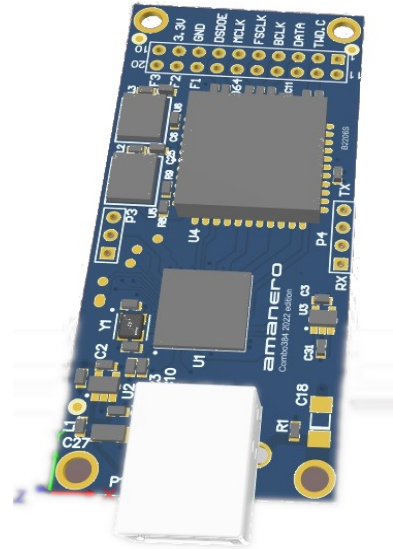


## FEATURES

- **Core**  
**ARM® Cortex®-M3 ATSAM3U - BGA**  
**CPLD XILINX® XC2C64A – PLCC - QFN**
- **OSCILLATORS**  
**24.5760 Mhz Low phase noise**  
**22.5792 Mhz Low phase noise**
- **USB**  
**USB 2.0 High Speed dedicated 12Mhz crystal**  
**Class 2 compatible**  
**No drivers for Mac OSX® 10.6+**  
**No drivers for Linux with UAC2 Kernel compliant**  
**WDM Kernel Streaming/WasaPI/DS MS**  
**Windows® 7 – 10 - 11 32bit/64Bit**
- **AUDIO**  
  
**PCM over USB sample rates 44.1Khz 48Khz, 88,2Khz,96Khz,192Khz**  
**352.8Khz, 384Khz I2S output**  
  
**DSD over USB freq. 2.822 Mhz, 3.072 Mhz, 5.644 Mhz, 6.144 Mhz. PCM token FA05**
- **OUTPUT**  
**LVC MOS33**
- **Powered by USB 5V bus. Power Consumption is 605 mW at max speed.**  
**The module mounts an ultra low noise LDO ADP-15x-3.3V**
- **ROHS and CE certified**



## DESCRIPTION

The 2022 edition boards feature the same chips as the previous editions, except that due to the shortage of semiconductors in the market, in 2022 it was possible to source the same chips with a different footprint such as BGA instead of LQFN or PLCC instead of QFN. However, these are still the same Atmel (Microchip) and Xilinx chips, so the signals on the input and output connectors are the same as the previous editions.

For any reference to the pinout of connectors or dimensions of the board, please refer to the datasheets linked below.

<https://www.amanero.com/drivers/combo384-D.pdf> without S/PDIF

<https://www.amanero.com/drivers/combo384SE.pdf> with S/PDIF IN/OUT

## SCHEMATICS

The ATSAM3U in BGA footprint 144 schematic is at this link

<https://www.amanero.com/drivers/USB2022.pdf>

The CPLD PLCC 44 schematic is at this link

[http://www.amanero.com/drivers/CPLD\\_PLCC44.pdf](http://www.amanero.com/drivers/CPLD_PLCC44.pdf)

## STEP file

It is possible to download the STEP file for the Combo384. The dimensions and positioning of the connectors are valid for all editions.

<https://www.amanero.com/mechanics/>

## DRIVERS

The Windows drivers are compatible with all editions and can be downloaded from the following link.

<https://www.amanero.com/drivers.htm>



ASIO is a registered trademark of Steinberg Media Technologies GmbH

<https://www.amanero.com/asio/setup110.exe> this version makes buffers 64bytes aligned

## Notice

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