Toshiba expand the TXZ+™ family with ARM® Cortex®-M4 microcontrollers for high-speed data processing

Düsseldorf, Germany, 08 September 2021 – Toshiba Electronics Europe GmbH ("Toshiba") announces the availability of 20 new microcontroller devices for high-speed data processing of the TXZ+™ family advanced class. These M4G group products are now part of the TXZ+ family advanced class and are manufactured in a 40nm process.

The new products (and others in the TXZ+ family) are ideally suited to a wide range of applications including office equipment (multi-function printers), audio/video (AV) equipment, IoT, home appliances, building automation and factory automation – or anywhere where high-speed data processing is required.

All of the new devices use Arm Cortex-M4 core and include a floating-point unit (FPU) that runs at speeds up to 200MHz. They also integrate 2048kB of flash memory for code, a further 32kByte of data flash with 100k write cycles endurance and 4kB of user data flash. The new microcontrollers also incorporate multiple interfaces and various communication options.

All devices in the M4G group, including those announced today, have enhanced communication functions integrated as a serial memory interface. Among the standards supported are quad / octal SPI, audio interface (I^2S), as well as UART, FUART, TSPI and I^2C. A three-unit DMAC and bus matrix structure significantly improves communication throughput when compared to conventional products.

The new devices support a variety of sensing applications due to their high-speed, high-precision 12-bit analog/digital converter (ADC) that allows individual sample-and-hold times to be set for each input channel with up to 24 channels. These devices provide

highly effective solutions for AC motor, brushless DC motor (BLDC) with the integration of Toshiba's advanced programmable motor driver (A-PMD).

The self-diagnosis functions incorporated in the devices for ROM, RAM, ADC and the clock support the achievement of IEC60730 Class B functional safety certification. These new devices offer low current consumption and high levels of functionality while maintaining good compatibility with devices within the existing TXZ™ family M4G group.

Comprehensive documentation, sample software (with examples of actual usage), and driver software for each peripheral are available for free download on Toshiba website. Additionally, evaluation boards and development environments are provided in cooperation with Toshiba's global ecosystem partners.

The new microcontroller products are now in mass production

For more information, please visit: https://toshiba.semicon-storage.com/eu/semiconductor/product/microcontrollers/txz4aplus-series.html#M4G-Group

Notes:
* Arm and Cortex are registered trademarks of ARM Limited (or its subsidiaries) in the EU and/or elsewhere.
* TXZ+ is a trademark of Toshiba Electronic Devices & Storage Corporation.
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About Toshiba Electronics Europe

Toshiba Electronics Europe GmbH (TEE) is the European electronic components business of Toshiba Electronic Devices and Storage Corporation. TEE offers European consumers and businesses a wide variety of innovative 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.

TEE has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services. The company president is Mr. Tomoaki Kumagai.

For more company information visit TEE's web site at www.toshiba.semicon-storage.com.

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September 2021   Ref. 7352_A_EN