

IM01 micro:bit Interface

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Micro:Bit Interface

Product highlights

- Connects a BBC Micro:Bit to the XinaBox eco-system
- Access to SD Card
- Green and Blue LED
- xPDI, can be used to program a CC03 and CS11
- 1000 mA power supply for heavy duty circuits
- Solder based pad for activating 5V
- Solder based pad for configuring UART/Serial direction

Overview

This xChip allows you connect your BBC Micro:Bit to the XinaBox eco-system. You can program the Micro:Bit as usual in MakeCode, JavaScript, Python, and in C/C++ using the Arduino and MBED IDE.

Specifications

IM01

- 1000 mA power supply
- SD Card using SPI and P16 for Chip Select
- Access to I2C
- Access to UART/Serial using P0 and P1
- Configuration of the direction of the UART/Serial via solder pads
- Green LED on P2
- Blue LED on P8
- Micro-USB connector for power and for using the xPDI for programming
- Micro-USB port is fully ESD protected
- Solder pad for activating 5v on the XinaBox xBus VSRC pin
- LED indicator for power

Programming

MakeCode and JavaScript

Look for MakeCode extension for the XinaBox eco-system by searching for <https://github.com/xinabox> and looking for repositories starting with "pxt".

Python

You can program the MicroBit in MicroPython. For Python libraries look for "python-" in the <https://github.com/xinabox> repository. Before programming in Python, watch this video to learn about the way you program the micro:bit in microPython for the XinaBox eco-system: Programming in Python (<https://youtu.be/8gLNLI7GBW4>)

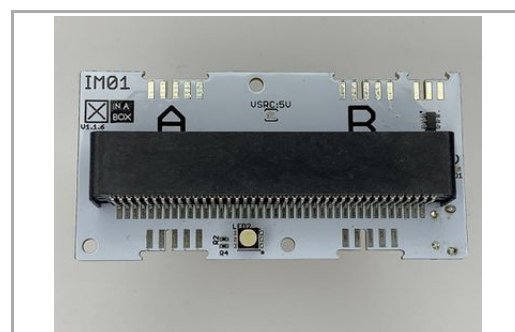
C/C++

You can program the Micro:Bit in C/C++. You can use the Arduino and the MBED IDE. For Arduino libraries look for "arduino-" in the <https://github.com/xinabox> repository.

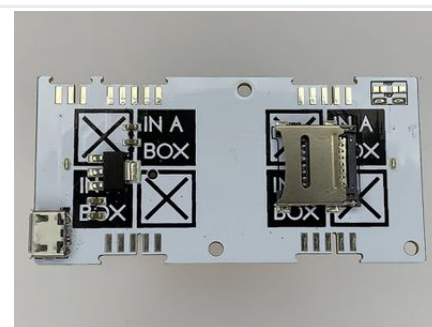
Wiring

Notice in this image that all pins of the micro:bit is in use:

IM01



Front



Back

CHIP

Main Category	Interface
Sub Category	Micro:Bit
Introduced	1 June 2019
Current version	1.1.7
Current version date	1 January 2020

Dimensions

Size	2x24U (32x64 mm)
Weight	16 g
Height	15 mm

Non-BUS Connections

North	2x xBus + xPDI
South	None
East	None
West	2x xBus

Powered By



Micro:Bit

Micro:Bit Pin	Used by	Function	xBus Name
P3	Micro:Bit	LED Col 1	
P0	IM01	Serial	RXD
P4	Micro:Bit	LED Col 2	
P5	Micro:Bit	Button A	
P6	Micro:Bit	LED Col 9	
P7	Micro:Bit	LED Col 8	
P1	IM01	Serial	TXD
P8	IM01	Green LED	
P9	Micro:Bit	LED Col 7	
P10	Micro:Bit	LED Col 3	
P11	Micro:Bit	BUTTON B	
P12	Micro:Bit	Reserved	
P2	IM01	Blue LED	
P13	IM01	SD Card - SCK	
P14	IM01	SD Card - MISO	
P15	IM01	SD Card - MOSI	
P16	IM01	SD Card - CS	
P19	Micro:Bit & IM01	I2C	SCL
P20	Micro:Bit & IM01	I2C	SDA

If you want to connect non-XinaBox sensors, switches, etc. then please watch this video [Connecting non-XinaBox sensors to micro:bit using IM01 and IX01 \(https://youtu.be/EoTGINegcRc\)](https://youtu.be/EoTGINegcRc).

Notes

- If you connect non-XinaBox sensors as per the video above to the RXD and TXD pins, then you cannot use the CW01 WiFi solution at the same time, since using those pins will conflict with the usage of the CW01.
- If you connect non-XinaBox sensors to the SDA and SCL pins, then you cannot use any other xChip, nor can you use the onboard Micro:Bit Accelerometer and Magnetometer, since using those pins will conflict with the use of I2C.

External Links

Libraries

- MakeCode Extensions (<https://github.com/xinabox?q=pxt->)
- Python Libraries (<https://github.com/xinabox?q=python->)
- Arduino Libraries (<https://github.com/xinabox?q=arduino->)

