



# ES9018K2M

## 32-bit Stereo Mobile Audio DAC

### Product Brief

The **ES9018K2M SABRE<sup>32</sup> Reference DAC** is a high-performance 32-bit, 2-channel audio D/A converter targeted for audiophile-grade portable applications such as mobile phones and digital music players, consumer applications such as Blu-ray players, audio pre-amplifiers and A/V receivers, as well as professional applications such as recording systems, mixer consoles and digital audio workstations.

Using the critically acclaimed ESS patented 32-bit Hyperstream™ DAC architecture and Time Domain Jitter Eliminator, the **ES9018K2M SABRE<sup>32</sup> Reference DAC** delivers a DNR of up to 127dB and THD+N of -120dB, a performance level that will satisfy the most demanding audio enthusiasts.

The **ES9018K2M SABRE<sup>32</sup> Reference DAC**'s 32-bit Hyperstream™ architecture can handle up to 32-bit, 384kHz PCM data via I<sup>2</sup>S, DSD-11.2MHz data as well as mono mode for highest performance applications. Both synchronous and ASRC (asynchronous sample rate conversion) modes are supported.

The **ES9018K2M SABRE<sup>32</sup> Reference DAC** comes in 28-QFN package and consumes less than 40mW in normal operation mode (< 1mW in standby mode).

The **ES9018K2M SABRE<sup>32</sup> Reference DAC** sets the standard for HD audio performance, **SABRE SOUND™**, in an easy-to-use form factor for today's most demanding digital-audio applications.

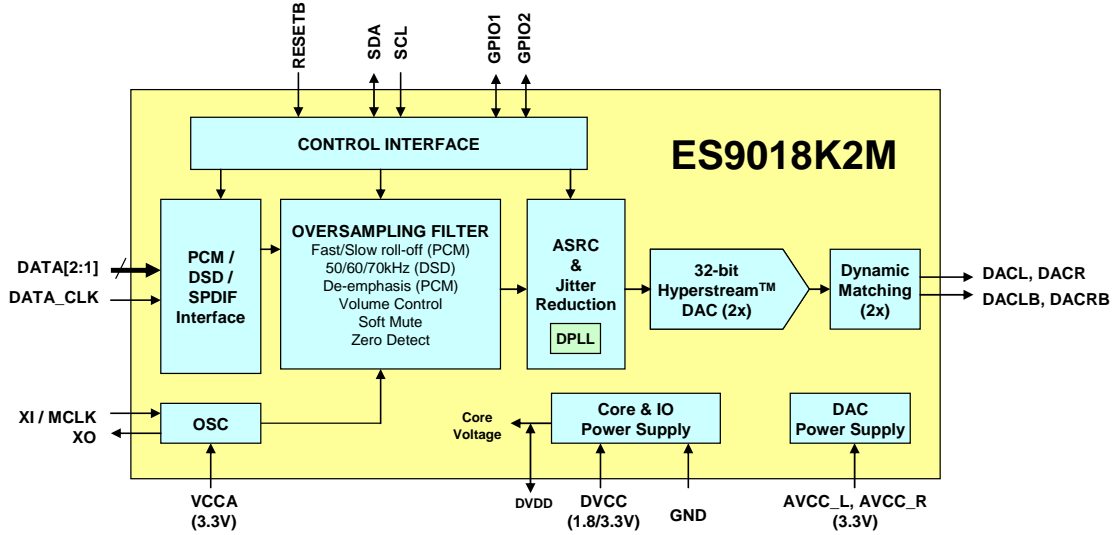
FEATURE	DESCRIPTION
Patented 32-bit Hyperstream™ DAC <ul style="list-style-type: none"> <li>+127dB DNR</li> <li>-120dB THD+N</li> </ul>	<ul style="list-style-type: none"> <li>Industry's highest performance 32-bit mobile audio DAC with unprecedented dynamic range and ultra low distortion</li> <li>Supports both synchronous and ASRC (asynchronous sample rate converter) modes</li> </ul>
Patented Time Domain Jitter Eliminator	<ul style="list-style-type: none"> <li>Unmatched audio clarity free from input clock jitter</li> </ul>
64-bit accumulator and 32-bit processing	<ul style="list-style-type: none"> <li>Distortion free signal processing</li> </ul>
Integrated DSP Functions	<ul style="list-style-type: none"> <li>Click-free soft mute and volume control</li> <li>Programmable Zero detect</li> <li>De-emphasis for 32kHz, 44.1kHz, and 48kHz sampling</li> </ul>
Customizable output configuration	<ul style="list-style-type: none"> <li>Mono or stereo output in current or voltage mode based on performance criterion</li> </ul>
I <sup>2</sup> C control	<ul style="list-style-type: none"> <li>Allows software control of DAC features</li> </ul>
28-QFN (5mm x 5mm) package	<ul style="list-style-type: none"> <li>Minimizes PCB footprint</li> </ul>
< 40mW operational power < 1mW standby power	<ul style="list-style-type: none"> <li>Maximizes battery life</li> </ul>
Versatile digital input	<ul style="list-style-type: none"> <li>Supports SPDIF, PCM (I<sup>2</sup>S, LJ 16-32-bit) or DSD input</li> </ul>
Customizable filter characteristics (revision V only)	<ul style="list-style-type: none"> <li>User programmable filter allowing custom roll-off response</li> <li>Bypassable oversampling filter</li> </ul>

## APPLICATIONS

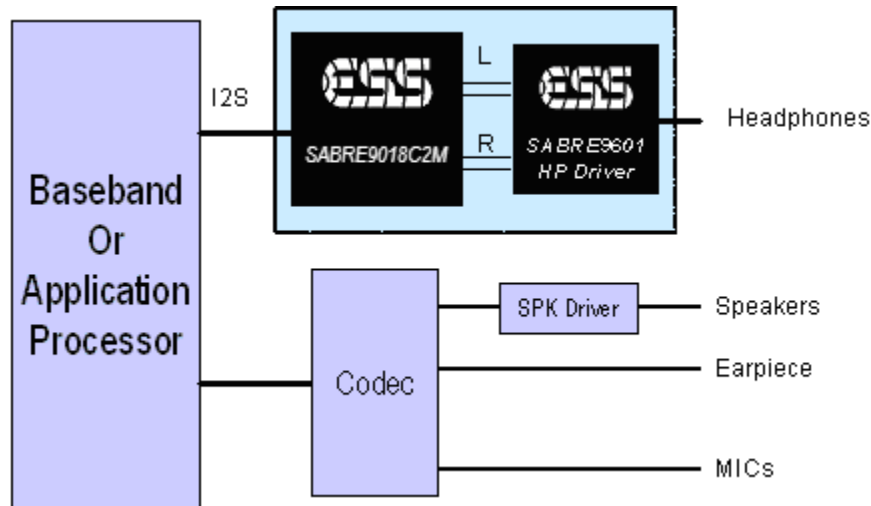
- Mobile phones / Tablets / Digital music players / Portable multimedia players
- Blu-ray / SACD / DVD-Audio player
- Audio preamplifier and A/V receiver
- Professional audio recording systems / Mixing consoles / Digital audio workstation



## FUNCTIONAL BLOCK DIAGRAM



## TYPICAL MOBILE APPLICATION DIAGRAM



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