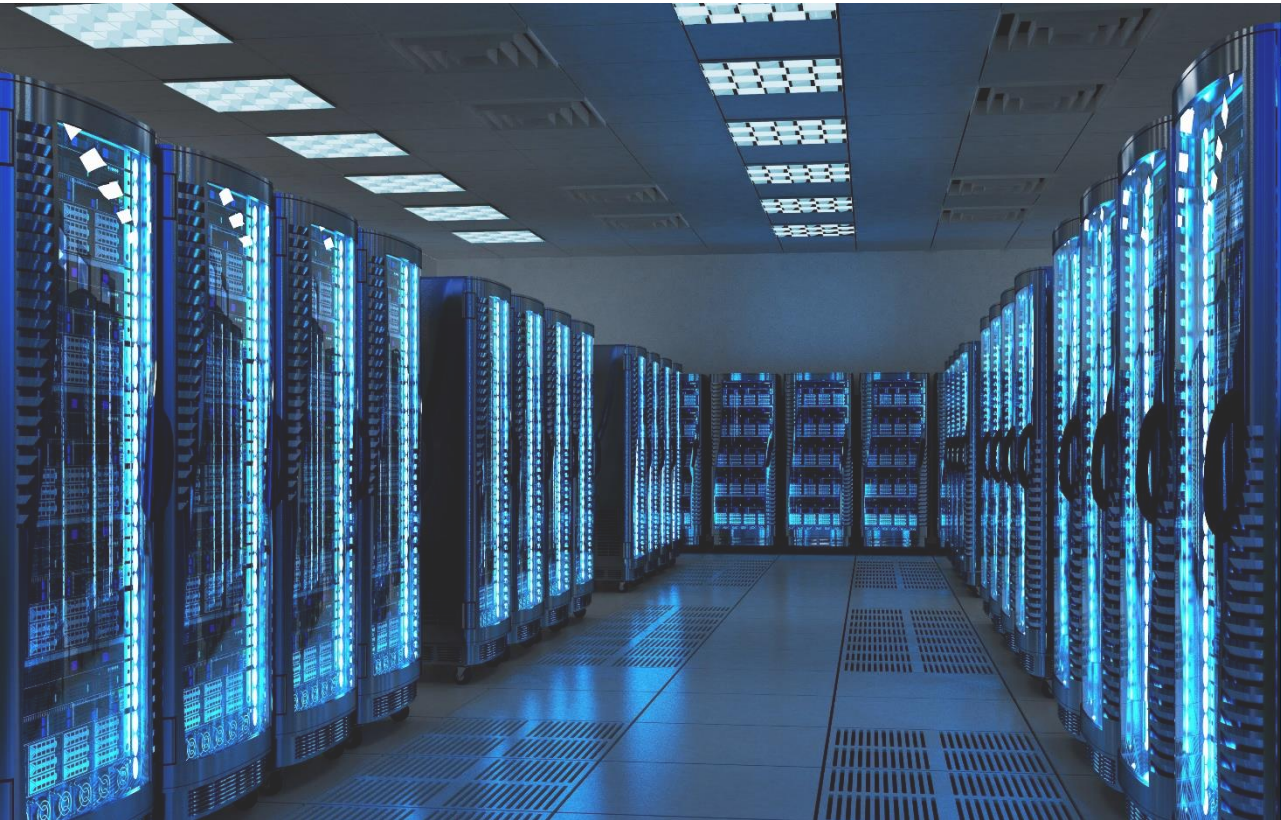


Most recent announcements

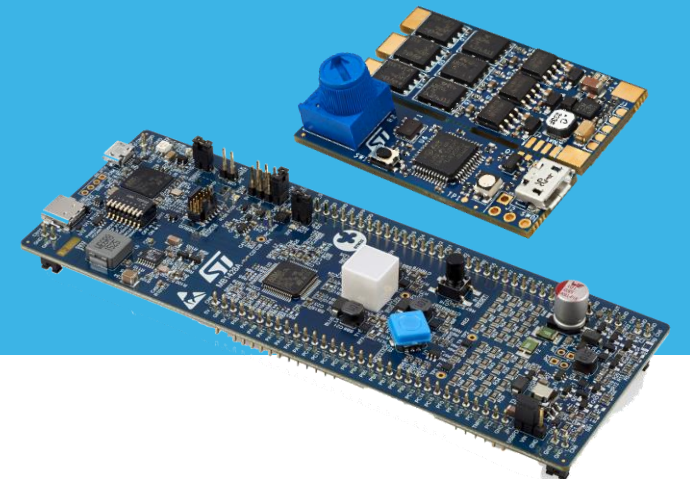


# STM32G4 series Mixed-signal MCU

Ideal for applications requiring an MCU that offers advanced and rich analog peripherals (digital power, motor control, instrumentation...)



- ▶ September 11<sup>th</sup> , 2019 - [Newsbite](#)
- ▶ May 28<sup>th</sup> , 2019 - [Press release](#)
- ▶ [Blog articles](#)
- ▶ [Product presentation](#)
- ▶ [Video](#)
- ▶ OnLine Training  
([OLT](#))





# STM32G0

## First 8-pin STM32 MCUs series

Brings 32-bit MCU possibilities  
to simple applications

**Compact, flexible, Simple**

- ▶ September 19<sup>th</sup>, 2019 - NB [here](#)
- ▶ December 4<sup>th</sup>, 2018 - PR [here](#)
- ▶ Product presentation [here](#)
- ▶ Blog articles [here](#)
- ▶ Getting started video [here](#)
- ▶ OnLine Training (OLT) [here](#)



[www.st.com/STM32G0](http://www.st.com/STM32G0)





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# STM32 ultra-low-power MCU



Most recent announcements



# STM32L5 MCUs with Arm<sup>®</sup> Cortex<sup>®</sup>-M33

Ultra-low power and security for IOT come first on STM32L5 microcontrollers from STMicroelectronics



- ▶ February 13<sup>th</sup>, 2020 - [Press Release](#)
- ▶ October 16<sup>th</sup>, 2018 – [Press Release](#)
- ▶ [Blog articles](#)
- ▶ [Product presentation](#)
- ▶ [Video](#)
- ▶ [OLT](#)





# STM32L4+ MCU series

## Excellence in ULP with more performance

Longer battery life and superior user experience

**120 MHz, down to 512 KB Flash, 320 KB RAM, down to 48 pins**

- ▶ March 12<sup>th</sup>, 2020 - NB [here](#)
- ▶ November 14<sup>th</sup>, 2017 - NB [here](#)
- ▶ Product presentation [here](#)
- ▶ Blog article [here](#)
- ▶ OnLine Training (OLT) [here](#)



[www.st.com/STM32L4+](http://www.st.com/STM32L4+)



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**STM32 wireless MCU**



Most recent announcements



# STM32WL wireless series

## The world's first LoRa<sup>®</sup>-enabled System-on-Chip

The STM32 pioneer in Sub-1 GHz wireless connectivity  
Easy-to-use, reliable and tailored for a wide range of RF applications



- ▶ [January 7<sup>th</sup> , 2020 - Press Release](#)
- ▶ [Blog articles](#)
- ▶ [Product presentation](#)
- ▶ [Flyer](#)
- ▶ [Video](#)
- ▶ [New STM32 System on Chip - Video](#)





# STM32WB MCU series with built-in Bluetooth® 5.0 and IEEE 802.15.4



STM32WB delivered in a new  
affordable Value line  
**Cost-effective,  
Featured-optimized**

- ▶ November 26<sup>th</sup>, 2019 - NB
- ▶ February 25<sup>th</sup>, 2019 - NB
- ▶ Product presentation
- ▶ Blog articles
- ▶ OnLine Training (OLT)

[here](#)

[here](#)

[here](#)

[here](#)

[here](#)



[www.st.com/STM32WB](http://www.st.com/STM32WB)



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# STM32 verticals

Most recent announcements



# STM32 digital power ecosystem for beginners up to experts

Accelerate the development of  
digital power applications

- ▶ June 18<sup>th</sup>, 2020 - PR
- ▶ Blog article
- ▶ Flyer
- ▶ Biricha Partner Program

[here](#)

[here](#)

[here](#)

[here](#)



[www.st.com/STM32-digital-power](http://www.st.com/STM32-digital-power)

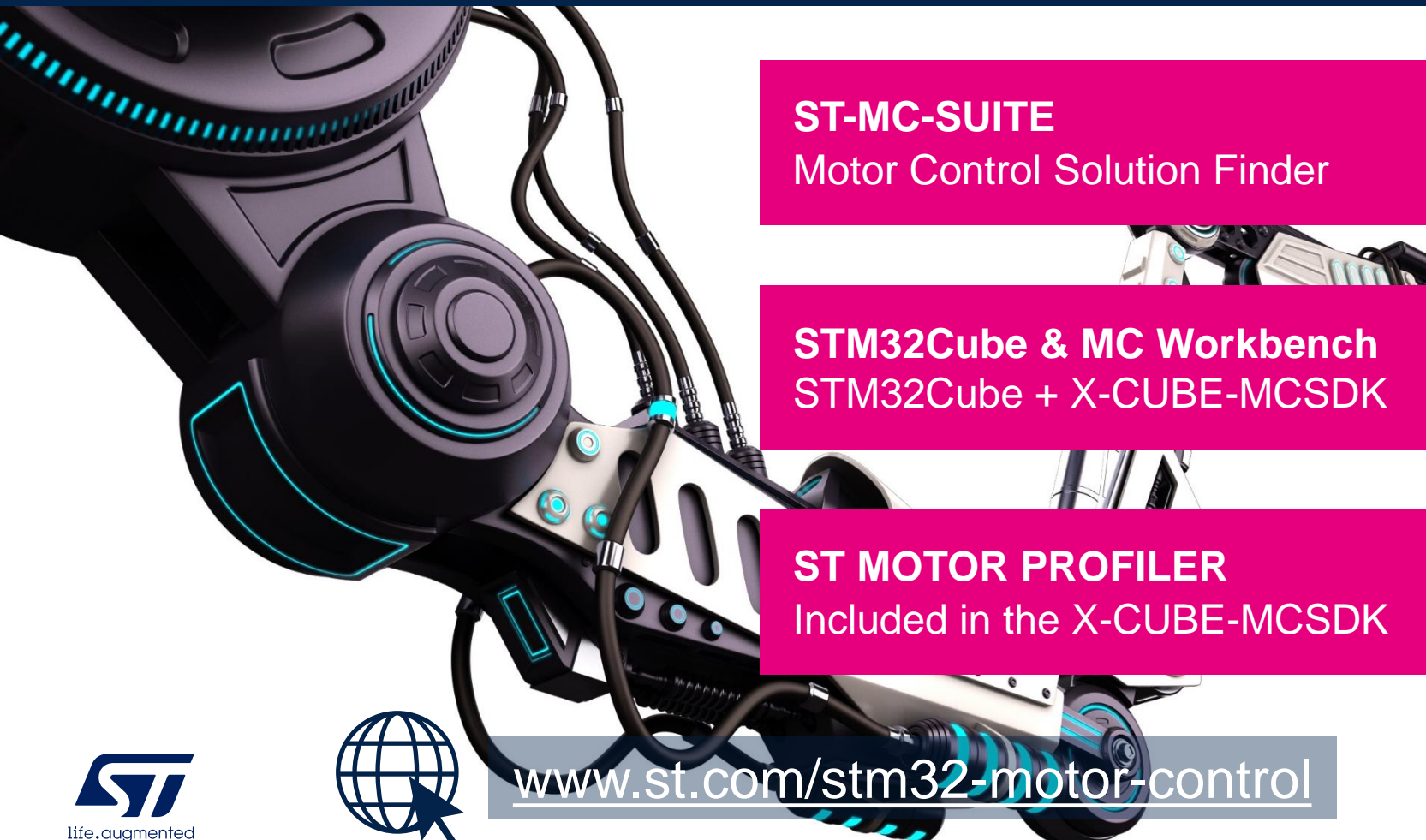




# ST-MC-SUITE: your complete motor control toolbox

## All-in-on online tool

An integrated development environment to ease and support the design of motor control solutions



**ST-MC-SUITE**  
Motor Control Solution Finder

**STM32Cube & MC Workbench**  
STM32Cube + X-CUBE-MCSDK

**ST MOTOR PROFILER**  
Included in the X-CUBE-MCSDK

▶ February 19<sup>th</sup> , 2019 - [NB](#)

▶ [Motor Control Suite](#)

▶ [Blog article](#)

▶ [Product presentation](#)

▶ [Video](#)

▶ [MOOC](#)

[www.st.com/stm32-motor-control](http://www.st.com/stm32-motor-control)

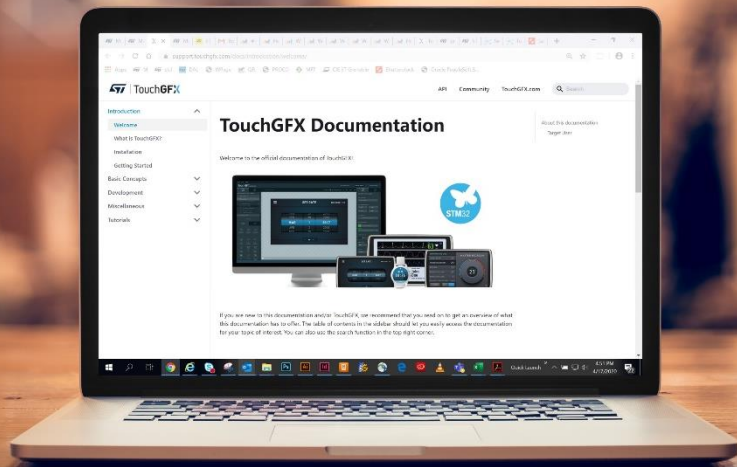




# STM32 & TouchGFX Revolutionizing the HMI of Things

Enhance STM32-based UIs with less MCU power

## TouchGFX



- ▶ April 7<sup>th</sup>, 2020 – [New documentation website](#)
- ▶ January 14<sup>th</sup>, 2020 – [Newsbite](#)
- ▶ [Blog articles](#)
- ▶ [Webinars](#)
- ▶ [Flyer](#)
- ▶ [Getting started video](#)
- ▶ [MOOC](#)





# Connect to USB Type-C™ with STM32 MCUs

The world's first conventional MCU with built-in USB-C and PD interfaces

**Entry level Solutions** Harness to the innovative features

**Certified UCPD STM32**  
Get more “power” and support new use-cases

**Port Manager with X-CUBE-PD**  
Create differentiation features

▶ November 5<sup>th</sup>, 2019 - [NB](#)

▶ February 22<sup>nd</sup>, 2019 - [NB](#)

▶ [Blog articles](#)

▶ [Product presentation](#)

▶ [Getting started Video](#)



<http://www.st.com/stm32-usb-c>



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# STM32 ecosystem



Most recent announcements



# STM32 discovery kit and expansion software

STM32L4+ board is featured to meet the performance demands and energy constraints typically placed on IoT nodes



STM32 IoT Discovery Kit aids creation of smart connected low-power devices



▶ July 13<sup>th</sup>, 2020 - [Newsbite](#)

▶ B-L4S5I-IOT01A - [Product Page](#)

▶ X-CUBE-AWS 2.0 - [Software page](#)



[www.st.com/b-l4s5i-iot01a](http://www.st.com/b-l4s5i-iot01a)



# Zigbee stack for STM32WB MCUs

Fully certified Zigbee PRO – Flexible dual-core MCU solution



▶ July 8<sup>nd</sup> , 2020 – Newsbite **new**

▶ STM32WB Presentation

▶ DAL

▶ Zigbee Partner web page

▶ Zigbee 3.0 Video

▶ STM32WB webpage

▶ STM32WB Online Training



# Wireless M-BUS stacks for STM32WL MCUs

W-MBUS stack for electricity, gas and water metering  
tailored to STM32WL

## W-MBUS Stack for **STM32WL**

Smart meters getting smarter



**STACKFORCE**  
embedded.connectivity.solutions

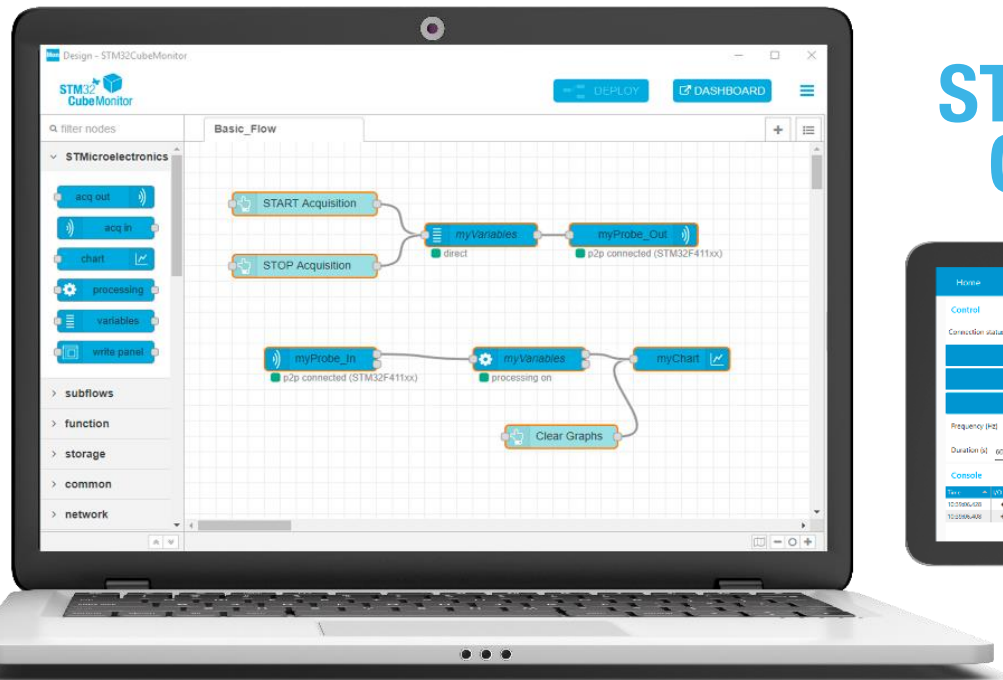
- ▶ July 2<sup>nd</sup> , 2020 – [Press Release](#) **new**
- ▶ STM32WL [Presentation](#)
- ▶ Stackforce [Partner web page](#)
- ▶ [STM32 Wireless webpage](#)
- ▶ [DAL](#)





# STM32CubeMonitor real-time graphical monitoring

Fine-tune and diagnose STM32 applications at run-time by reading and visualizing their variables in real-time



► March 3<sup>rd</sup>, 2020 - [Newsbite](#)

► Application monitoring - [Video](#)

► May 26<sup>th</sup>, 2020 - [Blog article](#)

new







# Functional safety packages for STM32 MCUs

Free safety packages for STM32 and an ecosystem of ST Authorized Partners



- ▶ May 5<sup>th</sup> , 2020 - [Newsbite](#)
- ▶ [Flyer](#)
- ▶ [Presentation](#)
- ▶ [Find a partner](#) - #FuSa
- ▶ On-line Training
  - [STM32H7](#)
  - [STM32G4](#)



[www.st.com/functionalsafety](http://www.st.com/functionalsafety)



# STM32Cube embedded software Now available in GitHub

Come and be part of the adventure as we continually improve  
STM32Cube!



# GitHub



[github.com/STMicroelectronics](https://github.com/STMicroelectronics)

The most popular code sharing service.

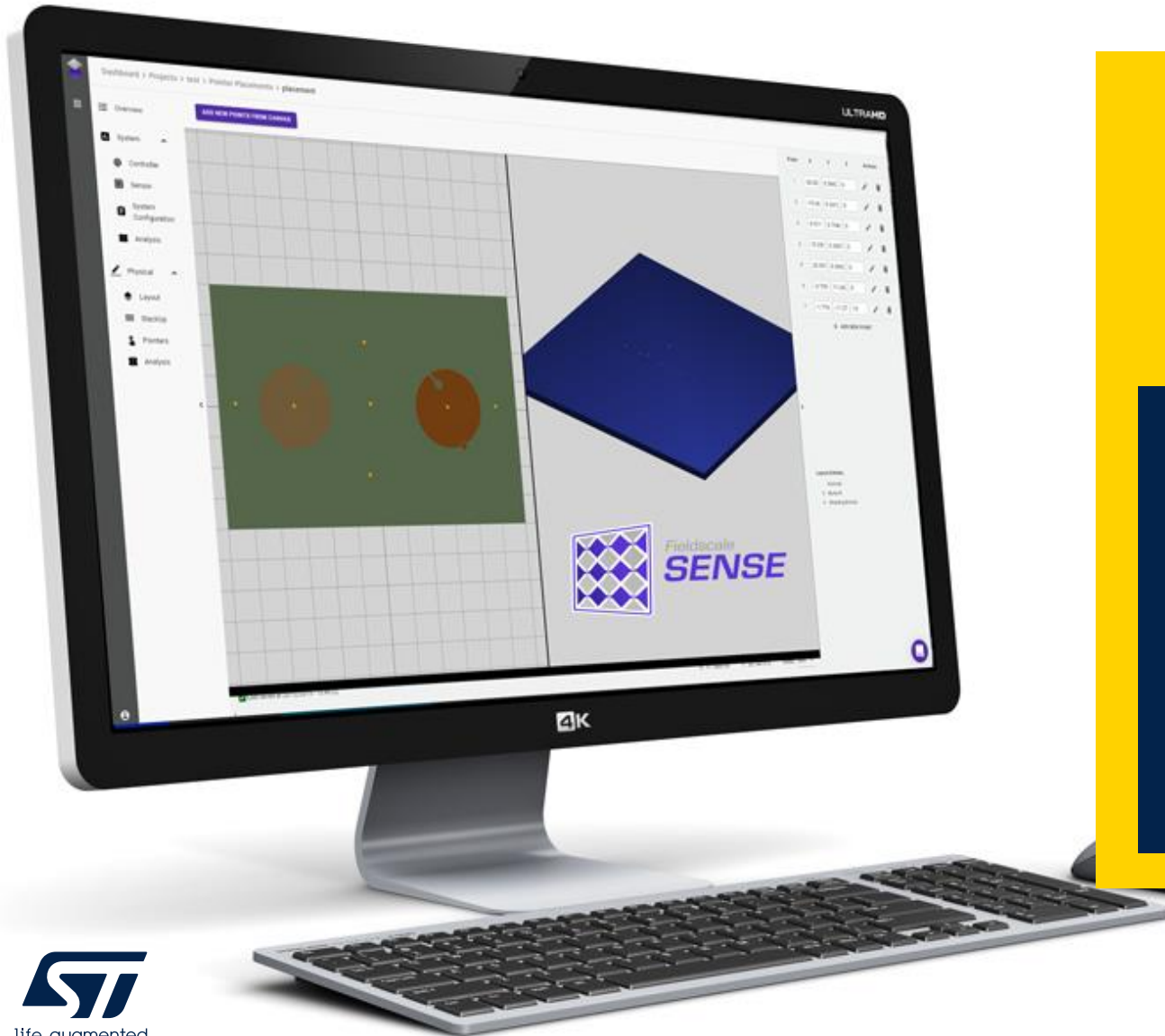
▶ April 30<sup>th</sup>, 2020 - [Newsbite](#)

▶ [GitHub link](#)





# Fieldscale SENSE for STM32 MCUs



Capacitive-touch  
development platform  
**The first end-to-end**

- January 27<sup>th</sup> , 2020 [here](#)  
PR
- Web page [here](#)
- Blog article [here](#)



# STM32 LoRaWAN® SW expansion now supports FUOTA

STMicroelectronics adds support for LoRaWAN®  
Firmware Update Over The Air in the STM32Cube ecosystem

▶ December 20<sup>th</sup> , 2019 - [PR](#)

▶ November 6<sup>th</sup> , 2019 - [NB](#)

▶ [Blog articles](#)

▶ [MOOC](#)

▶ [Video](#)

▶ [Community](#)



[www.st.com/i-cube-lrwan](http://www.st.com/i-cube-lrwan)



# STM32Trust: A complete toolset An ecosystem for embedded family

STM32Trust ecosystem from STMicroelectronics consolidates  
cyber-protection resources for IoT designers

**STM32**  
**Trust**



12 security functions

▶ July 30<sup>th</sup> , 2019 - [PR](#)

▶ [Blog article](#)

▶ [Product presentation](#)

▶ [Flyer](#)



[www.st.com/STM32Trust](http://www.st.com/STM32Trust)



# STM32 quality label strengthens MCU ecosystem

STMicroelectronics strengthens STM32 microcontroller ecosystem with MadeForSTM32™ quality label



- ▶ [July 11<sup>th</sup> 7<sup>th</sup>, 2019 - Press Release](#)
- ▶ [Blog article](#)
- ▶ [Video](#)
- ▶ [Presentation](#)
- ▶ [Flyer](#)

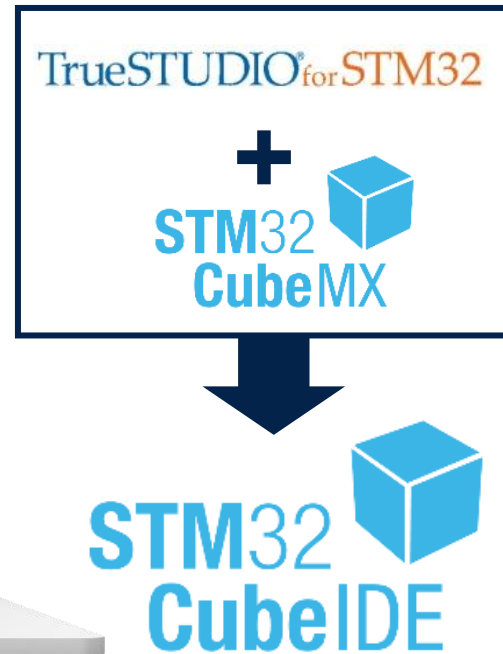
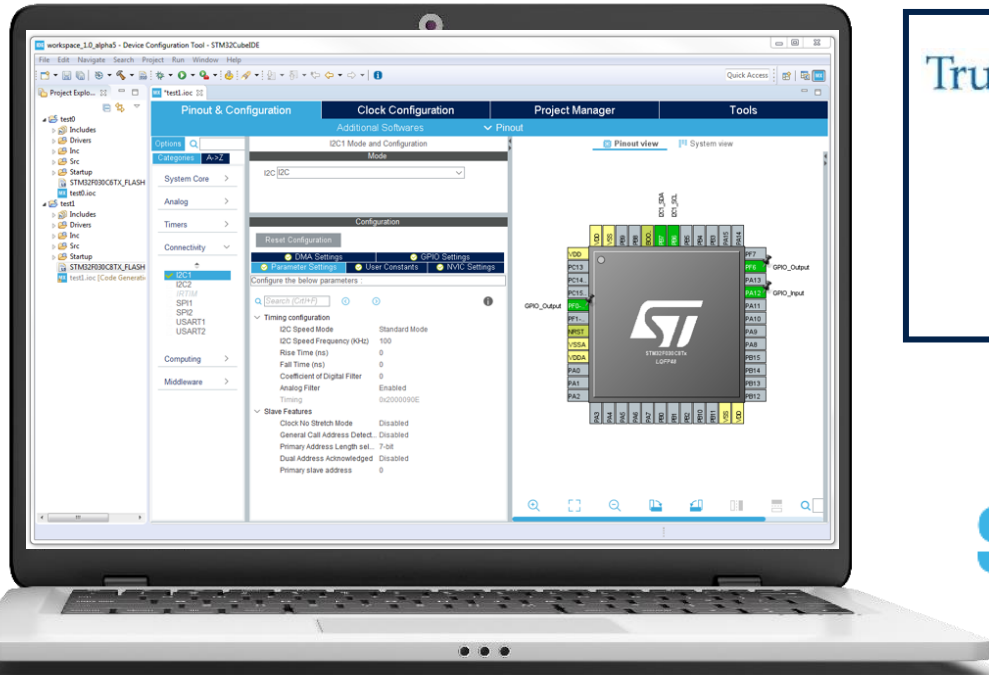




# STM32CubeIDE 1.3.0

## All-in-one development tool

STM32CubeIDE is an advanced C/C++ development platform with IP configuration, code generation, code compilation, and debug features



▶ April 25<sup>th</sup>, 2019 - [Newsbite](#)

▶ How to use STM32CubeIDE - [Video](#)

▶ [Blog articles](#)

▶ [MOOC](#)





# STM32Cube.AI Solution for artificial intelligence

STM32  
Cube.AI



## Neural-Network on STM32 **Simple, fast, optimized**

- January 3<sup>rd</sup> , 2019 - PR [here](#)
- Webinar replay [here](#)
- Blog article [here](#)
- Videos [here](#)
- Community [here](#)



[www.st.com/STM32CubeAI](http://www.st.com/STM32CubeAI)



# Releasing your creativity

▶ Famous video [here](#)



[/STM32](#)



[@ST\\_World](#)



[community.st.com](#)



[www.st.com/stm32](#)

new



[github.com/STMicroelectronics](#)

new



[wiki.st.com/stm32mpu](#)  
[wiki.st.com/stm32mcu](#)

- ▶ MCD Promo Plan Q4/2020 included  
(Q1 should be shared mid-Q4)

Internal use only

# Thank you

PR Press release

NB Newsbite

OLT OnLine Training

ULP Ultra-Low Power