XinaBox Datasheet CS11 - Core with SD Card Interface

Contents

- 1 Overview
- 2 Specifications
- 3 Important Programming Notes
- 4 External Links

Overview

This xCHIP forms part of the core modules and is a low-power micro-controller using the 32-bit ARM® Cortex®-M0+ processor, and ranges from 32- to 64-pins with up to 256 KB Flash and 32 KB of SRAM. This module operates at a maximum frequency of 48 MHz.

Product Highlights

- 256 KB in-system self-programmable Flash
- 32 KB SRAM Memory

Specifications

- ARM Cortex-M0+ CPU running at up to 48MHz
- Power-on reset (POR) and brown-out detection
- Idle and standby sleep modes

Important Programming Notes

- The RGB LED has swapped cathode-anode compared to standard Arduino M0 boards. That means that if you use Arduino M0 or similar board specification and not the XinaBox CS11 board specification, you need to use **LOW when turning a LED ON and HIGH when turning a LED OFF**.
- If you want to use the **SD Card** adapter, you need a **Chip Select** Pin. The value is **3 (PA9)**.
- If you want to use the USB connection as serial monitor, then refer to **SerialUSB**. Standard Serial is accessible using an FTDI xChip, such as the IP01 or IP02.
- The CS11 comes with a boot loader that allows you to program the Core 3 different ways:
  - The usual way by selecting the USB port the CS11 is connected to via either the IP02 or IP03
  - By exporting the .bin file from for example Arduino and the place the .bin file on a properly formatted SD Card. Once inserted into the CS11, the CS11 will program itself with the .bin file
  - By converting the .bin file to a .uf2 file. Use the utils/uf2conv.py from [1] (https://github.com/Microsoft/uf2). Then double click on the reset button on the CS11, which puts it into programming mode and then once the CS11 shows up as a disk on your computer, you simply drag the .uf2 file to the CS11 disk.
- LEDs
  - One LED CS11:
    - 4
  - RGB LED CS11:
    - Red: 11
    - Green: 12
    - Blue: 13

External Links

Datasheets

- SAM D21 From Microchip Technology Inc. (http://ww1.microchip.com/downloads/en/DeviceDoc/40001882A.pdf)

Shop

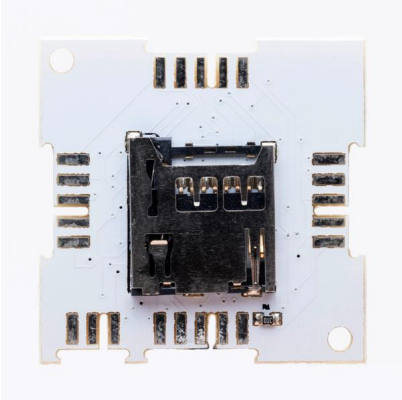
- Buy CS11 (https://xinabox.cc/products/CS11)

GitHub

- CS11 on GitHub (https://github.com/xinabox/xCS11)

CS11 - Core with SD Card Interface (ATSAMD21G18A)

Front



Back

☒CHIP	
Main Category	Core
Sub Category	Core with SD Card Interface
Introduced	1 January 2018
Current version	1.1.0
Current version date	1 March 2018
Dimensions	
Size	2x2U (32x32 mm)
Weight	3 g
Height	3.1/1.5/0.0 mm
Main Chip Set	
Main Chip	SAM D21
Max. Frequency	48 MHz
Program Memory Size	256 KB
RAM Memory Size	32 KB of SRAM
Serial Configuration	
Default Setting	DTE
Change Setting	DCE
UART Configuration	
RXD	PA11
TXD	PA10
I²C Configuration	
SDA	PA22
SCL	PA23
USB Configuration	
USB D+	PA25
USB D-	PA24
SPI Configuration	

MISO	PA12
MOSI	PA10
SCK	PB11
CS	PA09
LED Configuration	
Red pin	PA16
Green pin	PA19
Blue Pin	PA17