

HT32 MCU Lineup for Wide Application Ranges

Choosing a proper 32-bit MCU for your product application should focus not only on performance, but also on power consumption, package type, tooling, and cost. From the energy-efficient M0+ core series to the higher performing M3 core series, Holtek offers a wide range of flexible 32-bit MCU choices to meet your 32-bit application needs.

	16 KB	32 KB	64 KB	128 KB	256 KB	
5V 16 MHz HT32F500xx	HT32F50020	HT32F50030				General Purpose
5V 20 MHz HT32F502xx	HT32F50220	HT32F50230 HT32F50231	HT32F50241			
5V 60 MHz HT32F504xx			HT32F50442	HT32F50452		
3.3V 40 MHz HT32F522xx	HT32F52220	HT32F52230 HT32F52231	HT32F52241 HT32F52243	HT32F52253		
3.3V USB 48 MHz HT32F523xx		HT32F52331	HT32F52341 HT32F52342	HT32F52352		USB
3.3V USB 60 MHz HT32F523xx			HT32F52344	HT32F52354 HT32F52357	HT32F52367	
5V USB 60 MHz HT32F503xx			HT32F50343			
3.3V LCD 60 MHz HT32F573xx		HT32F57331	HT32F57341 HT32F57342	HT32F57352		LCD
5V Touch 60 MHz HT32F542xx		HT32F54231	HT32F54241 HT32F54243	HT32F54253		Touch
5V CAN 60 MHz HT32F532xx			HT32F53242	HT32F53252		CAN
3.3V 72 MHz HT32F123xx					HT32F12364	General Purpose
3.3V 96 MHz HT32F123xx			HT32F12345		HT32F12365 HT32F12366	

Innovative and All-round General Purpose HT32

Provide customers with advantages of high integration and practicability, so as to achieve an excellent combination of power, price and performance, with features that can assist customers to shorten the product development process and to quickly seize the market opportunities.



HT32 M0+ Series

The HT32 M0+ MCUs feature an excellent energy-efficient Arm® Cortex®-M0+ processor core, with an optimal balance between price, power and performance. This makes the MCUs suitable for use in the Internet of Things (IoT), wearable device products, and other similar applications. With the advantages in terms of code density, power consumption and price, the M0+ core-based MCUs are not only the first choice for new product design and development, but also the best choice for upgrading traditional products based on an 8-bit MCU to 32-bit MCU-based products with higher performance.

Major Advantages:

- 32-bit Arm® Cortex®-M0+ processor core
- Up to 60 MHz operating frequency
- Up to 256 KB on-chip Flash memory and 32 KB on-chip SRAM
- Flash memory protection
- Multiple booting modes
- 24-bit SysTick timer
- ISP and IAP programming methods
- 3 power domains
- 12-bit SAR A/D converter with a conversion rate of up to 1 Msps
- Real time clock
- I²C, SPI, USART and USB interfaces
- Smart card interface
- Serial wire debug port

Core

Arm® Cortex® -M0+ Processor

- Serial Wire Debug
- Internal Oscillators
- External Oscillators
- Real Time Clock
- Watchdog Timer
- System Clock PLL
- NVIC

Power Supply

POR/PDR

- Backup Domain Power Management
- BOD/LVD

Interfaces

- SPI Master/Slave
- I²C Master/Slave
- USART Interface
- UART Interface
- USB Interface
- Smart Card Interface

HT32 Arm® Cortex®-M0+
Best Choice for Price,
Power, Performance

Memory

16 ~ 256 KB Flash Memory

4 ~ 32 KB SRAM

- Multiple Booting Modes
- Flash Memory Protection
- IAP and ISP Programming Methods

Peripherals

General Purpose Timer

PWM Generator

- General Purpose Input/Output Ports
- Reset Control Unit
- Motor Control Timer
- Cyclic Redundancy Check
- Peripheral Direct Memory Access

Analog Features

A/D Converter

Comparator



HT32 M3 Series

The Holtek HT32 M3 core series of MCUs, based on the Arm® Cortex®-M3 processor, are specially designed for high performance and low power consumption applications, such as automotive systems, industrial control systems, wireless networks and sensors, etc., which require a 32-bit MCU solution of high performance, low-dynamic and static power consumption specifications. Features such as configurable interrupts and memory protection provide even more outstanding performance and flexibility for this series of MCUs.

Major Advantages:

- 32-bit Arm® Cortex®-M3+ processor core
- Up to 96 MHz operating frequency
- Up to 256 KB on-chip Flash memory and 128 KB on-chip SRAM
- Flash memory protection
- Multiple booting modes
- 24-bit SysTick timer
- ISP and IAP programming methods
- 3 power domains
- 12-bit SAR A/D converter with a conversion rate of up to 1 Msp/s
- Real time clock
- I²C, SPI, USART and USB interfaces
- Smart card interface
- Serial wire debug port
- External Bus Interface

Core

Arm® Cortex® -M3 Processor

Serial Wire Debug
Internal Oscillators
External Oscillators
Real Time Clock
Watchdog Timer
System Clock PLL
NVIC

Power Supply

POR/PDR
Backup Domain Power Management
BOD/LVD

Interfaces

SPI Master/Slave
I²C Master/Slave
USART Interface
UART Interface
USB Interface
Smart Card Interface
CMOS Sensor Interface

HT32 Arm® Cortex®-M3
High Efficiency, Abundant
Peripherals and Interfaces

Memory

16 ~ 256 KB Flash Memory
16 ~ 128 KB SRAM
Multiple Booting Modes
Flash Memory Protection
IAP and ISP Programming Methods

Peripherals

General Purpose Timer
PWM Generator
General Purpose Input/Output Ports
Reset Control Unit
Motor Control Timer
Cyclic Redundancy Check
Peripheral Direct Memory Access

Analog Features

A/D Converter
Comparator
Operational Amplifier