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STMicroelectronics Teams with Microsoft® to Boost Development of Smart, Connected Devices Leveraging STM32Cube Ecosystem

- ❖ *Integration lets STM32 developers access Microsoft Azure RTOS (Real-Time Operating System) for embedded projects*
- ❖ *Security- and safety-certified RTOS is free to use and source code can be modified*
- ❖ *Seamlessly accessible from STM32Cube development ecosystem*

Geneva, December 10, 2020 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has signed an agreement with Microsoft to simplify and accelerate the development of smart-appliance controllers and other Internet-of-Things (IoT) devices.

Developers working with STM32 microcontrollers (MCU) can now leverage Microsoft Azure RTOS (Real-Time Operating System) to provide ready-to-use services for managing their application. Seamlessly connected to the STM32Cube development ecosystem, which consolidates tools and software to support customers' projects from start to finish, Microsoft Azure RTOS will be fully supported and all licenses are free for images deployed properly on STM32 microcontrollers, including prototyping and volume production.

"*STM32 and Azure RTOS create a powerful combination for our customers to unleash their creativity,*" said Ricardo de Sa Earp, Group Vice President, Microcontroller Division General Manager, STMicroelectronics. "*We are making it easier and faster than ever to bring imaginative new IoT products to market that are high-performing, feature-rich, reliable, and secure.*"

"*As a global leader in the MCU market, ST is a valuable collaborator in our mission to consolidate Azure RTOS as the go-to platform for designers of smart, connected devices,*" said Sam George, Corporate Vice President, Azure IoT at Microsoft Corp. "*Moreover, Azure RTOS accessed through the STM32Cube tools integrates seamlessly with our Azure IoT platform, providing an easy and convenient means of connecting IoT endpoints and edge devices to the cloud.*"

Further technical information

The extensive STM32Cube ecosystem provides free development tools, software bricks, and software expansion packages for users to handle everything from selecting the right device and initializing the project to coding, programming, testing, and scaling and porting the design if needed. As one of the most highly regarded MCU-development ecosystems, STM32Cube is a pillar of the STM32 MCU family's success, combined with the broad choice of devices. Over 1000 STM32 variants are already available, covering a broad spectrum of performance, feature integration, and package sizes.

The STM32Cube ecosystem also features a broad offering of embedded software libraries. The user can pick and choose in a portfolio of more than 100 software packages from ST and partners, now enriched with Azure RTOS to further accelerate development of the final application.

The collaboration between ST and Microsoft lets customers leverage the rich services of Azure RTOS, which meet the needs of tiny, smart, connected devices. This includes Azure RTOS ThreadX real-time operating system, which has a compact memory footprint suited to deeply embedded applications. Also included are the FileX FAT file system, NetX and NetX Duo TCP/IP networking stacks, and USBX USB stack.

Value-added features of the Azure RTOS highly integrated and industrial-quality middleware components include support for IP layer security (IPsec) and socket layer security (TLS and DTLS) protocols, with future Common Criteria (CC) EAL4+ certification for TLS/DTLS and FIPS 140-2 certified software cryptographic library. Microsoft will also provide safety pre-certifications including IEC 61508 SIL4, IEC 62304 Class C, and ISO 26262 ASIL-D.

While ensuring a consistent look and feel across Azure RTOS components and products, which promotes ease of use, Microsoft is also providing extra flexibility for embedded developers by publishing the source code at GitHub as part of the agreement with MCU vendors.

Further information and links to download STM32Cube tools and software are available at https://www.st.com/content/st_com/en/stm32cube-ecosystem.html. Microsoft Azure RTOS is accessed through STM32Cube tools.

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About STMicroelectronics

At ST, we are 46,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An independent device manufacturer, we work with our 100,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and 5G technology. Further information can be found at www.st.com.

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