

MORPX Inc.  
[www.morpx.com](http://www.morpx.com)



# MU Vision Sensor 3

## Firmware Upgrade Guide



2019/12/19

## Disclaimer & Copyright

- The information in this manual applies to the MU Vision Sensor 3 produced by Morpx Inc. Please check the Morpx Inc' s website <http://www.morpx.com> for the latest version of the firmware and library functions. Updates are subject to change without notice.
- Please read this manual carefully before using MU Vision Sensor and make sure you understand it, incorrect operation may cause the device to stop working , worse detection results, or even damaging the device.
- Morpx Inc will not warrant the damage caused by unauthorized repair or modification of electronic components on the product.
- The technical solution, vision algorithms, communication protocol mentioned in this manual is developed by Morpx and protected by intellectual property rights. No organization or individual may copy or plagiarize the technical achievements of Morpx Inc. In case of any infringement, Morpx will take legal actions to protect its rights.
- Morpx is the registered trademark of Morpx.Inc., and MU is the registered trademark of MU Vision Sensor. All trademarks (names and patterns) presented here in the text or figures belong to the holders of the marks.

## Firmware Upgrade

### 1. Download Flash Tool

Morpx website download link:

[http://mai.morpx.com/images/page201904/flash\\_download\\_tools\\_v3.6.5.rar](http://mai.morpx.com/images/page201904/flash_download_tools_v3.6.5.rar)

### 2. Download Firmware

Please download the firmware that you need from the below links:

Standard MU Vision Sensor 3

Website: <http://mai.morpx.com/page.php?a=sensor-support>

MU Vision Sensor 3 of MoonBot Kit

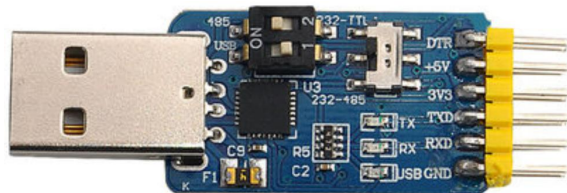
Website: <http://mai.morpx.com/page.php?a=moonbot-kit>

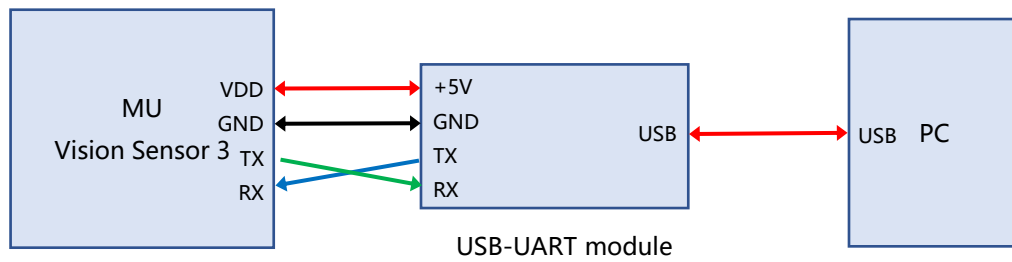
### 3. Upgrade

#### (1) Connection

One USB-UART module is needed.

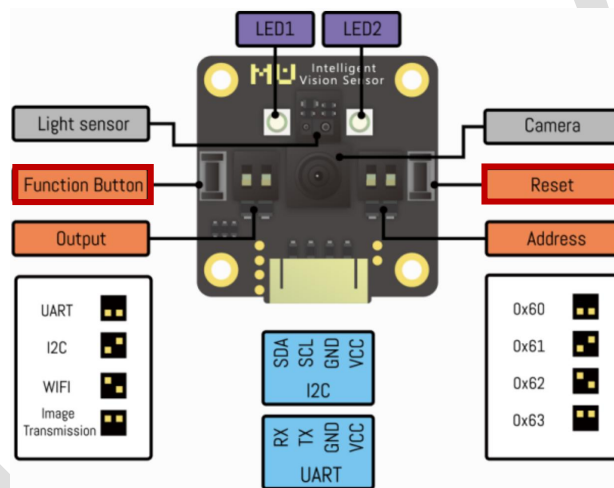
According to the following schematic diagram connect PC and USB-UART module and MU Vision Sensor 3:





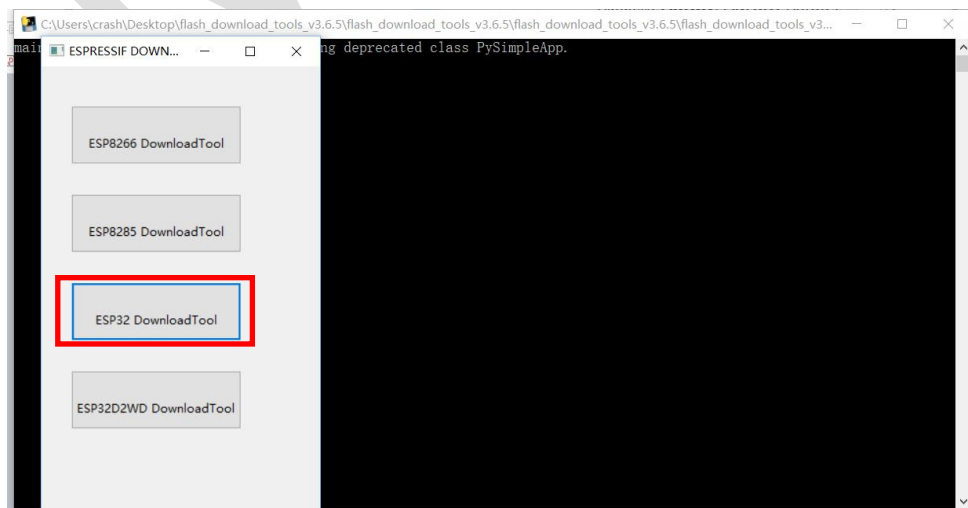
## (2) Enter Flash Mode

Press the Function button and hold, then click Reset button, finally release Function button.

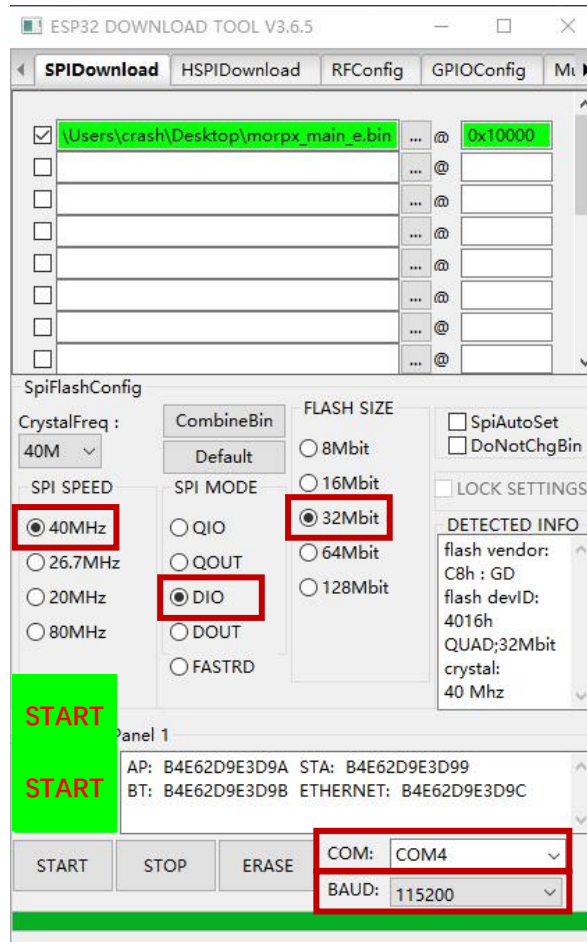


## (3) Run flash\_download\_tools\_vx.x.x.exe

## (4) Select ESP32 DownloadTool



## (5) Set Parameters



SPI SPEED: 40MHz

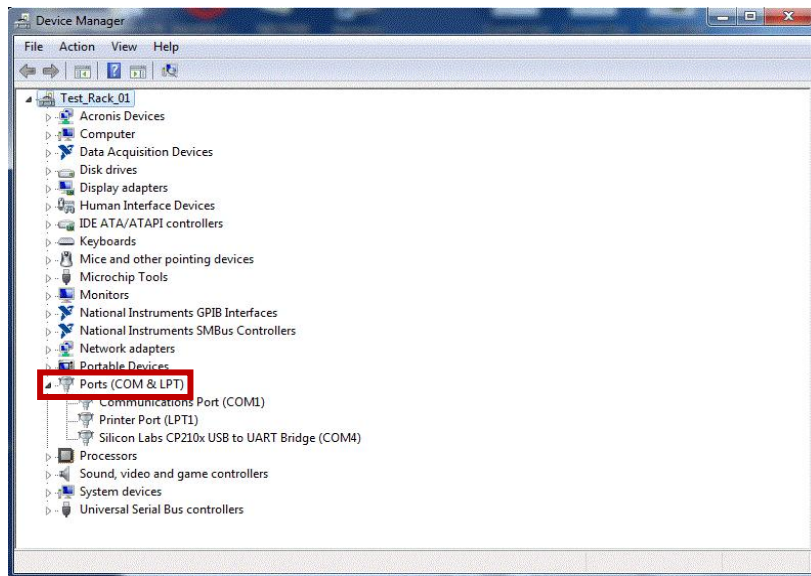
SPI MODE: DIO

FLASH SIZE: 32Mbit

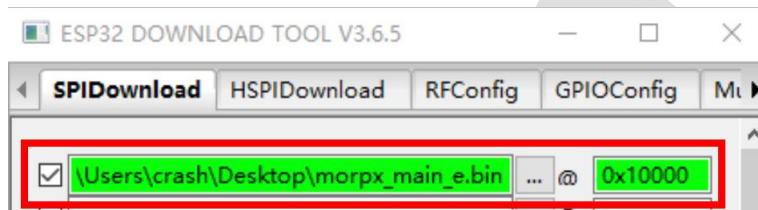
BAUD: 115200

**Notice:** If your USB-UART module support higher baud, you can select others value, such as 921600.

**COM:** Please select the right COM port according to the Ports information from Windows' Device Manager.



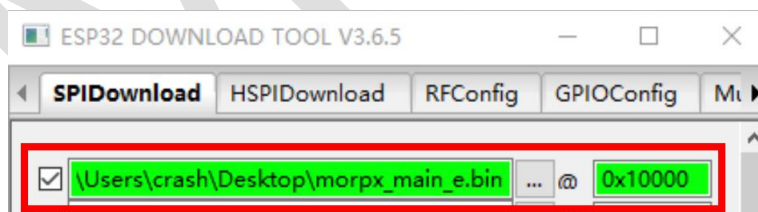
## (6) Select Firmware



Click the "... " button, and choose the firmware that you have downloaded.  
Besides make sure the first select box has been ticked.

## (7) Input Start Address

Input ' **0x10000** ' after @



**Warning! Don' t change this value, or damage will occur.**

If this tragedy occurs, please contact us for technical support.

Tel: +86-571-8195 8588

Email: [support@morpx.com](mailto:support@morpx.com)

## (8) Upgrade

Click the "START" button, then the upgrade process begins. It will take several seconds to complete. Higher baud, shorter time it costs.

**(9) Restart**

Morpx

## Technical Support

Thanks for purchasing MU Vision Sensor 3, and we would like to provide continuous updating service, please check to our website: [www.morpx.com](http://www.morpx.com) regularly. Updates are subject to change without notice. You can get the latest technical information from the following websites:

Online Documents: <https://morpx-docs.readthedocs.io/en/latest/>

GitHub: <https://github.com/mu-open-source/>

Official Website: <http://mai.morpx.com/page.php?a=sensor-support>

If there is any problem, you can contact us through telephone +86-571-81958588 or by email: [support@morpx.com](mailto:support@morpx.com).

Official Technical Support

Wechat



Official Technical Support

QQ

