**PROGRAMMING MCU**

ATmega8U2-MUR

* Product page

<https://www.digikey.com/en/products/detail/microchip-technology/ATMEGA8U2-MUR/2238248>

* Package type: VQFN -32
* Dimensions: 5.0mm x 5.0mm
* Datasheet

<https://ww1.microchip.com/downloads/en/DeviceDoc/doc7799.pdf>

* Summary

<https://ww1.microchip.com/downloads/en/DeviceDoc/7799S.pdf>

ATmega32U4-AU

* Product page

<https://www.mouser.com/ProductDetail/Microchip-Technology-Atmel/ATMEGA32U4-AU?qs=SSucg2PyLi7mKWjHIsNJ3w%3D%3D>

* Package type: TQFP -44
* Dimensions: 10mm x 10mm
* Datasheet

<https://www.mouser.com/datasheet/2/268/Atmel-7766-8-bit-AVR-ATmega16U4-32U4_Datasheet-1315135.pdf>

ATmega32U4-MU \*\*\*\*\*\*NOT IN OUR INVENTORY

* Product page

<https://www.mouser.com/ProductDetail/Microchip-Technology-Atmel/ATMEGA32U4-MU/?qs=JV7lzlMm3yJYRpi0cY3cKw%3D%3D&gclid=CjwKCAiAp4KCBhB6EiwAxRxbpDkEs26KqmpDthyDTNjmJf7Vpq02YR4XS3d45gWBFAJDFEnCvk-i9xoCMnUQAvD_BwE>

* Package type: QFN -44
* Dimensions: 7.0mm x 7.0mm
* Datasheet

<https://www.mouser.com/datasheet/2/268/Atmel-7766-8-bit-AVR-ATmega16U4-32U4_Datasheet-1315135.pdf>

* **This is the one the PCB is designed around**

**­­­­IDE**

MPLAB x IDE v5.45

* <https://www.microchip.com/en-us/development-tools-tools-and-software/mplab-x-ide>

XC8 Compiler

* <https://www.microchip.com/en-us/development-tools-tools-and-software/mplab-xc-compilers>

CONCERNS

* If PCB is deigned with 7x7 mm MCU in mind (32U4-MU), will the 5x5 mm 8U2-MUR or the 32U4-AU fit in the socket?
* Are all three capable of interfacing with MPLAB x IDE? **Yes**
* Does MCU require bootloader to run applications?