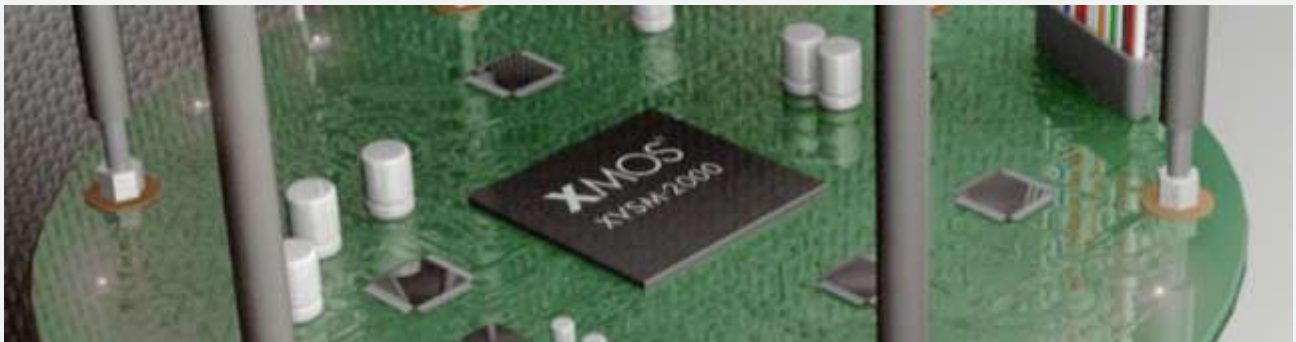




xCORE-VOICE USB Smart Microphone

HIGH PERFORMANCE DIRECTIONAL MICROPHONE



USB SMART MICROPHONE FEATURES

- **xCORE-VOICE XVSM-2000 processor**
 - Programmable multicore microcontroller with microphone and voice DSP
 - Beamformer with configurable beam width and non-stationary noise suppression (up to 20dB attenuation)
 - Perceptual Acoustic Echo Cancellation (up to 80dB att., mono, half-duplex)
 - Noise suppression (up to 20dB att.)
 - De-reverb (up to 20dB att.)
- **Backhaul**
 - High speed USB2.0 compliant device
 - Multichannel USB Audio Class 2.0
 - Optional TDM (time division multiplexed) interface
- **Voice capture**
 - Up to 16 element PDM microphone array
- **Audio output options**
 - I2S mono/stereo output
 - DSP options: compressor, limiter
- **System control options**
 - Industry's most flexible GPIO
 - Extensive general purpose libraries

xCORE-VOICE Interface processors provide the ideal platform for voice capture, high directivity microphone and speakerphone applications.

The xCORE-VOICE USB Smart Microphone (XVSM-2000) combines microphone array aggregation with advanced acoustic DSP technology and xCORE's industry leading control and communications flexibility.

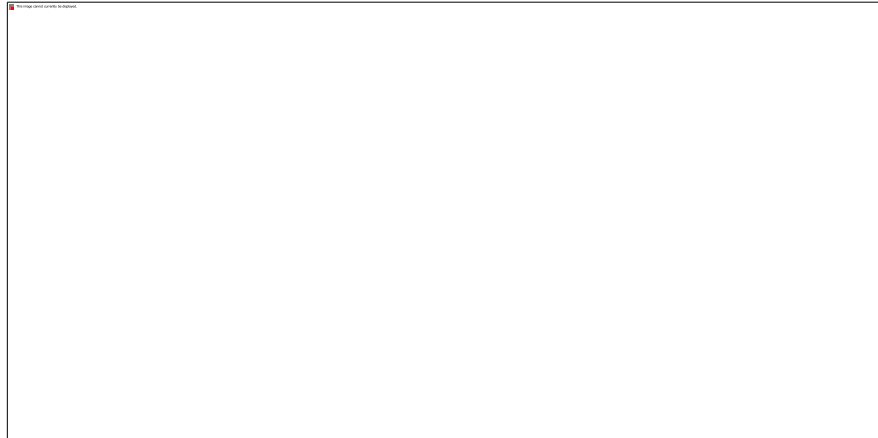
XVSM-2000 can be used stand-alone as a USB audio conference solution, or alongside an Applications Processor to provide high-integrity voice capture for a range of applications.

Offering advanced DSP capabilities including beamforming, echo cancellation and de-reverb ensure that voice sources are delivered with the highest possible quality, guaranteeing the best user-experience. Audio output processing enables two-way communication, either with conference participants, or speech recognition systems.

Getting started with xCORE-VOICE couldn't be easier thanks the xTIMEcomposer™ development tools which provide a feature-rich software development environment with quick and easy customization for customer specific, product differentiating features.



FUNCTIONAL BLOCK DIAGRAM: xCORE-VOICE USB Smart Microphone



APPLICATIONS

- Voice and audio capture
- High directivity digital microphones
- Conferencing systems
- USB speakerphones

XVSM-2000 EVALUATION BOARD

Features

- xCORE-VOICE XVSM-2000 processor
- 7 PDM MEMS microphones
- Connectivity options
 - USB device (micro-B) or optional TDM interface
- 3.5mm headphone jack
- User interface: 4 buttons, 13 LEDs
- xTAG interface for JTAG debug



DEVELOPING WITH xCORE-VOICE INTERFACE PROCESSORS

The xTIMEcomposer™ tool suite provides everything you need to write, debug and test applications for xCORE-VOICE processors. A rich set of optimisation parameters are available to ensure that the best results are achieved for the individual acoustics of the end product. These parameters include adjustment to: beam focus, noise and reverb attenuation, gain control and compression as well as numerous optimisations for echo cancellation.

For more information and to download xTIMEcomposer go to <http://www.xmos.com/tools>.

ORDERING INFORMATION

For a list of XMOS distributors, please visit www.xmos.com/support/distributors.

Part number	Contents
XK-USB-VSM-2000	xCORE-VOICE smart mic evaluation board, xTAG debugger, USB cable x2