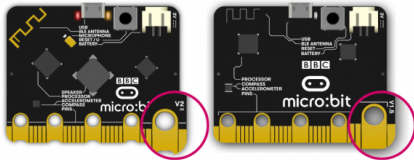


# Micro:bit

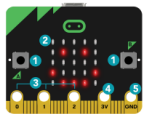
(page créée le 20 mai 2022, en cours de rédaction)

Il existe deux versions principales de micro:bit.

## Caractéristiques principales

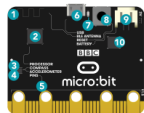


**micro:bit V1**



micro:bit V1 - Front

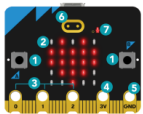
1. Buttons
2. LED Display
3. Pin - GPIO
4. Pin - 3 Volt Power
5. Pin - Ground



micro:bit V1 - Back

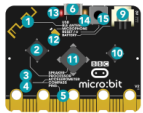
1. Radio & Bluetooth Antenna
2. Temperature Sensor & Processor
3. Compass
4. Accelerometer
5. Pins
6. Micro USB Socket
7. Single Red LED
8. Reset Button
9. Battery Socket
10. USB Interface Chip

**micro:bit V2**



micro:bit V2 - Front

1. Buttons
2. LED Display
3. Touchable Pins - GPIO
4. Pin - 3 Volt Power
5. Pin - Ground
6. Gold Touch Logo
7. Microphone LED



micro:bit V2 - Back

1. Radio & Bluetooth Antenna
2. Temperature Sensor & Processor
3. Compass
4. Accelerometer
5. Pins
6. Micro USB Socket
7. Single Red LED
8. Reset Button
9. Battery Socket
10. USB Interface Chip
11. Speaker
12. Microphone
13. Red Power LED
14. Yellow USB LED
15. Reset & Power button

## 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
SRAM 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/BLE Bluetooth 4.0	2.4GHz micro:bit radio/BLE Bluetooth 5.1
Power	5V via USB, 3V via edge connector or battery port	5V 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, <b>matched edge</b>
I2C	Shared I2C Bus	<b>Dedicated I2C Bus</b> for peripherals
Software/IDE	C++, makecode, Python, Scratch	C++, makecode, Python, Scratch
Size	50m (w) x 40m (h)	50m (w) x 40m (h)

## Brochage / Pinout

# micro:bit

## PINOUT

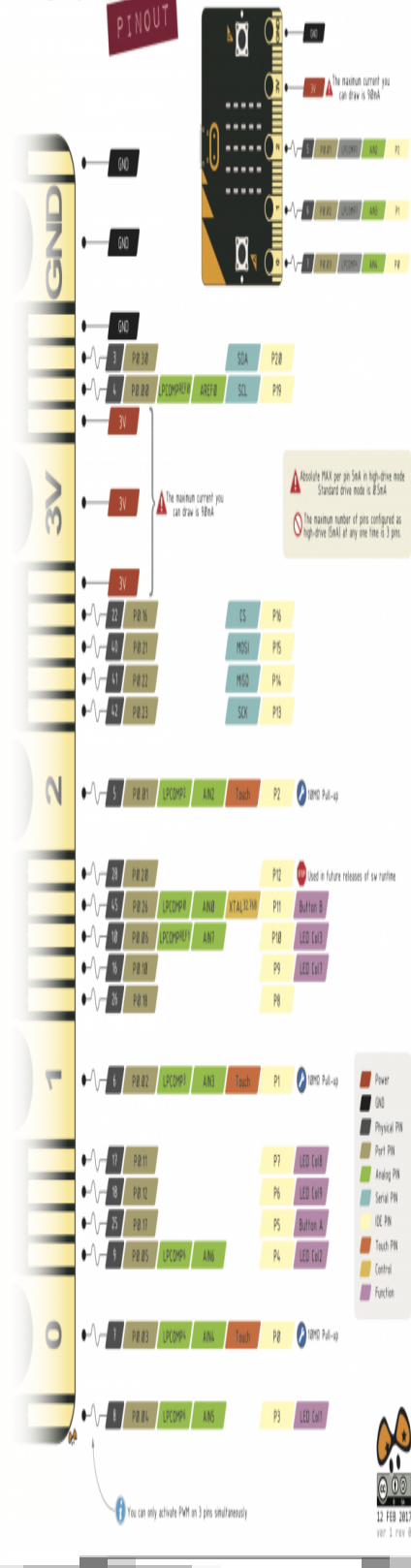


Schéma par Pighixx, CC BY-SA

## 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\\_util](https://github.com/emoc/microbit_util)

## Extensions

micro:bit + shield grove : [https://wiki.seeedstudio.com/Grove\\_Inventor\\_Kit\\_for\\_microbit/](https://wiki.seeedstudio.com/Grove_Inventor_Kit_for_microbit/)

micro:bit avec Scratch :

## Ressources

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