



# ES9016 Ultra 32-bit 8-Channel Audio DAC Product Brief

### OVERVIEW

The **ES9016 SABRE<sup>32</sup> Ultra DAC** is a high-performance 32-bit, 8-channel audio D/A converter targeted for consumer applications such as Blu-ray player, audio pre-amplifier, A/V receiver and professional applications such as recording systems, mixer consoles and digital audio workstations.

With ESS patented 32-bit Hyperstream<sup>™</sup> DAC architecture and Time Domain Jitter Eliminator, the **ES9016 SABRE<sup>32</sup> Ultra DAC** delivers a DNR of 124dB and THD+N of −110dB, a performance level that will satisfy the most demanding audio enthusiasts.

The *ES9016 SABRE*<sup>32</sup> *Ultra DAC*'s 32-bit Hyperstream<sup>™</sup> architecture can handle up to 32-bit PCM data via I<sup>2</sup>S input, as well as DSD or SPDIF data. The *ES9016 SABRE*<sup>32</sup> *Ultra DAC* supports up to 384kHz PCM data via I<sup>2</sup>S as well as DSD-11.2MHz data and consumes less than 100mW.

The **SABRE<sup>32</sup> Ultra DAC** sets a new standard for high quality audio performance, **SABRE SOUND<sup>™</sup>**, in a cost effective, easy-to-use form factor for today's most demanding digital audio applications.

FEATURE	BENEFIT
DAC Resolution	<ul> <li>o 32-bit Patented Hyperstream<sup>™</sup> DAC</li> </ul>
Input Resolution	o 32-bit
Jitter Elimination	<ul> <li>Patented Time Domain Jitter Eliminator</li> </ul>
64-bit accumulator and 32-bit processing	<ul> <li>Distortion free signal processing</li> </ul>
DNR	o +124dB
THD+N	o −110dB
Input Modes	<ul> <li>SPDIF with 8-input MUX</li> </ul>
	<ul> <li>PCM (l<sup>2</sup>S, MSB/LSB)</li> </ul>
	o DSD
	<ul> <li>External 8x Digital Filter</li> </ul>
Digital Filter	o 32-bit architecture
	<ul> <li>Selectable roll-off frequency</li> </ul>
	<ul> <li>Per-channel user customizable</li> </ul>
DSP Functions	<ul> <li>Click-free soft mute and volume control</li> </ul>
	<ul> <li>Programmable Zero detect</li> </ul>
	<ul> <li>De-emphasis for 32kHz, 44.1kHz, and 48kHz sampling</li> </ul>

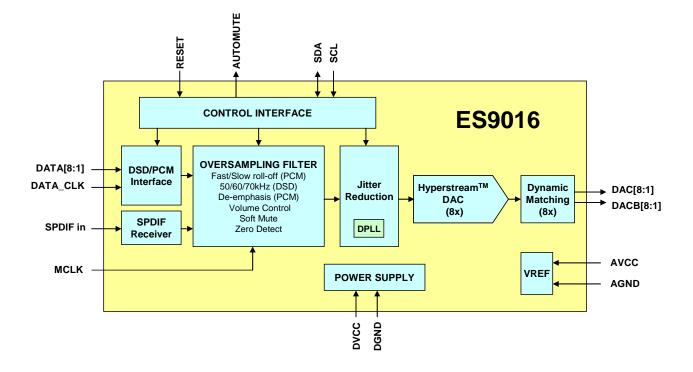
## **APPLICATIONS**

- Blu-ray / SACD / DVD-Audio player
- Audio preamplifier and receiver
- A/V processor
- Professional audio recording systems and mixing consoles
- Digital audio workstation

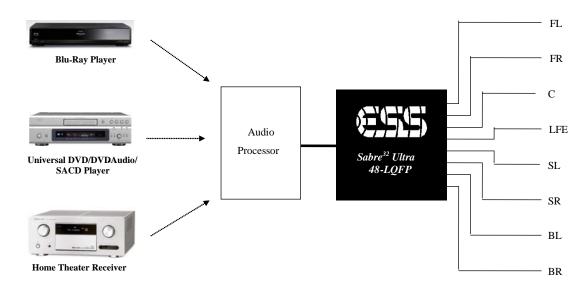


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### FUNCTIONAL BLOCK DIAGRAM



#### **APPLICATION DIAGRAM**



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