DOLPHIN
SEMICONDUCTOR

⑅ BAT
AUDIO IP PLATFORM

What is BAT ?

BAT is an advanced audio IP platform, providing high-fidelity audio IPs for battery powered SoC.

Dolphin Semiconductor portfolio brings unmatched quality, power consumption and innovation. From the industry's best ADC to the exclusive class-D IP, our audio redefines value creation, when developing IPs in-house and drastically reduce time-to-market, costs and risk.

Our solutions promise not just extended battery life but optimization of trending use cases, like ANC, beamforming or voice user interface.

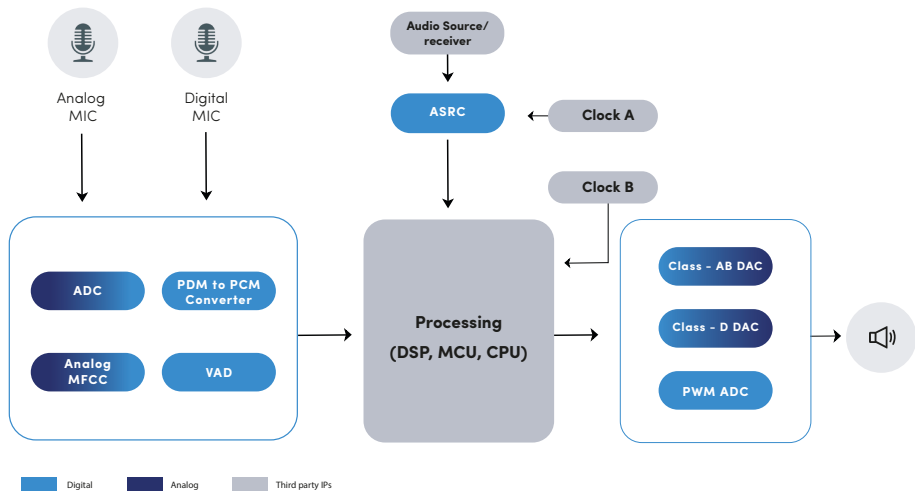## APPLICATIONS

> **Earbuds & Headsets**

> **Smart Speakers**

> **Wearables**

> **AR/VR**

> **IoT devices**

> **Automotive**

> **Audio smart detection**

ONE-STOP SHOP PLATFORM

Analog MIC
Digital MIC
Audio Source/ receiver
ASRC
Clock A
Clock B

ADC
PDM to PCM Converter
Analog MFCC
VAD

Processing (DSP, MCU, CPU)

Class – AB DAC
Class – D DAC
PWM ADC

Digital | Analog | Third party IPs

KEY PERFORMANCES

High SNR: 120 dB DAC; 109 dB ADC

Low latency: down to 1.5 µs

Low noise: down to 1.78 µVrms

Low power: down to 125 µA ADC

Low gate count ASRC and PWM DAC

8 µA Voice Activity Detection

4 µA Analog feature extraction

KEY FEATURES

0° Phase mismatch between channels

Analog & Digital VAD

Digital DAC

PLL–less audio codec

Customizable audio codec

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