

# MICROPHONE **ARRAY** or **SMART** MICROPHONE

## What is the difference?

A comparison of the features & functions of XMOS Voice products

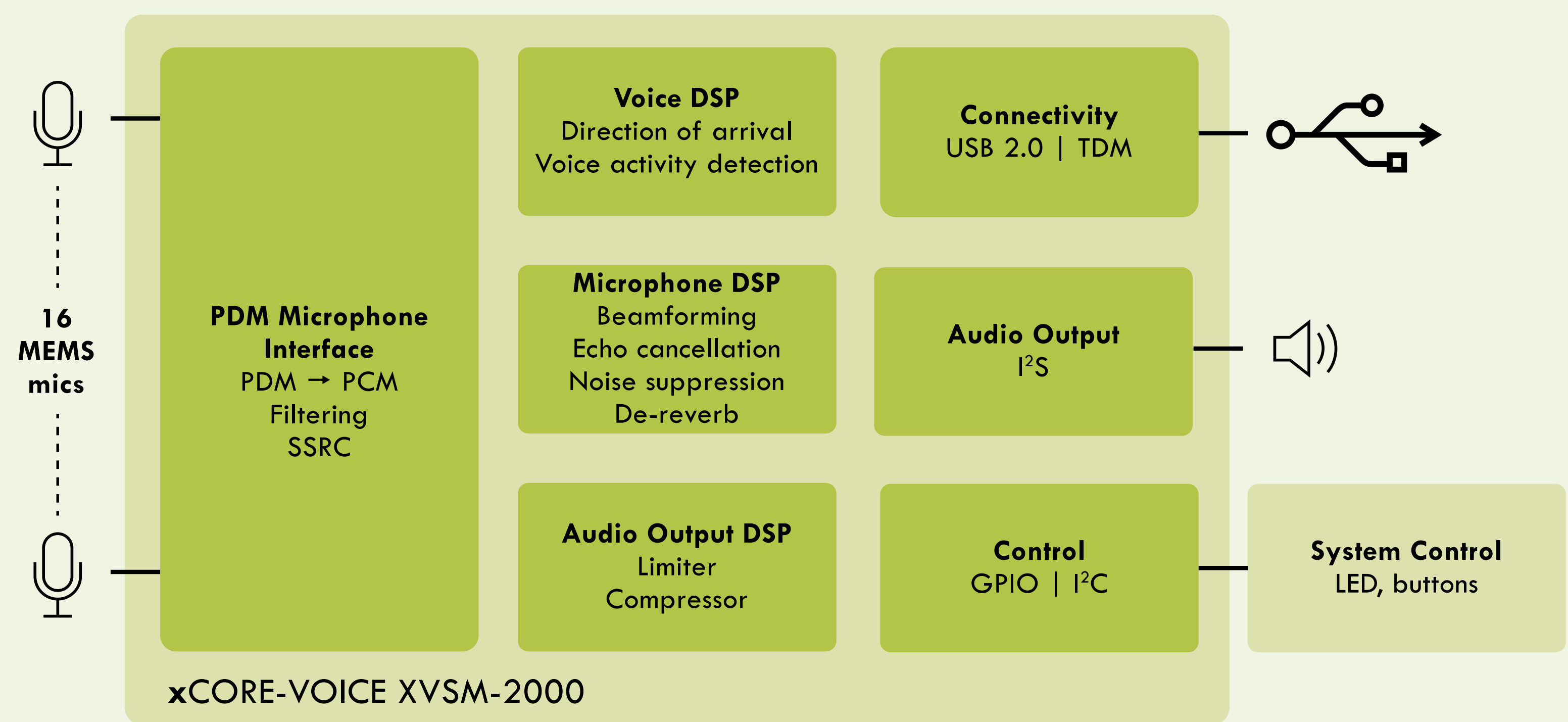
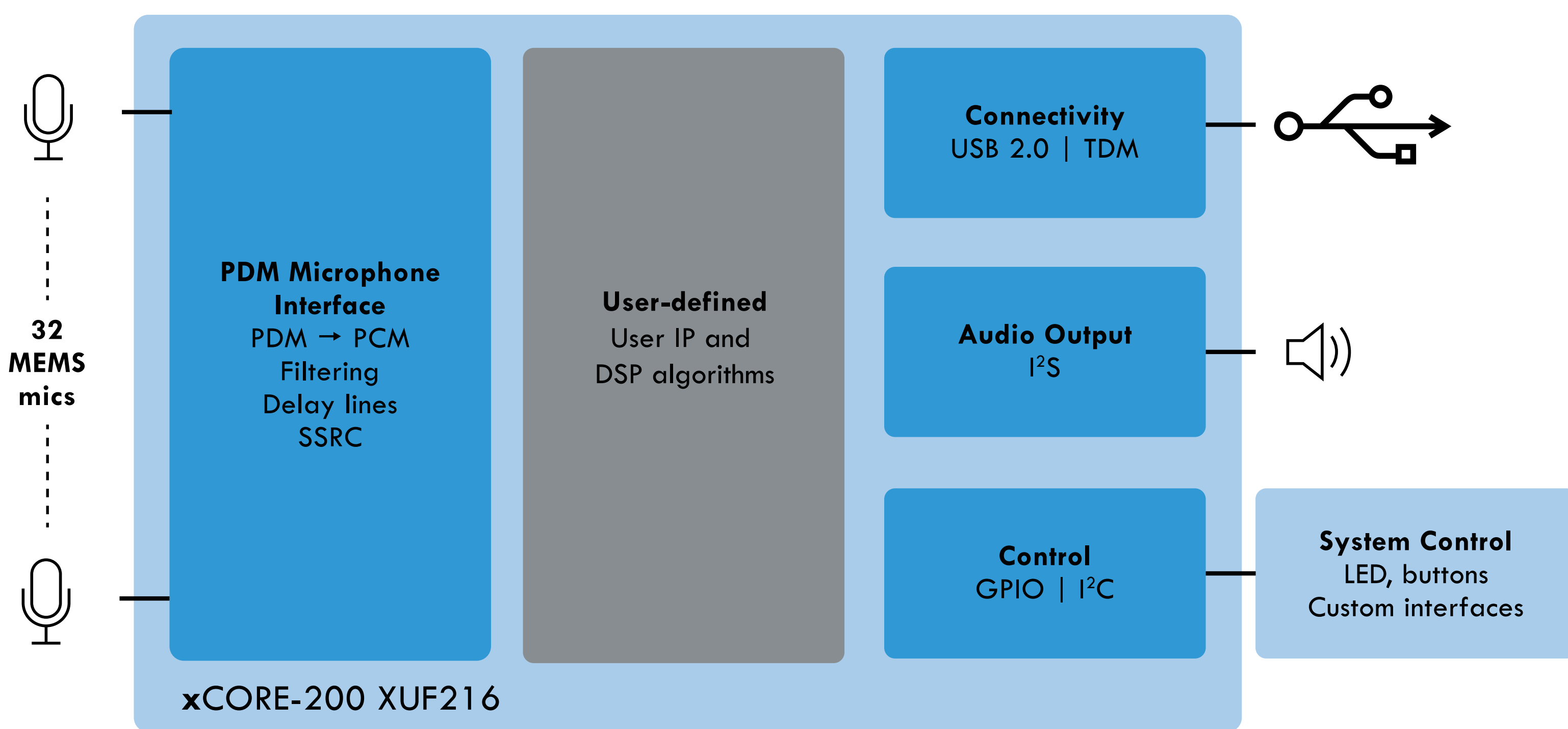
### MICROPHONE ARRAY:

Based on **XUF216**  
Part of the **xCORE-200** family



### SMART MICROPHONE:

Based on **XVSM-2000**  
Part of the **xCORE-VOICE** family



## APPLICATIONS

- ▶▶ Sound analysis
- ▶▶ Actuator control
- ▶▶ USB and wireless speakers
- ▶▶ Smart appliances and TVs
- ▶▶ Digital assistants and personal robots

- ▶▶ Far-field voice capture
- ▶▶ Smart appliances and TVs
- ▶▶ Digital assistants and personal robots

## MICROPHONES

- ▶▶ Up to 32 PDM microphones
- ▶▶ PDM to PCM format conversion with 4ch decimator
- ▶▶ Programmable output sample rate

- ▶▶ Up to 16 PDM microphones
- ▶▶ PDM to PCM format conversion with 4ch decimator
- ▶▶ Output sample rate 16 kHz

## CONNECTIVITY

- ▶▶ USB 2.0 device, GigE

- ▶▶ USB 2.0 device, TDM/I<sup>2</sup>C

## PERIPHERALS

- ▶▶ User defined including I<sup>2</sup>S, I<sup>2</sup>C, SPI, QSPI, SDRAM, UART

- ▶▶ I<sup>2</sup>S, I<sup>2</sup>C

## DSP FUNCTIONALITY

- ▶▶ Fully programmable for custom IP

- ▶▶ Voice: DOA, activity detection
- ▶▶ Microphone: beamformer, NS, de-reverb, AEC, AGC

## AUDIO OUT

- ▶▶ I<sup>2</sup>S stereo

- ▶▶ I<sup>2</sup>S stereo

## I/O

- ▶▶ Flexible IO with HW response ports

- ▶▶ Programmable GPIO

## PROCESSING POWER

- ▶▶ Up to 2000MIPS

- ▶▶ Up to 1800MIPS

## PROGRAMMING TOOLS

- ▶▶ xTIMEcomposer v14 or later

- ▶▶ xTIMEcomposer v14 or later

Learn more at [xmos.com/products/microphones](http://xmos.com/products/microphones)

Learn more at [xmos.com/products/voice](http://xmos.com/products/voice)