

PERFORMANCE AND DEVELOPMENT WORKFLOWS

FEATURE	ATTINY412	SAM D11C	XIAO RP2040	XIAO ESP32-C3	ATTINY1624
Microcontroller	ATtiny412	SAM D11	RP2040	ESP32-C3	ATtiny1624
Core	AVR	ARM Cortex-M0+	ARM Cortex-M0+	RISC-V	AVR
Clock Frequency	20 MHz	48 MHz	133 MHz	160 MHz	20 MHz
RAM	4 KB	8 KB	264 KB	400 KB	2 KB
Flash	4 KB	16 KB	2 MB	384 KB	16 KB
Connectivity	SPI, I2C, UART	SPI, I2C, UART	SPI, I2C, UART, USB	SPI, I2C, UART, USB	SPI, I2C, UART
Language Compatibility	C, C++, Arduino	C, C++, Arduino	C, C++, Arduino	C, C++, Arduino, CircuitPython, MicroPython	C, C++, Arduino
Form Factor	Small	Small	Small	Small	Small
Power Supply	1.8V - 5.5V	1.62V - 3.63V	3.3V	3.3V	1.8V - 5.5V
Communication Interfaces	SPI, I2C, UART	SPI, I2C, UART	SPI, I2C, UART, USB	SPI, I2C, UART, USB	SPI, I2C, UART
Additional Peripherals	12 GPIO pins	14 GPIO pins	30 GPIO pins	30 GPIO pins	12 GPIO pins
Price	Low	Low	Low	Low	Low
Applications	IoT, embedded electronics, sensors, actuators	IoT, embedded electronics, sensors, actuators	IoT, embedded electronics, sensors, actuators	IoT, embedded electronics, sensors, actuators	IoT, embedded electronics, sensors, actuators
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