



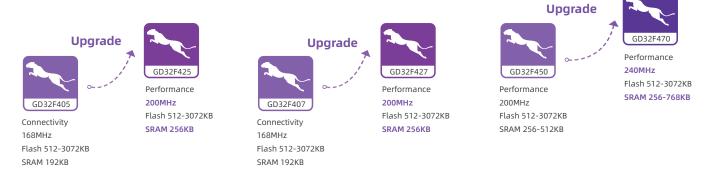
GD32F470/F427/F425 High Performance Line The Most Powerful ARM[®] Cortex[®]-M4 Core-Based Product in the GD32 MCU Product Family

The newly launched GD32F470/F427/F425 series of high-performance microcontrollers expands the GD32F4 product family. The new series offers a large memory capacity and high core frequency. It inherits the rich peripheral interfaces and enhanced security functions of the GD32F4 series. It is fully compatible with GD32F450/F407/F405 products, providing customers with improved performance. The GD32F470x MCU series are available in high-volume quantities to meet market demand.

Advanced Manufacturing Technology Reduces Power Consumption while Achieving Better Cost-Effectiveness

The 40nm advanced process can meet the sophisticated requirements of the increasing MCU control system. It achieves lower power consumption, effectively extending the life of the end device while enhancing system reliability & safety and reducing the silicon area of a single chip to achieve better cost-effectiveness.

Performance Optimization while Providing Full Hardware / Software Compatibility



The new GD32F470/F427/F425 series closely follows the broader market demand, covering an extended range of differentiated market applications with high performance, real-time processing, and high storage capacity.



Available on GD32F427/F470

Available on GD32F470 only



GD32F470/F427/F425 Block Diagram

Notes: GD32F470 provides the highest performance and the most comprehensive peripheral interfaces.

System	Arm [®] Cortex [®] -M4 core	Memory
	240 MHz	3MB Flash
16/48MHz HIRC		768 KB SRAM
32KHz LIRC		
EXT:4-32MHz/32.768KHz	DSP instruction extension	Peripherals
PLL	Floating Point Unit (FPU)	8xU(S)ART
POR/PDR/LVD	Memory Protection Unit (MPU)	3xl²C
CCU/RCU/PMU	NVIC	6xSPI
		2xl²S
	SWJ-DP	1x SDIO
Timers		2x CAN 2.0B
8x16bit GP Timer	Up to 16-CH DMA	1xFS USB 2.0
2x32bit GP Timer		1xHS USB 2.0
2x16bit AD Timer	Peripherals	Ethernet MAC
2x16bit Basic Timer		EXMC
IWDG	Max 140 GPIOs	
		Analog
WWDG	Digital camera interface (DCI)	
RTC	TFT-LCD Interface(TLI)	3x12-bit ADC
SysTick	Image processing accelerator (IPA)	2x 12bit DAC

GD32F470/F427/F425 High-performance Portfolio



Development tools

GD32470I-EVAL / GD32470Z-EVAL

A full-featured evaluation board based on the GD32F470IKH6 / GD32F470ZKT6, respectively. Supports software development, debugging, and demonstrates the complete functional capabilities of the device.

GD32F470V-START / GD32F427H-START / GD32F427V-START / GD32F427R-START

Entry-level learning boards based on the GD32F470VKT6 / GD32F427VKH6 / GD32F427VKT6 / GD32F427RKT6, respectively. These correspond to different package types to support simpler application development and debugging.



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 GD32F470ZIT6
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 GD32F470ZET6

 GD32F470VKT6
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 GD32F470ZGT6
 GD32F470VET6
 GD32F470VGH6
 GD32F470ZKT6

 GD32F470VGT7
 GD32F470ZGT7
 GD32F470Z-EVAL
 GD32F470V-START
 GD32F470I-EVAL