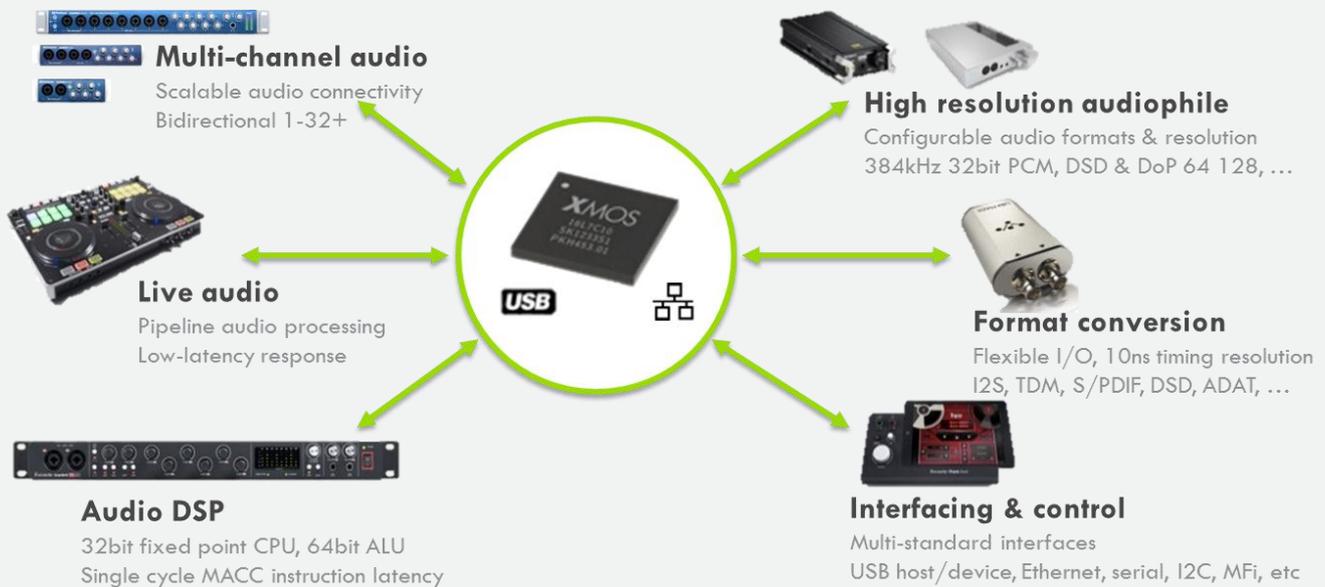


MULTI-CHANNEL AUDIO CONNECTIVITY



Powerful programmable silicon

- xCORE™ multicore microcontrollers
- 4-16 logical cores, 400-1000MIPS
- 32bit fixed point data path
single cycle 64bit MACC
- Flexible Hardware Response™ I/O
10ns response time
- Optional integrated USB 2.0 PHY

Scalable software components

- Scalable channel count: 1-32+
- Scalable audio resolutions and formats
PCM 384kHz, DSD128, DoP
- Flexible audio interfacing
I2C, TDM, S/PDIF, DSD, ADAT
- Royalty free software
provided as C/C++ source code
- xTIMEcomposer™ development tools

Complete audio reference applications

- USB Audio Class 2.0
- Ethernet AVB Audio

Programmable flexibility and low-latency deterministic performance make XMOS xCORE multicore microcontrollers ideally suited for multi-channel audio connectivity applications.

On-chip Hardware Response ports allow complex timing-critical interfaces to be defined in software, and powerful multicore processing always ensures bit perfect transfer of audio data from one interface to another.

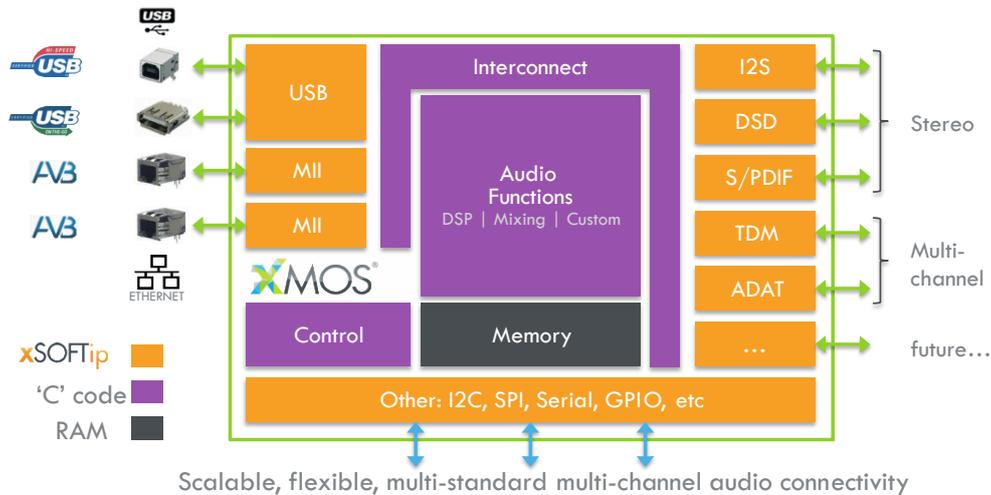
Software libraries of standard audio interfaces together with USB and networking audio software components, all using common APIs, let you create applications that deliver the audio connectivity you require.

Need to add some DSP? The 32bit data path with full 64bit multiply-accumulate precision and single cycle instruction execution, together with a sample-by-sample pipeline approach to data processing, enables predictable low-latency audio DSP – ideal for live applications.

The xTIMEcomposer Studio development tools make software development fast and easy, allowing you to quickly build applications from reference libraries as well as develop additional application specific features.

All of the above is complemented by a family of hardware and software audio connectivity development platforms; providing complete reference implementations of USB Audio Class 2.0 and Ethernet AVB Audio.

SCALABLE, FLEXIBLE, MULTI-STANDARD, MULTI-CHANNEL AUDIO CONNECTIVITY



USB AUDIO DEVELOPMENT KITS

Multi-Function Audio XK-USB-AUDIO-U8-2C-AB XS1-U6 multicore microcontroller	<ul style="list-style-type: none"> • Stereo analog in & out • S/PDIF out • MIDI in & out • PCM ≤384kHz at 16, 24, 32bits • Native DSD64 and DSD128 • DoP64 and DoP128 	<ul style="list-style-type: none"> • Complete USB audio hardware and software development platforms • 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 • Local crystal low jitter audio clocking • Multiple OS support: <ul style="list-style-type: none"> • Windows, Mac, Apple, Android
USB Audio 2.0 DJ Kit XR-USB-AUDIO-2.0-4C XS1-U6 multicore microcontroller	<ul style="list-style-type: none"> • 4channel analog in & out • S/PDIF out • PCM ≤192kHz at 16, 24, 32bits 	
U16 Multi-Channel Audio XK-USB-AUDIO-U16-MC XS1-U16 multicore microcontroller	<ul style="list-style-type: none"> • 8channel analog in & out • S/PDIF or ADAT in & out • MIDI in & out • 18in/8out digital audio mixer • PCM ≤192kHz at 16, 24, 32bits 	

ETHERNET AUDIO DEVELOPMENT KITS

AVB Audio Endpoint XK-AVB-LC-SYS XS1-L16 multicore microcontroller	<ul style="list-style-type: none"> • Star network topologies <ul style="list-style-type: none"> • 100Mbit/s Ethernet port • Simultaneous talker & listener <ul style="list-style-type: none"> • 8 channels in & out at 48kHz, 24bits • 4 channels in & out at 96kHz, 24bits 	<ul style="list-style-type: none"> • AVB standards compliant <ul style="list-style-type: none"> • Time synchronization: 802.1AS • Traffic shaping: 802.1Qav • Bandwidth reservation: 802.1Qat • Media transport: IEEE 1722 • Discovery and management: 1722.1 • Bit perfect AVB audio transfer • PLL recovery of AVB media clock
AVB Daisy-Chain Kit XK-SK-AVB-DC XS1-L16 multicore microcontroller	<ul style="list-style-type: none"> • Star or daisy-chain network topologies <ul style="list-style-type: none"> • Dual 100Mbit Ethernet ports • Simultaneous talker & listener <ul style="list-style-type: none"> • 4 channels in & out at 48kHz, 24bits • 2 channels in & out at 96kHz, 24bits 	

MULTI-CHANNEL AUDIO CONNECTIVITY SOFTWARE & xSOFTip LIBRARIES

USB host/slave, Ethernet MAC, USB Audio Class 2.0, AVB; I2S, TDM, S/PDIF, ADAT; DSP; I2C, SPI, serial & other GPIO. Libraries can be inspected and added to projects using the xSOFTip Explorer view in xTIMEcomposer Studio.

xTIMEcomposer DEVELOPMENT TOOLS

The xTIMEcomposer tools suite includes all the tools you need to develop applications for xCORE multicore microcontrollers including debugger, multicore simulation, timing closure source code instrumentation and integrated help. The tools can be downloaded free of charge from <http://www.xmos.com/support/tools>.

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This is a preliminary product brief, contents are subject to change.

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