

# PyBadge for MakeCode Arcade

Versatile, compact dev board that evaluates the ATSAMD51J19 Cortex M4 processor

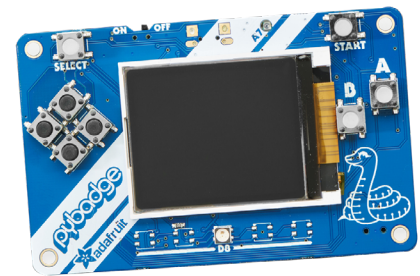
## Product Overview

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## Description

The PyBadge for MakeCode Arcade from Adafruit is a versatile, compact development board that evaluates the ATSAMD51J19 Cortex M4 processor. This credit-card-sized board can run CircuitPython programming language, MakeCode Arcade code editor or the Arduino open-source electronics platform. The board features 512KB of Flash and 192KB of RAM. The device also has 2MB of Quad Serial Peripheral Interface (QSPI) Flash for file storage, which is ideal for images, fonts, sounds, or game assets. The board has a thin-film-transistor display with dimmable backlight with 8 silicone-top buttons. The buttons are arranged to mimic a gaming handheld.



A low cost version is available with pared-down hardware to make it more affordable. Still use it with MakeCode Arcade and the low-cost version has the same processor chip, QSPI Flash, on/off switch, buttons, buzzer, light sensor, and battery circuit. This board does not have Feather headers, JST STEMMA connectors, LIS3DH accelerometer, or optional speaker connection. Instead of 5 NeoPixels there is only one in the center front. The MakeCode Sync Cable is a Micro B USB to Micro B USB cable that is specifically designed for co-op fun or player-versus-player showdowns. This cable is compatible with PyGamer and the JACDAC pin is connected to the extra ID pin of the Micro B cable so data can pass back and forth.

## Features

- ATSAMD51J19 @ 120MHz with 3.3V logic/power and 512KB of FLASH + 192KB of RAM
- 2MB of SPI Flash for storing images, sounds, animations, etc.
- 8 x game/control buttons with silicone button tops
- 5 x NeoPixels for badge dazzle, or game score-keeping
- Triple-axis accelerometer (motion sensor)
- Light sensor, reverse-mount so that it points out the front
- Built-in buzzer mini-speaker
- Mono Class-D speaker driver for 4Ω to 8Ω speakers, up to 2W
- LiPoly battery port with built-in recharging capability
- USB port for battery charging, programming, and debugging
- 85.7mm x 54.6mm x 10mm dimensions

## Mouser Part Number(s)

[View All Parts](#)

To learn more, visit <https://www.mouser.com/new/adafruit/adafruit-pybadge-for-makecode-arcade/>