Analog Reinvented

SABRE **Reference / Premier Series**
Highest Performance Audio DAC
Product Brief

The **SABRE** Highest Performance Audio DAC Series is the world's first 8-channel audio DAC solution to bring true professional digital audio to the mass consumer home entertainment market.

Part Number	Description	Package	DNR (dB)	THD (dB)	I2S or SPDIF Input	DSD Input	Jitter Reduction	Power (mW)
ES9008S	*SABRE Reference* Audio DAC	64LQFP	134 (Mono) 128 (8ch)	-118	√	√	√	100 @ 8ch
ES9006S	*SABRE Premier* Audio DAC	48LQFP	120	-102	√	√	√	100 @ 8ch

With patented Hyperstream™ architecture and Time Domain Jitter Eliminator, the **SABRE Reference** Audio DAC outperforms the best audiophile equipment with unprecedented 134dB DNR and -118dB THD+N, delivering true studio quality audio to digital audio applications such as Blu-ray, SACD, DVD-Audio, DVD, CD, home theatre, set top boxes and digital TV.

The **SABRE** Audio DAC sets a new standard for high quality audio performance in a cost effective, compact, easy to use form factor for today's most demanding digital audio applications.

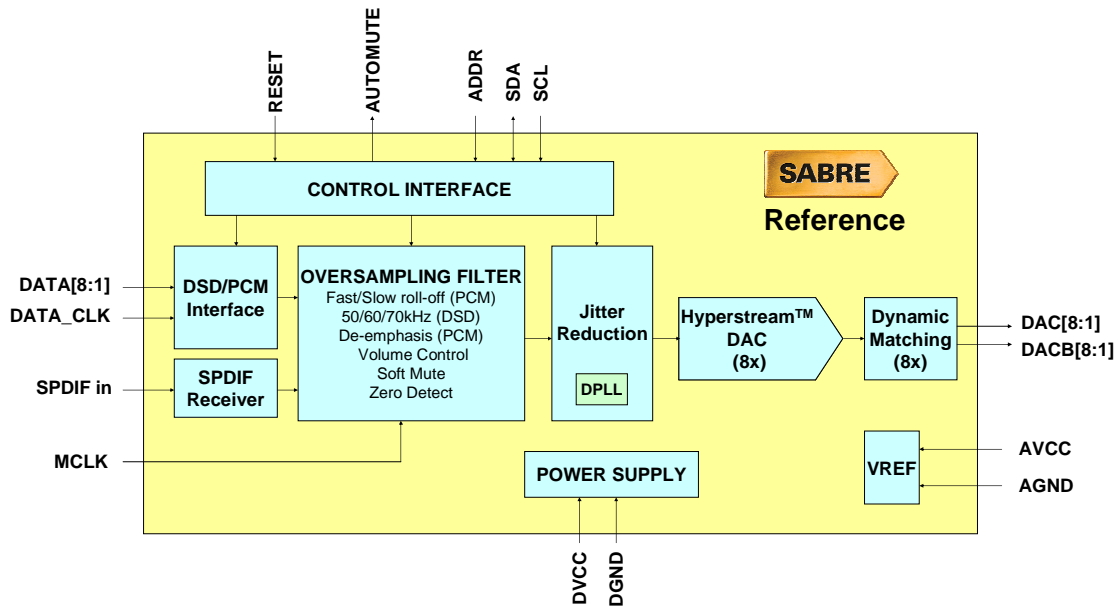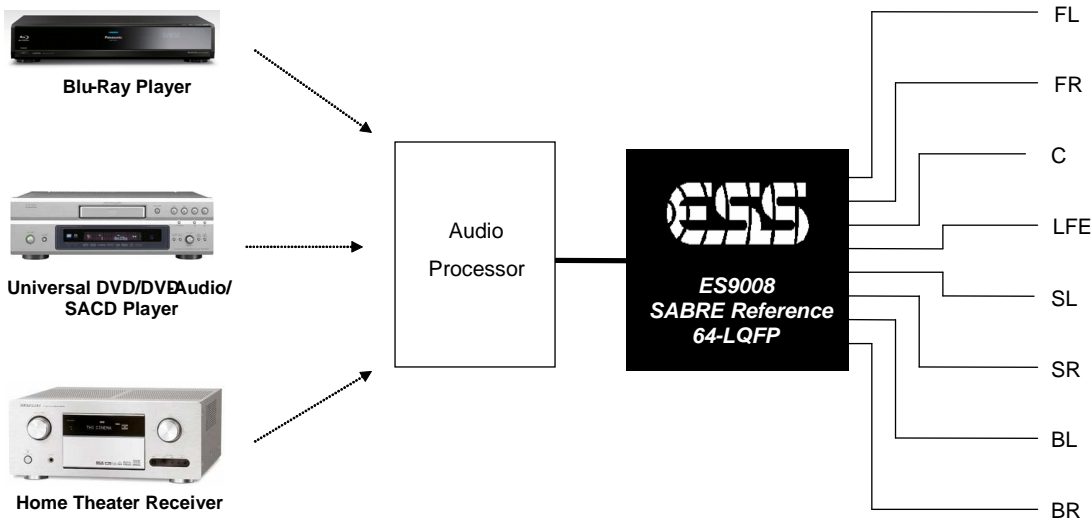| FEATURE	BENEFIT
Patented HyperStream™ Architecture <table><tr><td></td><td>*Reference*</td><td>*Premier*</td></tr><tr><td>DNR (dB)</td><td>Up to 134</td><td>120</td></tr><tr><td>THD+N (dB)</td><td>-118</td><td>-102</td></tr></table>	Unprecedented dynamic range and low distortion allowing true reproduction of audio as it is mastered at recording studio
Patented Time Domain Jitter Reduction	Unmatched audio clarity free from input clock jitter allowing simple system design and layout
48-bit accumulator / 28-bit processing (Reference) 48-bit accumulator / 25-bit processing (Ultra)	Distortion free signal processing
Auto-detect PCM/ DSD converter	Universal (e.g. DVD/SACD) audio playback
8-channel DAC in 64-LQFP or 48LQFP	Reduces PCB footprint and simplifies board layout
Low power (100mW for 8 channels)	Simplifies power supply design
Customizable output configuration	Mono, stereo, 4 or 8-channel output in current or voltage mode based on performance criterion
Universal digital input	All-digital SPDIF (*Reference* only), PCM (I2S, MSB/LSB justified 16, 20 or 24-bit) or DSD input
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

FUNCTIONAL BLOCK DIAGRAM

APPLICATION DIAGRAM