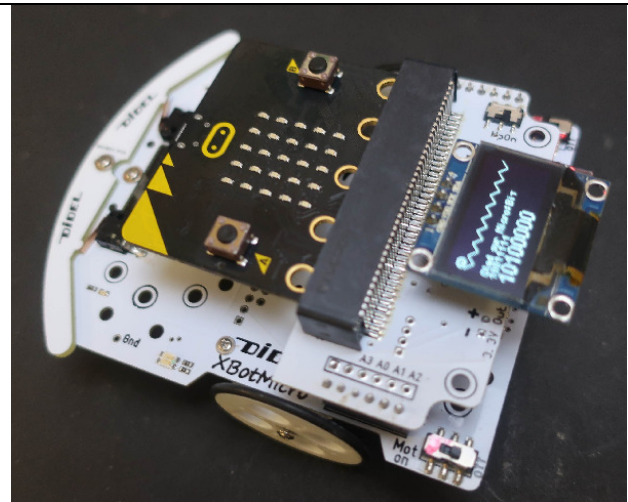
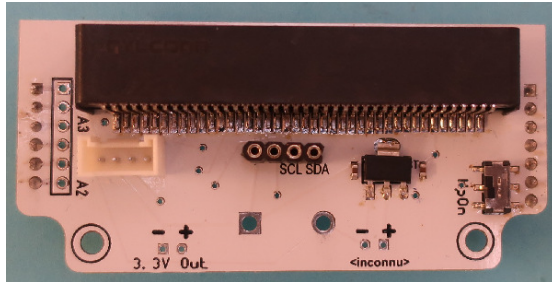




M:Xbot, the Micro:Bit - Xbot adapter

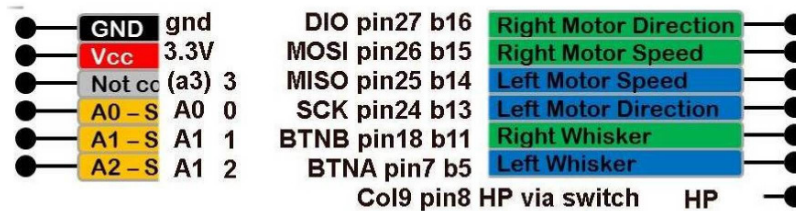
The M:Xbot is a simple board that fit on an Xbot robot base. The inserted BBC Micro:Bit card controls the motors, the whiskers, and the 3 free sensor lines. A Grove I2C connector and an OLED SSD1306 connector are available.



This board is a preproduction item to be handed to teachers having experience in Arduino and Microbit or NRF51 softwares. Production board may include more connectors or sensors, strip of leds, etc, according to pedagogical objectives.

Micro:Bit on Xbot

Pins assignment



Arduino programming

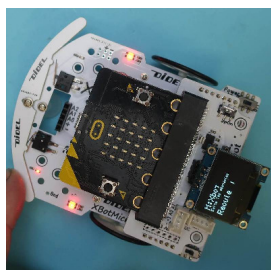
See www.didel.com/MicrobitArduino.pdf for details

All Arduino programs for the Xbot (if they do not use the timer for now) execute on Micro:Bit if the XbotDef.h file below is used.

```
// MicroBitEvitObst.ino
#include "xbotDef.h"

void setup() { // init
  XBotDefSetup();
}

void loop() {
  Avance();
  if (ObsD) { //back and turn
    Recule();
    delay (300);
    TourneG();
    delay (200);
  }
  if (ObsG) { //back and turn
    Recule();
    delay (300);
    TourneD();
    delay (100);
  }
}
```



```
//XbotDef pour Microbit ok
//in pp #include "xbotDef.h" XBotDefSetup();

#define RecD 16
#define AvD 15
#define AVG 14
#define RecG 13
#define MousD 11 // pin
#define MousG 5

#define ObsD !digitalRead(MousD) // =1 if obst
#define ObsG !digitalRead(MousG)

void Avance() {
  digitalWrite(AVG, HIGH); // move forward
  digitalWrite(RecG, LOW);
  digitalWrite(AVD, HIGH);
  digitalWrite(RecD, LOW);
}

void Recule() {
  . . . . .

  // moustaches in
  pinMode (MousD, INPUT);
  pinMode (MousG, INPUT);
}

void XBotSetup () {
  pinMode(RecG, OUTPUT);
  pinMode(AVG, OUTPUT);
  pinMode(AVD, OUTPUT);
  pinMode(RecD, OUTPUT);
  // moteurs off
  Stop();
}
```