GigaDevice

GigaDevice's GD32E5 Series of High-Performance Microcontrollers Based on the Arm® Cortex®-M33 Core

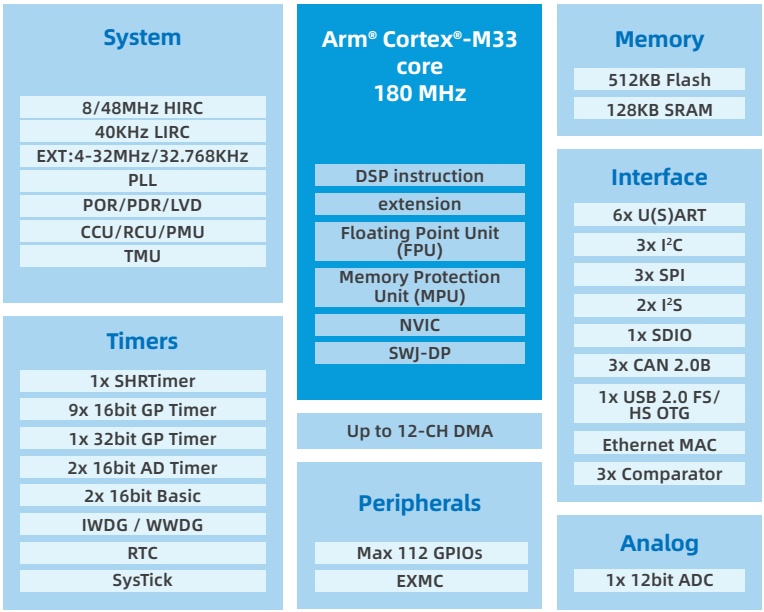
GD32E5 high-performance microcontrollers based on the Arm® Cortex®-M33 core are manufactured using the industry-leading low-power 40nm embedded flash memory process, helping to improve power efficiency and development costs.

The GD32E5 MCUs are well-suited for developing high-precision industrial controls, digital power supplies, motor frequency conversion, measuring instruments, mixed-signal processing, and industrial or consumer control systems.

Key Features

- 180MHz Arm® Cortex®-M33 core
- Up to 512KB of embedded eFlash
- Up to 128KB of SRAM
- Built-in hardware multiplier/divider
- Five low power consumption modes
- An extensive range of enhanced I/Os and peripherals 80% GPIO available
- Trigonometric Math Unit (TMU) execute common trigonometric and arithmetic operations
- Super High-Resolution Timer (SHRTIMER) with the fastest resolution of 90ps

GD32E5 Block Diagram



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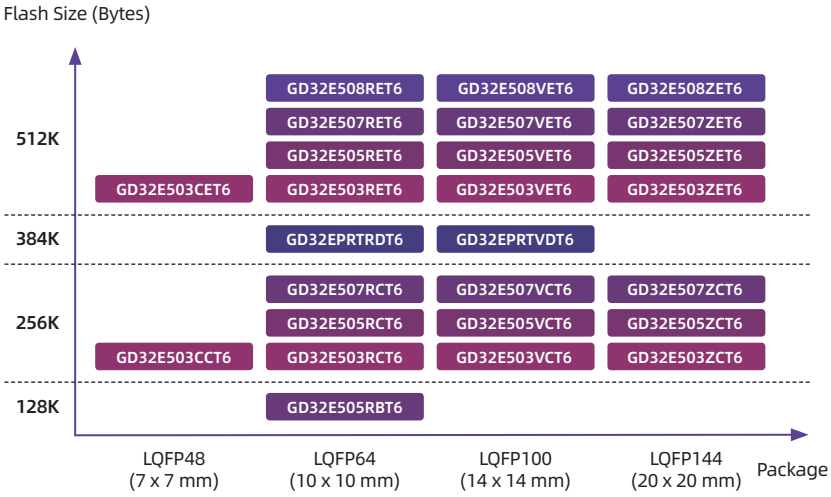
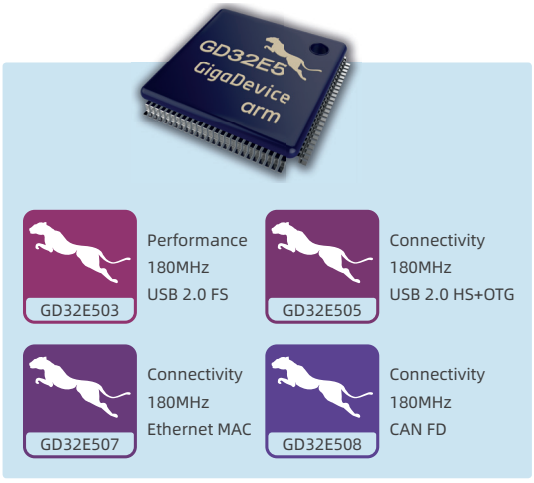
GD32E5 Cortex®-M33 High-performance Portfolios

Product Lineup





Development Tools

GD32E503V-EVAL / GD32E503Z-EVAL / GD32E507Z-EVAL

A full-featured evaluation board based on the GD32E503VET6 / GD32E503ZET6 / GD32E507ZET6. Supports software development, debugging, and demonstrates the complete functional capabilities of the device.

GD32E503R-START / GD32E503C-START / GD32E507R-START / GD32E507V-START

Entry-level learning boards based on the GD32E503RET6 / GD32E503CET6 / GD32E507RET6 / GD32E507VET6 MCUs. These correspond to different package-type products that support simpler application development and debugging.

arm KEIL IAR SYSTEMS SEGGER eclipse

The popular Keil MDK, IAR Workbench, and SEGGER Embedded Studio

Supported by the widely popular Keil MDK, IAR Workbench, and SEGGER Embedded Studio Commercial Tools. GNU Tools from Eclipse / Arm Embedded Toolchain is also supported.

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