



Toshiba to launch new Servo Drive Reference Model at Embedded World 2020

Reference system offers quick start for targeting accurate, power-optimized servo motor control

Düsseldorf, Germany, 11th February 2020 – Toshiba Electronics Europe (“Toshiba”) today announced that they will launch their modular Servo Drive Reference Model (RM) Multi-Channel Motor Control reference platform at this year’s Embedded World exhibition under the banner of “The Journey of Motor Control”. This platform supports the growing interest in Industry 4.0 solutions where servo motors are integrated into applications such as collaborative robots (cobot). It also targets applications focused on accurate, energy efficient control, such battery powered lawn mowers, and 3D and additive printing technologies.

At the centre of the Servo Drive RM platform lies an Arm® Cortex®-M4 processor with FPU core-based microcontroller from Toshiba on an exchangeable plug-in card. This features an Advanced Vector Engine peripheral. Thanks to the Advanced Vector Engine implementing vector mathematics in hardware, together with its tight coupling with the analog-to-digital converter (ADC), the Programmable Motor Drive (PMD), and the Encoder (ENC) block, the load on the CPU is significantly reduced in motor control applications. Not only does this leave plenty of performance for other tasks, it also

significantly reduces the engineering time required to implement vector motor control firmware.

The base platform is extendable, providing connectors for up to three power stages as well as an Arduino compliant interface communication to a host system can be realized via Arduino boards, CAN, Ethernet or even via the on-board Bluetooth 5 module

A low voltage power stage supporting brushless-DC (BLDC) motors requiring up to 48V and operating between 20W and 200W is also available. Featuring six TPW3R70APL MOSFETS utilizing the latest generation U-MOS IX-H silicon process, they feature an RDS(ON) of 3.7mΩ and support power dissipation of up to 170W. They are implemented in compact 5.0 x 6.0 x 0.73mm DSOP Advance, dual-side cooling packages. A range of encoder boards provide adaption to a cross-section of motor rotor encoders and resolvers.

Also, on display will be the software package that operates in conjunction with the Toshiba microcontroller and Servo Drive RM platform. Communicating via the system's USB interface, it simplifies the configuration of the Advanced Vector Engine peripheral for optimum motor efficiency and control.

The Servo Drive RM provides a flexible and extendable reference platform for those involved in creating motor drive solutions that focus on accurate and energy efficient control. Additionally, Toshiba will be exhibiting a cross section of their other motor and stepper motor control solutions at the exhibition as part of the Journey of Motor Control.

The Toshiba stand is to be found in Hall 3A at stand 420.

Note:

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* All other company names, product names, and service names mentioned herein may be trademarks of their respective companies.

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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. The company's broad

portfolio encompasses integrated wireless ICs, power semiconductors, microcontrollers, optical semiconductors, ASICs, ASSPs and discrete devices ranging from diodes to logic ICs.

TEE has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing design, manufacturing, marketing and sales. Company president is Mr. Tomoaki Kumagai

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