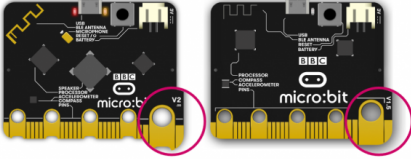


Micro:bit

(page créée le 20 mai 2022, en cours de rédaction)

Il existe deux versions principales de micro:bit.

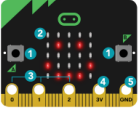
Caractéristiques principales



micro:bit V1.5 vs V2

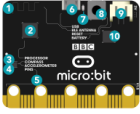
| Features/Specs | micro:bit v1.5 | micro:bit v2 |
|-------------------------|---|---|
| Release Date | NA | 13th Oct 2020 |
| MCU or Processor | Nordic Semiconductor nRF51822 | Nordic Semiconductor nRF52833 |
| MCU Core Architecture | ARM Cortex-M0 32-bit | ARM Cortex-M4 32-bit (FPU) |
| MCU Flash Size | 256KB | 512KB |
| RAM Size | 16KB | 128KB |
| MCU Clock | 16MHz | 64MHz |
| USB Interface Processor | NXP KL26Z, 16KB RAM | NXP KL27Z, 32KB RAM |
| Microphone, MIC | None | MEMS Microphone, LED Indicator |
| Speaker | None | Onboard Piezo Buzzer |
| Touch Sensitive Logo | None | Touch Sensitive Logo Pad |
| Wireless | 2.4GHz micro:bit radio/Bluetooth 4.0 | 2.4GHz micro:bit radio/Bluetooth 5.1 |
| Power | 3V via USB, 3V via edge connector or battery port | 3V via USB, 3V via edge connector or battery port |
| Power Indicator LED | NA | Onboard Power Indicator LED |
| Power Off Button | NA | Onboard Power Button (Push and Hold) |
| Current for External | 3V, 50mA | 3V, 200mA |
| Motion Sensor | ST LSM303 | ST LSM303 |
| Edge Connector | 25-pin, 3 dedicated GPIO, PWM, I2C, SPI, Power, and etc | 25-pin, 4 dedicated GPIO, PWM, I2C, SPI, Power, and etc |
| Ring Connector | 3 (GPIO) + 2 (Power) ring connectors | 3 (GPIO) + 2 (Power) ring connectors, notched edge |
| I2C | Shared I2C Bus | Dedicated I2C Bus for peripherals |
| Software/IDE | C++, makecode, Python, Scratch | C++, makecode, Python, Scratch |
| Size | 50mm (w) x 40mm (h) | 50mm (w) x 40mm (h) |

micro:bit V1



micro:bit V1 - Front

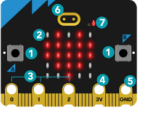
- Buttons
- LED Display
- Pin - GPIO
- Pin - 3 Volt Power
- Pin - Ground



micro:bit V1 - Back

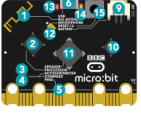
- Radio & Bluetooth Antenna
- Temperature Sensor & Processor
- Compass
- Accelerometer
- Pin
- Micro USB Socket
- Single Red LED
- Reset Button
- Battery Socket
- USB Interface Chip

micro:bit V2



micro:bit V2 - Front

- Buttons
- LED Display
- Notched Pin - GPIO
- Pin - 3 Volt Power
- Pin - Ground
- Gold Touch Logo
- Microphone LED



micro:bit V2 - Back

- Radio & Bluetooth Antenna
- Temperature Sensor & Processor
- Compass
- Accelerometer
- Pin
- Micro USB Socket
- Single Red LED
- Reset Button
- Battery Socket
- USB Interface Chip
- Speaker
- Microphone
- Red Power LED
- Reset & Power button

Brochage / Pinout

micro:bit

PINOUT

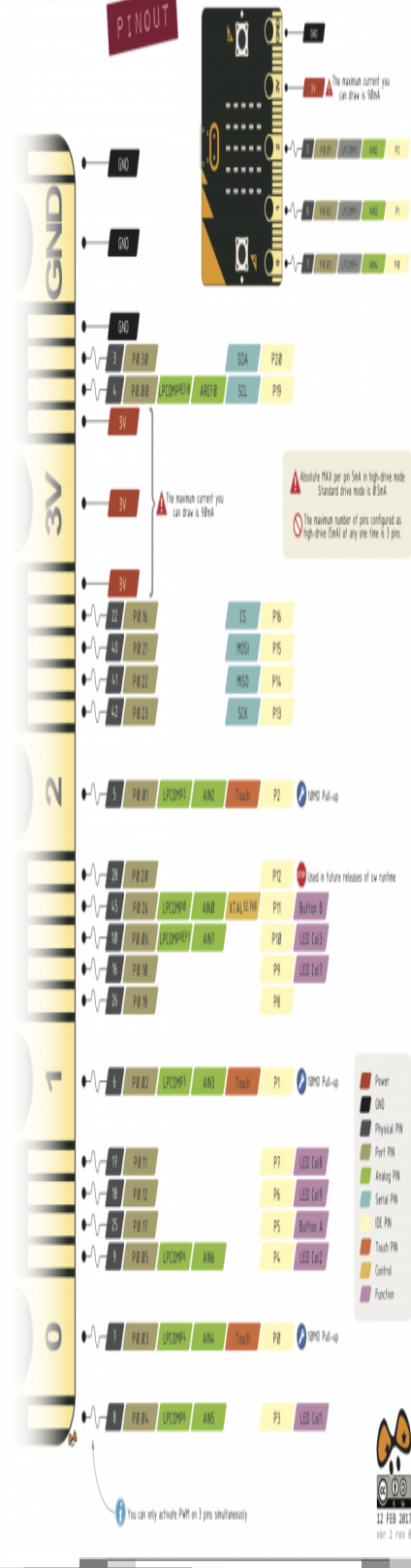


Schéma par Pighixx, CC BY-SA

Programmer la carte

En ligne, par bloc, en javascript ou micropython, avec l'éditeur makecode

- <https://makecode.microbit.org/?lang=fr>

En ligne / en local, par bloc avec Scratch

- <https://scratch.mit.edu/microbit>

En local, en code python, avec l'éditeur Mu

En local, en code C, avec l'IDE arduino

- <https://learn.adafruit.com/use-micro-bit-with-arduino?view=all>

Utilisation

Connexion série sur linux

A minima, on peut utiliser screen pour recevoir les données

```
ls /dev/ttyACM*           # chercher le port
screen /dev/ttyACM0 115200
# on arrête screen avec CTRL-A, puis K (pour Kill)...
# sur l'utilisation de screen, voir https://www.tecmint.com/screen-command-examples-to-manage-linux-terminals/
```

Des exemples pour une réception dans processing ici : https://github.com/emoc/microbit_utile

Extensions

micro:bit + shield grove : https://wiki.seeedstudio.com/Grove_Inventor_Kit_for_microbit/

micro:bit avec Scratch :

Ressources

Article extrait de : <http://lesporteslogiques.net/wiki/> - **WIKI Les Portes Logiques**
Adresse : <http://lesporteslogiques.net/wiki/materiel/microbit?rev=1653291918>
Article mis à jour: **2022/05/23 09:45**