

GigaDevice Continues to Strengthen its Portfolio of Arm® Cortex®-M23 based MCUs

Beijing, China (February 28, 2019) – GigaDevice, a leading supplier of non-volatile memory and 32-bit microcontroller solutions, officially released a new series of MCU's based on the Arm® Cortex®-M23 core. The GD32E231 series is ideal for constrained industrial applications where cost is important and also suitable for high-speed signal acquisition, mixed-signal processing, motor control and sensor networks.

The GD32E231 series of MCUs is available in the LQFP48 (7x7mm) package and currently includes 3 sub members. It also maintains the compatibility of software and pin layout with existing GD32 products, making it easier to implement code migration and expansion. Moreover, all products offer industry level high reliability and temperature standards and provide a product life guaranteed for over ten years. The series is currently sampling and will officially be in mass production March this year.

Continuously strengthen the product portfolio

The GD32E231 new product series are equipped with unique on-chip resources and improved production reliability for a wider range of industrial applications. The chip is available with up to four 16-bit general purpose timers, one 16-bit advanced vector control timer, which supports three-phase Pulse Width Modulated (PWM) output and Hall acquisition interface, one 16-bit basic timer and one multi-channel DMA controller. In addition, the serial connectivity includes two USARTs, two SPIs, two I2Cs and one I2Ss.

To support more signal chain applications, it also integrates one high-speed rail-to-rail input/output analog voltage comparator (COMP), two high-gain rail-to-rail operational amplifiers (OPA) and one 12-bit high performance Analog to Digital Converter (ADC) with 2.6Msps sampling rate. With a high peripheral integration, the new series focuses on simplifying hardware development and saving PCB layout space resulting in the latest single-chip solutions and reducing system cost.

GD32E231 series products support system frequency up to 72MHz and are equipped with 16KB to 64KB of embedded flash memory and 4KB to 8KB SRAM. At the same time the combination of the hardware multiplier, hardware divider and acceleration unit included in the Arm® Cortex®-M23 core can achieve high-performance real-time control and mixed-signal processing. The GD32E231 provides multiple timers,

supporting PWM outputs in order to directly control various types of motors. Furthermore, the chip integrates high-performance ADCs, voltage comparators, high gain op-amps and other analog peripheral resources to support high-speed signal acquisition and motor closed-loop control algorithms, while a large variety of standard interfaces improves the connectivity to sensor networks and multi-protocol data communications. Ultimately, it achieves a single chip solution for various requirements of industrial control such as acquisition, amplification, transmission and processing.