

AD82120/8/9

ESMT

2x25W Stereo / 1x50W Mono Class-D Audio Amplifier With 32 bands EQ and DRC Functions

- ◆ AD82120/8/9 provides advanced audio processing functions, such as volume control, 32 EQ bands, audio mixing, 3D surround sound and Dynamic Range Control (DRC).
- ◆ I2S, Left-alignment, Right-alignment, TDM data format
- ◆ Multiple sampling frequencies (Fs) : 8K, 16K, 48kHz and 96kHz
- ◆ Multiple analog gain selection for different PVDD
- ◆ Configuration: 2.0, 1.1, 1.0
- ◆ Support 1.8V signal input (AD82129)
- ◆ Supply voltage
 - 4.5V~26V for PVDD (AD82128/AD82129)
 - 8~26V for PVDD (AD82120)

AD82120/8/9 Package

E-TSSOP-28

Output	SNR	Vn(24V)	Rdson	EQ	I2C	I2S
25Wx2	107dB	65uV	150mΩ	32 band	4 device	Output

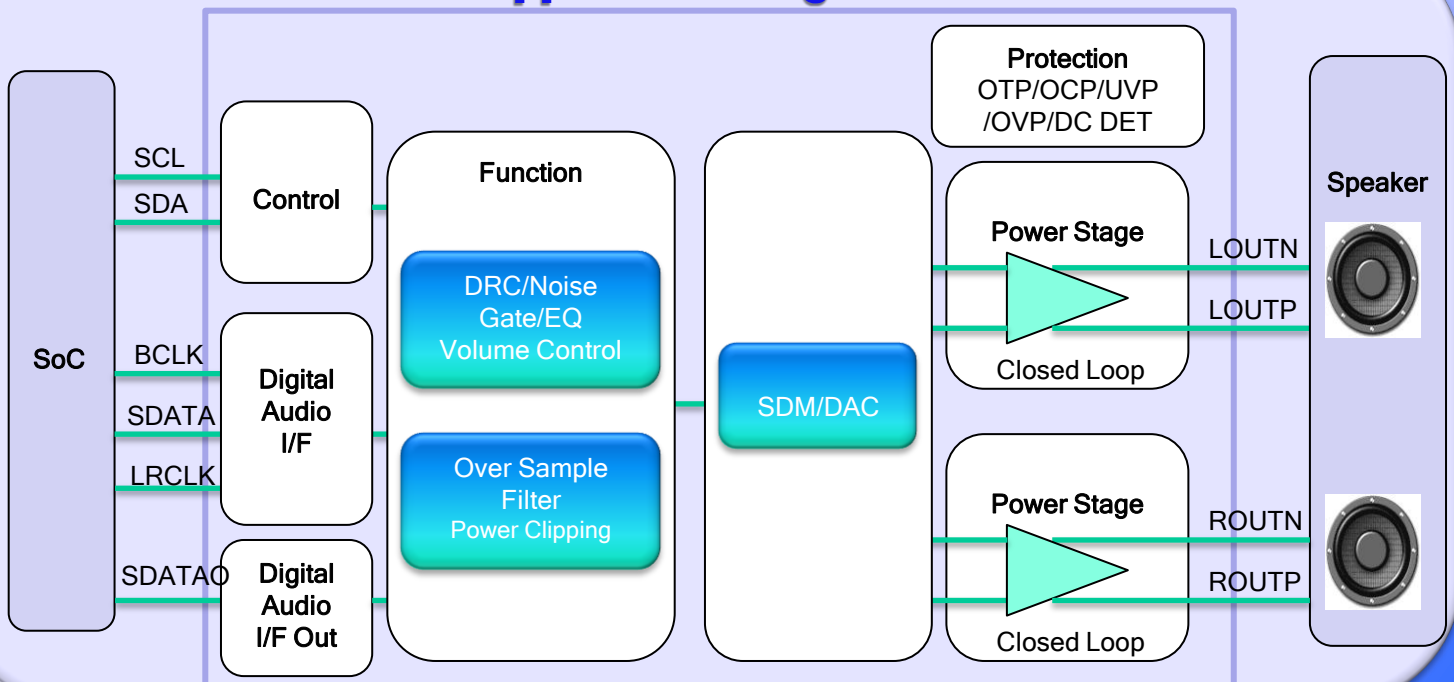
Application

Specifications and Features

- ▣ TV
- ▣ AI/BT Speaker
- ▣ Wireless Speaker
- ▣ Sound Bar

- ▣ Louder Speaker Output Power
 - 25W/CH into 8Ω < 1% THD+N@24V
 - 8W/CH into 4Ω 1% THD+N@12V
- ▣ Multiple Switching Frequencies
 - Adjusted by 300KHz, 600KHz or 800KHz
- ▣ Speaker protection
 - Three Band plus post Dynamic range control
- ▣ Volume control
 - +24dB~-103dB, 0.125dB/step
- ▣ Sound processing
 - 32 bands parametric speaker EQ
 - Dynamic range control
 - Programmed 3D surround sound
- ▣ Protection
 - DC detect for speaker
 - Short Circuit
 - UVP Under-Voltage Detection
 - OVP Over-Voltage Detection
 - Over-Temperature

Application Diagram



Class-D Amplifiers - Selected Products

Product ID	Ch	VDD (V)	Power (W)	Load (ohm)	Package	Features	Status
AD82120-QG28NRT AD82120-QG28NRR	2	8~26	25	8/4	E-TSSOP-28L	I ² S In/I ² C; Vol./Mute 3.3V I/O 32 Bands EQ Power Clipping Three Band DRC With post DRC Noise Gate/3D/TDM Spread Spectrum I ² S Out/MCLK-Less Closed-Loop P2P solution	MP
AD82128-QG28NRT AD82128-QG28NRR	2	4.5~26	25	8/4	E-TSSOP-28L	I ² S In/I ² C; Vol./Mute 3.3V I/O 32 Bands EQ Power Clipping Three Band DRC With post DRC Noise Gate/3D/TDM Spread Spectrum I ² S Out/MCLK-Less Closed-Loop P2P solution	MP
AD82129-QG28NRT AD82129-QG28NRR	2	4.5~26	25	8/4	E-TSSOP-28L	I ² S In/I ² C; Vol./Mute 3.3V/1.8V I/O ; MCLK Out 32 Bands EQ Power Clipping Three Band DRC With post DRC Noise Gate/3D/TDM Spread Spectrum I ² S Out/MCLK-Less Closed-Loop	MP
AD82110-QG28NRT AD82110-QG28NRR	2	4.5~26	25	8/4	E-TSSOP-28L	I ² S In/I ² C; Vol./Mute 32 bits audio data path 3.3V/1.8V I/O Power Clipping/DTC DRC/Noise Gate/TDM Spread Spectrum I ² S Out/MCLK-Less/ Filter-Less Closed-Loop	MP

Ordering Information

Product ID	Package	Packing	Comments
AD82120-QG28NRR	E-TSSOP 28L	2500 Units / Reel 1 Reels / Small Box	Green
AD82128-QG28NRR	E-TSSOP 28L	2500 Units / Reel 1 Reels / Small Box	Green
AD82129-QG28NRR	E-TSSOP 28L	2500 Units / Reel 1 Reels / Small Box	Green