



ESS Technology, Inc.

SABRE³² Reference DAC
32-bit Hyperstream™ Audio DAC
Product Brief

OVERVIEW

The **SABRE³² Reference** audio DAC series is the world's highest performance 32-bit audio DAC solution 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.

Part Number	Description	Package	DNR (dB)	THD (dB)	32-bit DAC	I2S/DSD Input	SPDIF Input	Jitter Reduction
ES9018	SABRE³² Reference 8-Channel Audio DAC	64-LQFP	135 (mono) 129 (8ch)	-120	Yes	Yes	Yes	Yes
ES9012	SABRE³² Reference Stereo Audio DAC	64-LQFP	133	-120	Yes	Yes	Yes	Yes

With ESS patented 32-bit Hyperstream™ DAC architecture and Time Domain Jitter Eliminator, the **SABRE³² Reference Stereo DAC** delivers an unprecedented DNR of up to 135dB and THD+N of -120dB, the industry's highest performance level that will satisfy the most demanding audio enthusiasts.

The **SABRE³² Reference** audio DAC's 32-bit Hyperstream™ architecture can handle full 32-bit PCM data via I2S input, as well as DSD or SPDIF data. The **SABRE³² Reference** supports up to 200kHz input sampling rates and consumes less than 100mW.

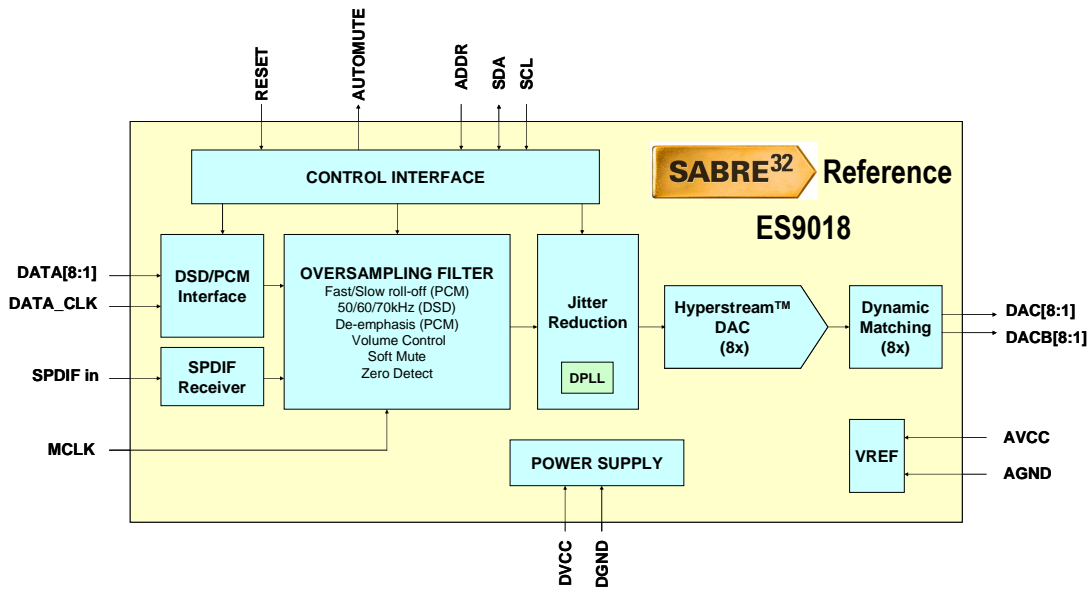
KEY FEATURES

Feature	Benefit
Patented 32-bit Hyperstream™ DAC <ul style="list-style-type: none"> Up to 135dB dynamic range -120dB THD+N 	Industry's highest performance 32-bit audio DAC with unprecedented dynamic range and ultra low distortion
Patented Time Domain Jitter Eliminator	Unmatched audio clarity free from input clock jitter
Universal digital input for up to 200kHz sampling rate	Supports SPDIF, PCM (I2S, MSB/LSB justified 16-32-bit) or DSD input with DVD Audio and SACD compatibility.
Integrated DSP functions	Click-free soft mute and volume control Programmable filter characteristics for PCM/DSD Programmable Zero detect De-emphasis for 32, 44.1 and 48kHz sampling
Customizable output configuration (SABRE³² DAC 8-Channel Reference only)	Mono, stereo, 4 or 8-channel output in current or voltage mode based on performance criterion
Customizable filter characteristics	User programmable filter allowing custom roll-off response
100mW power consumption	Simplifies power supply design

APPLICATIONS

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

FUNCTIONAL BLOCK DIAGRAM



APPLICATION DIAGRAM

