

XCORE-200 MULTICHANNEL AUDIO PLATFORM

The xcore-200 multichannel audio platform provides a scalable and flexible hardware and software solution for a wide range of consumer and professional audio products.

The multichannel audio platform is based on an xcore-200 multicore controller; the XE216-512-TQ128 includes a high speed USB 2.0 PHY, RGMII interface, high speed flexible GPIO and 16 logical cores that deliver up to 2000 MIPS of deterministic processing power.

The guaranteed Hardware-Response™ time of xcore technology always ensures lowest latency bit perfect audio streaming to and from the USB host or Ethernet network.

The XMOS xTIMEcomposer™ development tools enable quick customisation for product differentiating features.



FEATURE HIGHLIGHTS

USB COMPLIANT

Full-speed USB embedded host for plug-and-play operation, High-speed USB 2.0 compliant device with low loopback latency.

BIT-PERFECT AUDIO TRANSFER

USB Audio Class 2.0 compliant with AVB standard compliant endpoint. High resolution stereo audio playback delivered through PCM up to 384kHz, 32 bits, DSD and DoP up to 128 (see specifics below). AVnu plugfest delivers proven interoperability with other vendors. Local clocking, asynchronous USB audio transfer and PLL network clock recovery ensure low jitter, high quality audio capture and playback.

FLEXIBLE I/O

Simultaneous quad stereo record and playback through 8-channel streaming to and from host. Flexible, deterministic and responsive processing power, easily customisable to meet specific product requirements.

RAPID DEVELOPMENT

Source code reference software and integrated suite of development tools mean royalty-free deployment and a fast time to market.

MULTIPLE OS SUPPORT

Support for Windows, Mac OSX, Android and Apple iOS.

XK-AUDIO-216-MC-ABL

Supports Apple iOS, Mac OSX, Android and Windows

Self-powered

PCM <384kHz at 16, 24 or 32 bits

10/100/1000 Mbit Ethernet connectivity

XK-AUDIO-216-MC-AB

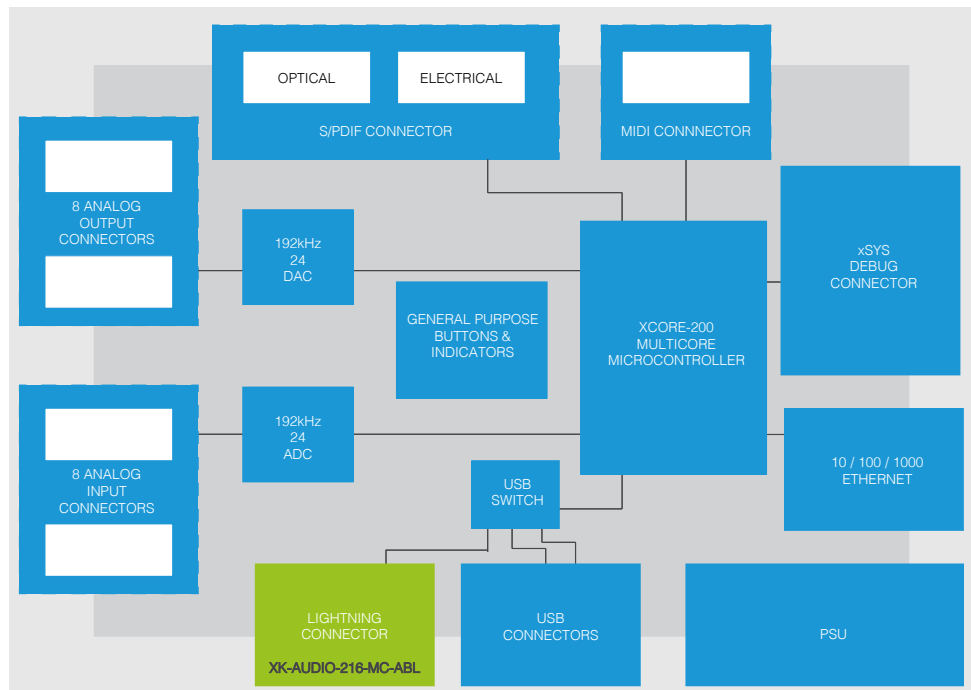
Supports Mac OSX, Android and Windows

Bus-powered

PCM <192kHz at 16, 24 or 32 bits

Gigabit Ethernet connectivity

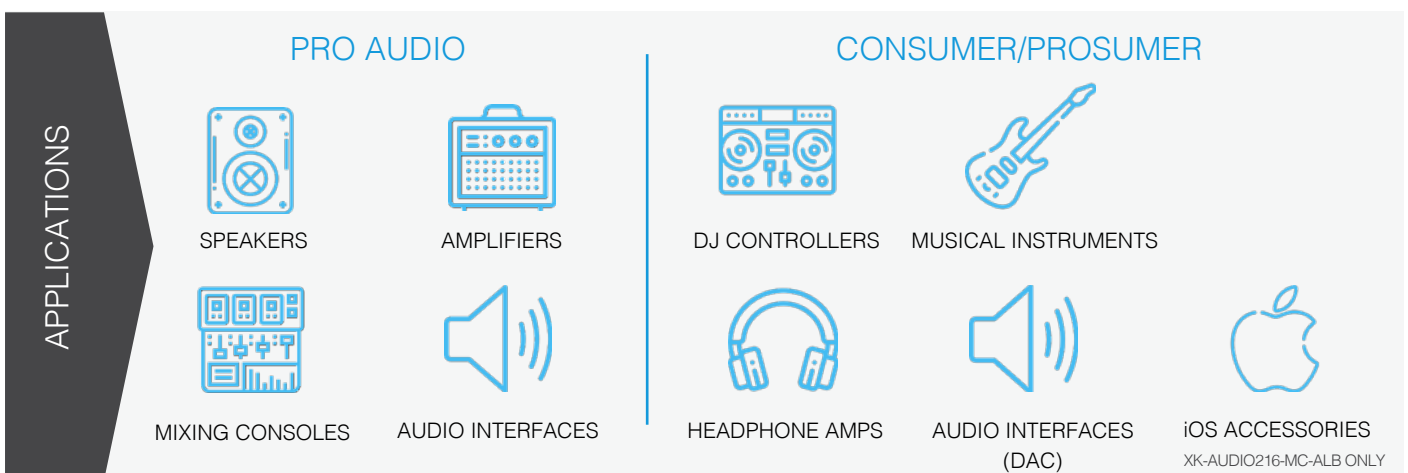
BLOCK DIAGRAM



EXPLORER KIT

Delivered as royalty-free 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 & DFU classes and fully compliant Ethernet AVB products.

XK-AUDIO-216-MC-ALB also includes Apple Device Mode with Role Switch to Host Mode operation and Apple Host Mode directly.



SILICON

XE216-512-TQ128

DEV KIT FOR SOLUTIONS INCLUDING APPLE

XK-AUDIO-216-MC-ALB

DEV KIT FOR OTHER SOLUTIONS

XK-AUDIO-216-MC-AB



For further information, please visit xmos.ai/usb-multichannel-audio/

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