



Toshiba starts shipping engineering samples of Arm® Cortex® -M4 microcontrollers for system control applications

Enhanced security and data management functions support secure system design for industrial equipment and IoT devices.

Düsseldorf, Germany, 18th August 2026 – Toshiba Electronics Europe GmbH (“Toshiba”) has announced engineering samples of the TXZ+™ Family Entry-Class M4V Group of standard microcontrollers. Featuring an Arm® Cortex® -M4 core with a floating-point unit (FPU) operating at up to 80MHz, the M4V group is designed for system control applications in industrial equipment, consumer products and IoT devices. They combine security functions, integrated peripherals and flexible memory options to support the development of connected embedded systems. The microcontrollers are available in 0.5mm-pitch LQFP64 (TMPM4V4FWUG), 0.5mm-pitch LQFP48 (TMPM4V2FWDUG), 0.5mm-pitch VQFN48 (TMPM4V2FWQG), and 0.8mm-pitch LQFP44 (TMPM4V1FWUG) packages.

As network connectivity and over-the-air (OTA) software updates become more widely adopted in consumer and industrial equipment, protecting devices against unauthorised access and software tampering has become increasingly important. There is also growing demand throughout the product lifecycle for secure software storage, configuration management, data logging and reliable system operation.

The M4V Group addresses these requirements by integrating a multilayered security architecture that combines access control, memory protection and execution control. The devices also include built-in self-diagnostic functions to support functional safety, enabling designers to develop systems with enhanced resilience against software and hardware faults.

The microcontrollers support a single supply voltage range of 2.7V to 5.5V, making them suitable for a wide variety of embedded control applications. Each device integrates 128kB of code flash memory, 64kB of data flash memory and 32kB of RAM. The dedicated data flash memory allows rewritable information, including configuration settings and

system logs, to be stored separately from application code. An internal high-speed oscillator with $\pm 1\%$ accuracy also helps reduce the number of external components required in system designs.

The M4V Group integrates the peripheral functions commonly required for embedded system control, including a 12-bit analogue-to-digital converter (ADC), timers, universal asynchronous receiver/transmitter (UART), serial peripheral interface (SPI), inter-integrated circuit (I²C) and direct memory access (DMA). The devices also incorporate Toshiba's Advanced Programmable Motor Driver (A-PMD2), enabling brushless DC motor control where required. A serial memory interface (SMIF) provides direct access to external flash memory, allowing efficient storage of firmware, log files and other application data. By mapping external memory directly into the address space, it supports high-speed memory access with minimal CPU intervention through dedicated hardware control.

The microcontrollers are intended for a broad range of embedded applications, including connected household appliances such as washing machines, refrigerators and air conditioners; industrial equipment including inverters, motors, pumps and factory automation systems; security equipment such as servers and remote monitoring devices; and other embedded system control applications requiring secure data storage and management capabilities.

To support evaluation and software development, Toshiba provides starter kits, sample software, common microcontroller software interface standard (CMSIS) compliant drivers and support for major integrated development environments (IDEs). These resources enable customers to progress from device evaluation to application development using a common software environment.

Find out more about the M4V Group of microcontrollers on Toshiba's website:

<https://toshiba.semicon-storage.com/eu/semiconductor/product/microcontrollers/txz4eplus-series.html>

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Notes:

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TXZ+™ is a trademark of Toshiba Electronic Devices & Storage Corporation.

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About Toshiba Electronics Europe

[Toshiba Electronics Europe GmbH](#) (TEE) offers European consumers and businesses a wide variety of hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer and white goods applications. Next to HDDs, the company's broad portfolio encompasses power semiconductors and other discrete devices ranging from diodes to logic ICs, optical

semiconductors as well as microcontrollers and application specific standard products (ASSPs) amongst others. In addition, TEE offers SCiB™ battery cells and modules with lithium titanium oxide (LTO) for heavy-duty applications.

TEE has its headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services.

Visit Toshiba's websites at www.toshiba.semicon-storage.com and www.scib.jp/en for further company and product information.

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