



GD32VW553 RISC-V core Wi-Fi 6 MCU

The GD32VW553 series MCU supports Wi-Fi 6 and Bluetooth LE 5.2 wireless connectivity. It features advanced Radio Frequency Integrated Circuits (RFIC), enhanced security mechanisms, generous storage capacity, and a wide range of universal interfaces. Leveraging a mature process platform and cost-effective optimization, it consistently delivers solutions for market applications demanding efficient wireless capabilities. With its excellent edge processing and connectivity features, GD32VW553 applies to various wireless application scenarios, including smart home appliances, smart home systems, industrial Internet, and communication gateways. This series of MCUs is also well suited for scenarios with budget constraints, making it an ideal choice for office equipment, payment terminals, and various IoT products.

High Performance

- ◆ RISC-V core 160MHz
- ◆ 4MB Flash, 320KB SRAM
- ◆ Hardware DSP, Double Precision FPU

RF Computing Performance

- ◆ IEEE 802.11b/g/n/ax
- ◆ Bluetooth LE 5.2

Various Peripheral Resources

- ◆ 3x U(S)ART, 2x I2C, 1x SPI, 1x QSPI
- ◆ 1x ADC, Multi 32/16-bit Timers

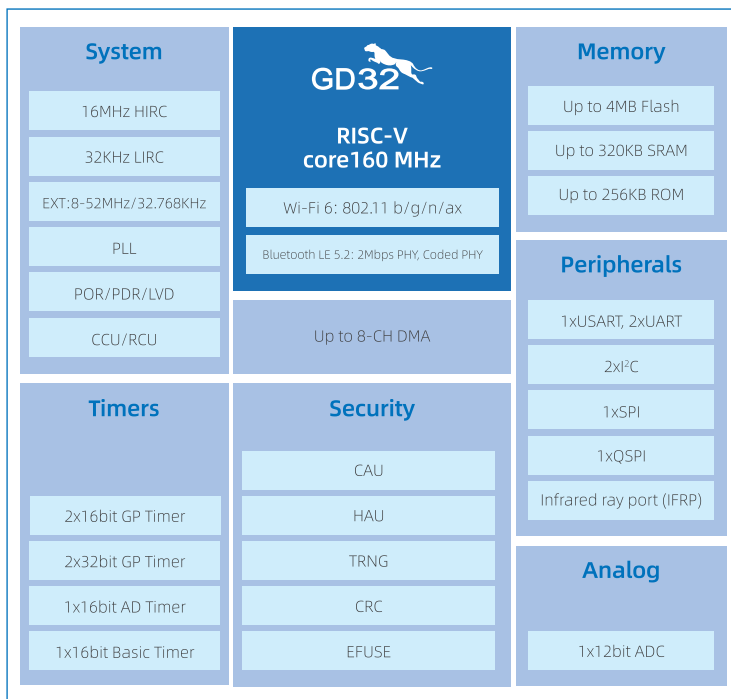
Enhanced Security

- ◆ DES, 3DES or AES, and HASH Algorithms
- ◆ Public Key Cryptographic Acceleration Unit
- ◆ True Random number generator





GD32VW553 Block Diagram



Development Tools

Development Boards	Ordering Part Number	MCU Part Numbers
Evaluation Boards	GD32VW553H-EVAL	GD32VW553HMQ7
Starter Kit	GD32VW553K-START	GD32VW553KMQ7

The full-featured evaluation board is based on the QFN40 package and supports complete functional demonstration, development and debugging.

The start kit is based on the QFN32 package, which supports the test for RF performance.

GD32VW553 Ecosystem

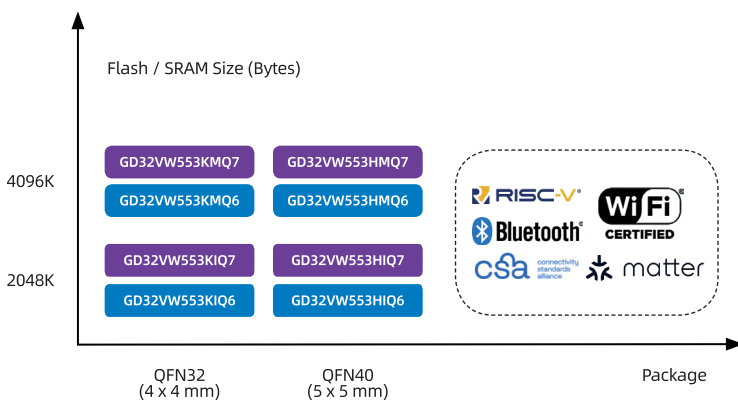


SEGGER has formed a strategic partnership with GigaDevice to offer developers free access to the SEGGER Embedded Studio IDE and a complete suite of development tools. IAR will also provide comprehensive support for the new GD32VW553 series MCU, including development and compilation tools as well as tracking and debugging tools.

GigaDevice provides the new GD32VW553 series MCU with a range of free development tools, including GD32 IDE, GD-LINK debugging and download tool, and GD32 All-In-One Programmer. In addition, GigaDevice has concurrently released the SDKs that contain the underlying driver, wireless protocol stack, and application routine. Development boards that are compatible with various Real-Time Operating Systems (RTOS) supporting local connection, cloud connection, security, and Over the Air (OTA) upgrade are also available, enabling rapid deployment of connectivity devices.

The GD32VW553 series meets the Matter over Wi-Fi application standard developed by the international organization Connectivity Standards Alliance (CSA). This allows GD32VW553 to facilitate seamless interconnections among various Matter devices, improving the overall compatibility and interoperability of smart home systems. The GD32VW553 series MCU has achieved official Wi-Fi 6 certification from the Wi-Fi Alliance (WFA), Bluetooth certification from the Bluetooth Special Interest Group (Bluetooth SIG), and RF FCC/CE compliance certification.

GD32VW553 Combo Wireless Series



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