**Communication protocols:**

XBee3:

* Only supports I2C in Master mode, no Slave mode
* Supports SPI in Slave mode, but only in API mode

ESP8266:

* Only supports I2C in Master mode, no Slave mode
* Only supports SPI in Master mode, no Slave mode

Solution:

* Operate both in Master mode, but software switch the modes for each board

**SD Card:**

Adafruit MicroSD Card Breakout Board:

* Supports SPI
* Has CircuitPython sample code

CircuitPython vs MicroPython explanation:

* <https://learn.adafruit.com/getting-started-with-raspberry-pi-pico-circuitpython/micropython-or-circuitpython>

**Raspberry Pi Pico:**

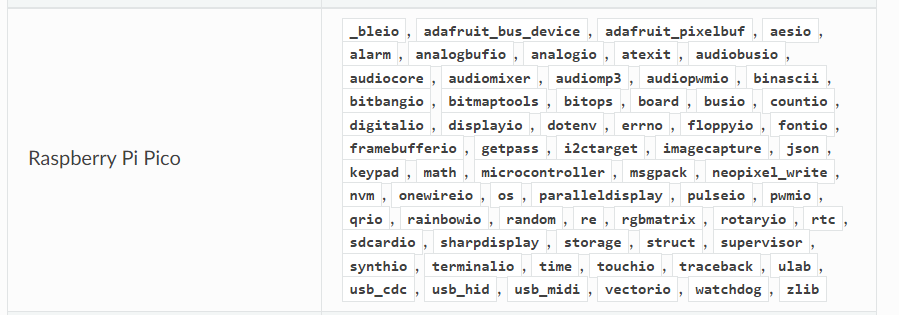


Figure 1: Available CircuitPython modules according to https://docs.circuitpython.org/en/latest/shared-bindings/support\_matrix.html

**XBee:**

Calendar

Description automatically generated

Graphical user interface, text, application

Description automatically generated

**Pycharm:**

**Text

Description automatically generated**

* Install the 2022 Community Version
  + Problems were encountered with the 2018 version

**XBee Operation Modes:**

* Do we set the data sink to REPL or API
  + REPL mode limits the amount of data that can be moved, leading to potential data loss
  + API mode should be used