



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

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 players, audio pre-amplifiers, A/V receivers 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) 133 (stereo) 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 1.536MHz¹ input sampling rates and consumes less than 100mW.

FEATURE

BENEFIT

Patented 32-bit Hyperstream™ DAC <ul style="list-style-type: none"> Up to 135dB DNR -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
64-bit accumulator and 32-bit processing	Distortion free signal processing
Universal digital input for up to 1.536MHz ¹ 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	Mono, stereo, 8-channel (ES9018 only) 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

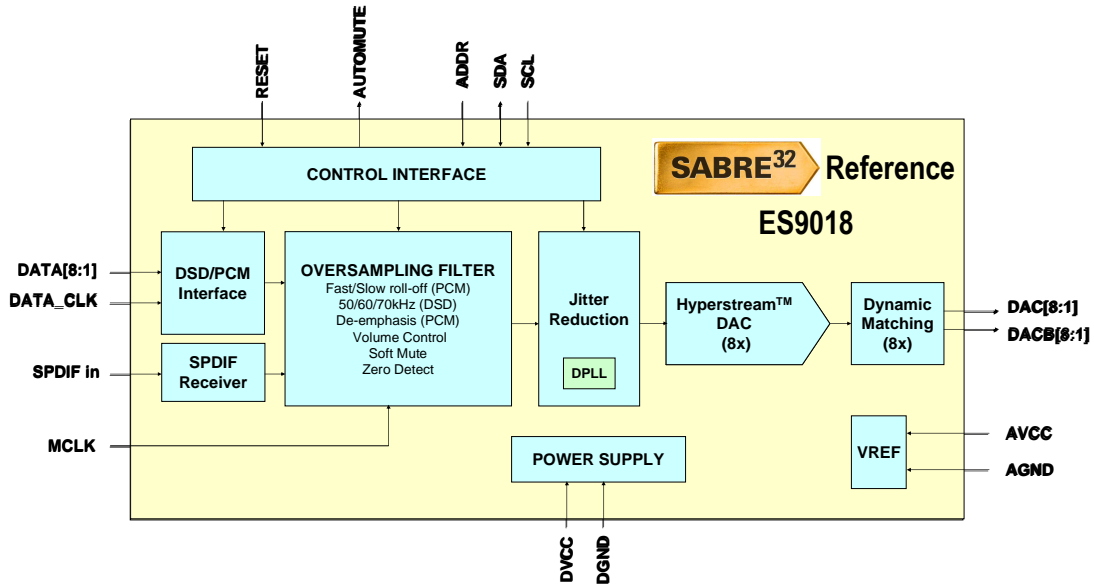
- Blu-ray / SACD / DVD-Audio player
- Audio preamplifier and receiver
- A/V processor
- Professional audio recording systems and mixing consoles
- Digital audio workstation

1. This is for oversample bypass mode only. The maximum sample rate using the internal oversampling filters is 200kHz.

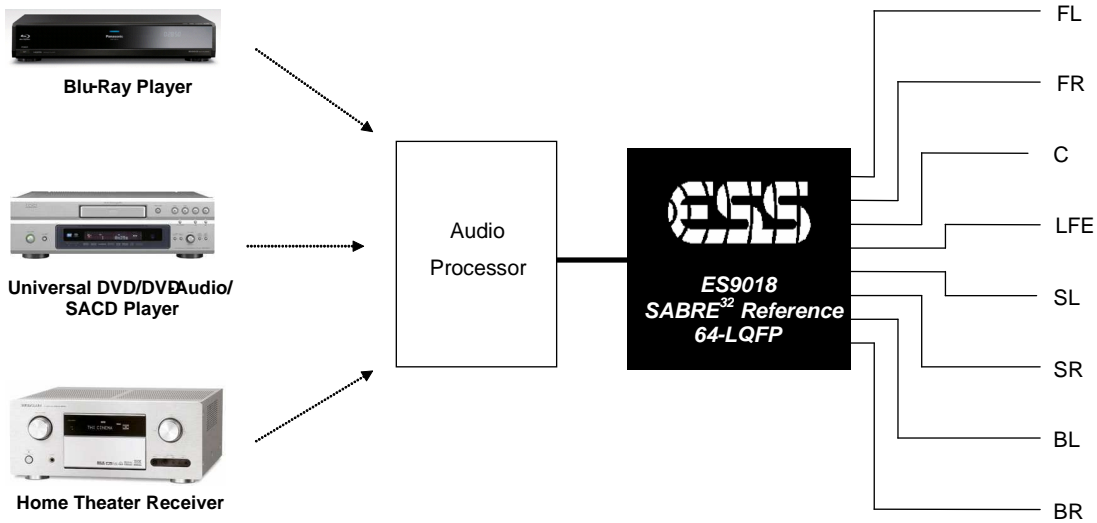


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FUNCTIONAL BLOCK DIAGRAM



APPLICATION DIAGRAM



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