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## Overview

This xCHIP forms part of the core modules. The SAM D21 from Microchip Technology Inc is a low-power microcontroller using the 32-bit ARM® Cortex® -M0+ processor with up to 256 KB Flash and 32 KB of SRAM. This module is compatible with the Arduino platform due to the shared architecture with the Arduino M0.

### Product Highlights

- ARM Cortex-M0+ Architecture
- 48 MHz
- 256 kB Flash
- 32 kB SRAM Memory
- SWD Debugging with IP03 Interface and Capable Programmer
- Low Power Idle and Standby Modes

## Programming Notes

### Arduino

See Getting Started with the CC03 for Arduino programming.

More info:

- Choose Arduino/Genuino Zero (Native Port)
- If you are using the IP02 to program your CC03, then these are the settings:
  - The A/B switch is in position B
  - The DTE/DCE switch is in position DCE
  - (If you battle reading the small print, both switches should be in the position closest to the USB port (away from the CC03))
- If you want to print to serial, the use Serial USB
  - You can add a line to your code at the top if your code already uses Serial everywhere:
    - `#define Serial SerialUSB`

## Specifications

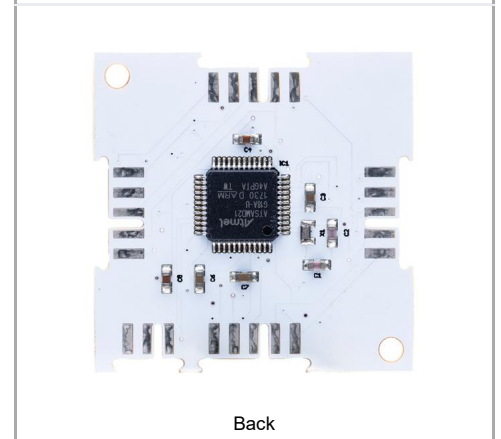
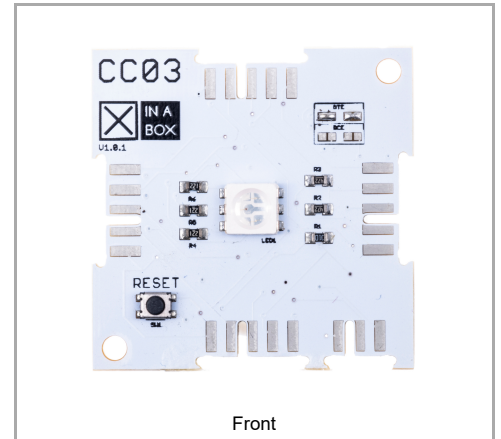
- Five 16-Bit Configurable Timers
- Three 24-Bit Timers/Counters
- 32-Bit Real Time Counter with Clock/Calendar Function
- Watchdog Timer
- CRC-32 Generator

## External Links

### GitHub

- CC03 on GitHub (<https://github.com/xinabox/xCC03>)

## CC03 - Cortex M0+ Core (ATSAMD21G18/SAMD21G/SAMD21)



<input checked="" type="checkbox"/> CHIP	
<b>Main Category</b>	Core
<b>Sub Category</b>	CPU
<b>Introduced</b>	1 January 2017
<b>Current version</b>	1.0.0
<b>Current version date</b>	1 January 2017
<b>Dimensions</b>	
<b>Size</b>	2x2U (32x32mm)
<b>Weight</b>	2.9 g
<b>Height</b>	4.2/0/0 mm
<b>Non-<input checked="" type="checkbox"/>BUS Connections</b>	
<b>South</b>	<input checked="" type="checkbox"/> BUS & <input checked="" type="checkbox"/> PDI
<b>Main Chip Set</b>	
<b>Main Chip</b>	ATSAMD21G18
<b>Architecture</b>	ARM® Cortex®-M0+
<b>Core Size</b>	32 bit
<b>Max. Frequency</b>	48 MHz
<b>Program Memory Size</b>	256 kB Flash
<b>RAM Memory Size</b>	32 kB SRAM
<b>I<sup>2</sup>C Speed</b>	100/400 kHz
<b>Programmer Setting</b>	
<b>Programmer</b>	IP03
<b>Serial Configuration</b>	
<b>Default Setting</b>	DTE
<b>Change Setting</b>	DCE
<b>UART Configuration</b>	
<b>RXD</b>	PA11
<b>TXD</b>	PA10

<b>I<sup>2</sup>C Configuration</b>	
<b>SDA</b>	PA22
<b>SCL</b>	PA23
<b>USB Configuration</b>	
<b>USB D+</b>	PA25
<b>USB D-</b>	PA24
<b>LED Configuration</b>	
<b>Red pin</b>	PA16
<b>Green pin</b>	PA19
<b>Blue Pin</b>	PA17