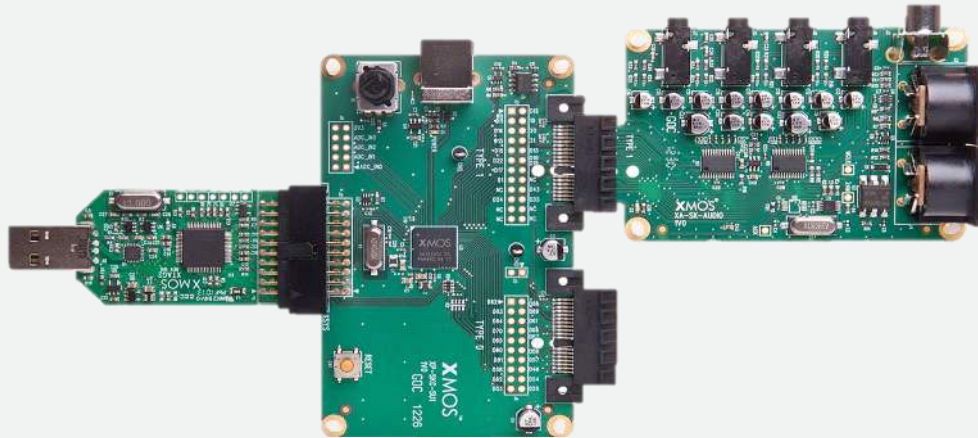




## USB DJ AUDIO PLATFORM

Quad-channel USB Audio Class 2 development platform for PC, Mac, Android



### FEATURES

- **USB Audio development hardware and reference software platform**
  - Quad analog input and output
  - S/PDIF output
  - MIDI input and output
- **USB compliant device**
  - High-Speed USB device  
Optional Full-Speed fall-back
  - USB Audio Class 2.0 device  
Optional Audio Class 1.0 fall-back
  - Self- or bus-powered
- **Bit perfect USB audio transfer**
  - Asynchronous Isochronous from host
  - Adaptive Isochronous to host
  - PCM  $\leq 192\text{kHz}$  at 16, 24 or 32bits
  - Local crystal low-jitter audio clocking
- **Multiple OS support**
  - Windows
  - Mac OS X
  - Android
- **Royalty free software stack**
  - Provided as source code

The USB DJ Audio Platform is a complete development hardware and reference software platform targeted at quad-channel USB audio applications, such as DJ decks and mixers.

The DJ Audio hardware is based around the XS1-U6 multicore microcontroller; an XMOS xCORE-USB™ device with an integrated High Speed USB 2.0 PHY and 6 logical cores delivering 500MIPS of deterministic and responsive processing power.

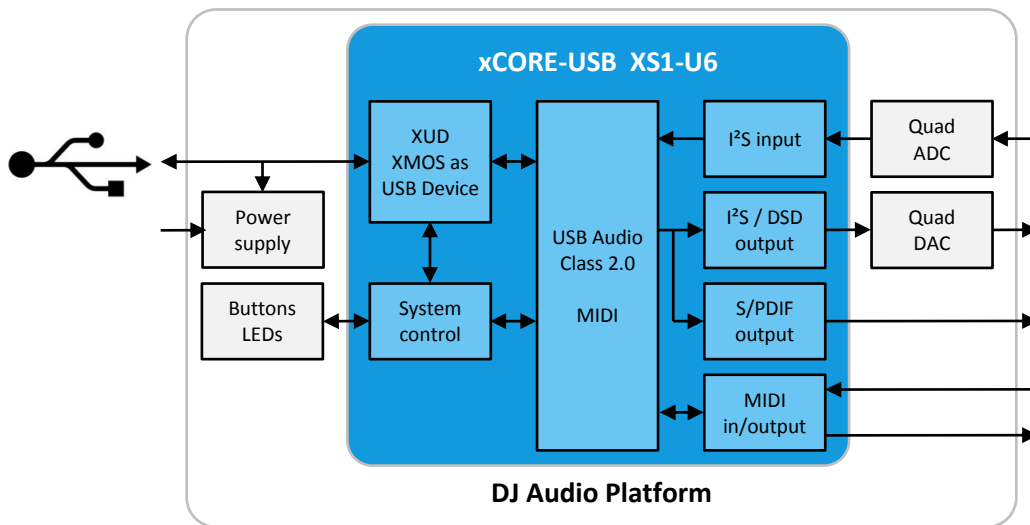
Exploiting the flexible programmability of the xCORE™ architecture, the DJ Audio platform supports USB streaming of 4 input and 4 output audio channels simultaneously - at up to 192kHz. Ideal for mixing two sources and providing main and headphone monitor output feeds.








The guaranteed Hardware-Response™ times of xCORE technology always ensure low latency (round trip as low as 3ms), bit perfect audio streaming to and from the USB host.

Delivered as source code, the reference software provides a fully featured production ready solution, including support for: Full- and High-Speed USB operation, USB Audio Class 2.0 & 1.0, MIDI, HID and DFU classes.

The XMOS xTIMEcomposer™ Studio development suite and tools then allow for quick and easy software development and customization to add customer specific, product differentiating features.

## USB DJ AUDIO PLATFORM BLOCK DIAGRAM



|   | Feature  | Benefit  |
|---|--|--|
|    | High-speed USB 2.0 device  | Plug-and-play operation<br>Bus- or self-powered  |
|   | USB Audio Class 2.0 compliant  | Driverless operation with Mac OS X <sup>1</sup> and Android <sup>2</sup><br>Multiple driver vendors for Windows <sup>3</sup> |
|  | Quad-channel streaming to & from host at up to 192kHz PCM            | Simultaneous dual stereo record and playback<br>High resolution audio  |
|  | Local clocking<br>Asynchronous USB audio transfer                    | Low jitter, high quality audio capture and playback  |
|  | Powered by xCORE-USB multicore microcontroller                       | Flexible, deterministic and responsive processing power<br>Low audio USB round trip latency (<3ms achievable)                |
|  | Flexible hardware & software platform                                | Predefined feature set reference software<br>Easily customisable to meet specific product requirements                       |
|  | Source code reference software<br>Integrated development tools suite | Rapid development and code reuse<br>Royalty-free deployment<br>Fast time to market   |

1: Mac OS X v10.6.4 and later provides native USB Audio Class 2.0 support.

2: Requires that Android device is USB host with USB Audio Class support. Tested against: Samsung Galaxy S3, S4, Note, Sony Xperia Z1, HTC One.

3: USB Audio Class 2.0 support under Windows requires a 3<sup>rd</sup> party driver.

## ORDERING INFORMATION

For a list of XMOS distributors, please visit [www.xmos.com/support/distributors](http://www.xmos.com/support/distributors).

| Part number         | Contents   |
|---------------------|--|
| XR-USB-AUDIO-2.0-4C | U6 core board: XP-SKC-SU1<br>Audio slice: XA-SK-AUDIO<br>xTAG debugger: XA-XTAG2<br>12V PSU, USB cable |