

Typ	V007	V006	V003
Core	- QingKe 32-bit RISC-V core, RV32EmC instruction set - Fast programmable interrupt controller + hardware interrupt stack - Support 2-level interrupt nesting - Support system main frequency 48MHz	- QingKe 32-bit RISC-V core, RV32EmC instruction set - Fast programmable interrupt controller + hardware interrupt stack - Support 2-level interrupt nesting - Support system main frequency 48MHz	- QingKe 32-bit RISC-V core, RV32EmC instruction set - Fast programmable interrupt controller + hardware interrupt stack - Support 2-level interrupt nesting - Support system main frequency 48MHz
Flash	62KB	62KB	16KB
Ram	8KB	8KB	2KB
Memory	- 256B system non-volatile configuration information storage area - 256B user-defined memory	- 256B system non-volatile configuration information storage area - 256B user-defined memory	- 64B system non-volatile configuration information storage area - 64B user-defined memory
DMA	- 7-channel general-purpose DMA controller - 7 channels, support ring buffer - Support TIMx/ADC /USART/I2C/SPI	- 8-channel general-purpose DMA controller - 7 channels, support ring buffer - Support TIMx/ADC /USART/I2C/SPI	- 1 group of 1-channel general-purpose DMA controller - 7 channels, support ring buffer - Support TIMx/ADC /USART/I2C/SPI
ADC	- 12-bit ADC - Analog input range: VSS~V DD - 8 external signals + 3 internal signals - Support 3M sampling rate	- 12-bit ADC - Analog input range: VSS~V DD - 8 external signals + 2 internal signals - Support 3M sampling rate	- 10-bit ADC - Analog input range: VSS~V DD - 8 external signals + 2 internal signals - Support external delayed triggering
Touch	8-channel touch-key channel detection	8-channel touch-key channel detection	none
USART	2 - Support LIN	2 - Support LIN	1
SPI	1	1	1
I2C	1	1	1
GPIO	- 4 sets of GPIO ports, 31 I/O ports - Mapping 1 external interrupt	- 4 sets of GPIO ports, 31 I/O ports - Mapping 1 external interrupt	- 3 groups of GPIO ports, 18 I/O ports - Mapping 1 external interrupt
Timer	- 16-bit advanced-control timer, with dead zone control and emergency brake; can offer PWM complementary output for motor control - 16-bit general-purpose timer, provide input capture/output comparison/PWM/pulse counting/incremental encoder input - 16-bit compact timer for auxiliary motor applications - 2 watchdog timers (independent watchdog and window watchdog) - SysTick: 32-bit counter	- 16-bit advanced-control timer, with dead zone control and emergency brake; can offer PWM complementary output for motor control - 16-bit general-purpose timer, provide input capture/output comparison/PWM/pulse counting/incremental encoder input - 16-bit streamlined timer - 2 watchdog timers (independent watchdog and window watchdog) - SysTick: 32-bit counter	- 16-bit advanced-control timer, with dead zone control and emergency brake; can offer PWM complementary output for motor control - 16-bit general-purpose timer, provide input capture/output comparison/PWM/pulse counting/incremental encoder input - 2 watchdog timers (independent watchdog and window watchdog) - SysTick: 32-bit counter
OPA PGA CMP	- Multiple input channels, selectable multi-step gain - 2 output channels, optional ADC pins - Support 3-channel polling, supports single or dual resistor scheme. - Support high-speed mode to increase slew rate - 2-group analog voltage comparator CMP: - General-purpose CMP, 3 input channels, supports 3 CMP polling to detect positioning and output to peripherals or I/Os - Streamlined CMP, internally cascaded to OPA outputs	- Multi-input channel, optional multi-stage gain - 2 output channels, optional ADC pin - P-side supports 3-channel polling - Support high-speed mode to increase swing rate	1 group of OPA and comparator: connected with ADC and TIM2
Clock	- Clock & Reset - Built-in factory-trimmed 24MHz RC oscillator - Built-in 128KHz RC oscillator - High-speed external 3~25MHz oscillator - Built-in system clock monitoring (SCM) module - Power on/down reset, programmable voltage detector	- Clock & Reset - Built-in factory-trimmed 24MHz RC oscillator - Built-in 128KHz RC oscillator - High-speed external 3~25MHz oscillator - Built-in system clock monitoring (SCM) module - Power on/down reset, programmable voltage detector	- Clock & Reset - Built-in factory-trimmed 24MHz RC oscillator - Built-in 128KHz RC oscillator - High-speed external 4~25MHz oscillator - Power on/down reset, programmable voltage detector
Power	- supports rated 2.5~5V power supply - Low-power mode: Sleep, Standby	- supports rated 2.5~5V power supply - Low-power mode: Sleep, Standby	- System power supply VDD: 3.3V or 5V - Low-power mode: Sleep, Standby
Debug	Debug mode: 1-wire or 2-wire serial debug interface	Debug mode: 1-wire or 2-wire serial debug interface	1-wire serial debug interface (SDI)