

IDT™ PC AUDIO CODECS

Third-party partners

Dolby Laboratories, Inc.
www.dolby.com

Knowles Acoustics
www.knowlesacoustics.com

Maxx® by Waves Audio, Ltd.
www.maxx.com

Sonic Focus, Inc.
www.sonicfocus.com

SRS Labs, Inc.
www.srslabs.com

Akustica, Inc.
www.akustica.com

Silicon Laboratories, Inc.
www.silabs.com

Glossary

ADC—analog-to-digital converter

DAC—digital-to-analog converter

HD—high definition

SNR—signal-to-noise ratio

VoIP—voice over IP

High Definition Audio is the new standard for high fidelity audio in PCs. IDT High Definition Audio codecs ensure that PCs have the best audio fidelity in the market. Our growing portfolio supports from 2 to 10 channels of audio along with advanced technologies such as integrated digital microphone interface, modem interface, ADAT® optical interface, and more.

High performance to support theater quality audio

- Up to 110 dB SNR DAC performance currently
- Up to 100 dB SNR ADC performance currently
- 24-bit data with up to 192 kHz sampling rate

Technology leadership

- Improved voice input quality for VoIP and speech recognition applications
- First and only HD Audio codec with a cost-effective digital microphone solution, placed in the display bezel for best voice input quality
- Drive cost reduction with integration of modem system interface for AMoM (Audio Modem on Motherboard)
- No compromise in modem or audio quality while reducing costs
- Partnered with Silicon Labs® for lowest system cost and highest reliability

- Advanced interfaces
- ADAT® optical “Lightpipe” interface for up to 8 channels of uncompressed 24-bit data
- I²S interface for supporting > 110 dB external stereo DAC in high-end entertainment PCs
- Smallest packaging
- 5 mm x 5 mm 32 QFN for footprint and height sensitive applications

Superior service, tools, and software

- Our high level of service includes driver configuration, detailed design/schematic reviews, customer friendly extranet etc.
- IDT kernel processing Interface allows compatible plug-ins to operate on all audio streams in the PC
- Audio Effects Designer plug-in incorporates a 20 band equalizer and dynamics processing to tune PCs for optimum sound quality
- Broad third party software solutions for differentiation and upsell opportunities

Product selector guide

	STAC 9200	STAC 9202	STAC 9250	STAC 9251	STAC 9220	STAC 9221	STAC 9223	STAC 9227	STAC 9228	STAC 9229	STAC 9230	STAC 9271	STAC 9272	STAC 9273	STAC 9274
HD Audio Interface	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DAC Channels (Mono)	Two	Two	Two	Two	Eight	Eight	Eight	Eight	Eight	Eight	Eight	Ten	Ten	Ten	Ten
ADC Channels (Mono)	Two	Two	Two	Two	Four	Four	Four	Six	Six	Six	Six	Six	Six	Six	Six
DACs and ADCs	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit	24-bit
5V Analog Options	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4V Analog Options	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹	✓ ¹
3.3V Analog Options	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—	✓	—	—
Up to 96 kHz Sample Rates	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Up to 192 kHz Sample Rate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dolby SW Version	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sound Room, Dolby PC Entertainment Experience Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	✓	✓	—
Home Theater, Dolby PC Entertainment Experience Program	✓ ²	✓ ²	✓ ²	✓ ²	✓	✓	✓	✓	✓	✓	—	✓	✓	✓	—
Master Studio, Dolby PC Entertainment Experience Program	—	—	—	—	—	✓	—	—	—	—	✓	—	—	—	✓
Small Form Factor (32 pin)	✓	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Integrated Headphone Amp	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Universal Jacks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Full Jack Sense	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Internal Jack Sense	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GPIO Jack Sense	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SPDIF Out	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SPDIF In	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
I ² S Out	—	—	—	—	—	✓	—	—	—	—	—	—	—	—	—
ADAT Output	—	—	—	—	—	✓	✓	✓	✓	✓	✓	—	—	✓	✓
Stereo Microphone	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Digital Microphone	—	✓	—	✓	—	—	—	—	✓	✓	✓	—	✓	✓	✓
Integrated Modem Support	—	—	✓	✓	—	—	—	—	—	—	—	—	—	—	—

¹4V Analog operating is supported on some of this family of codecs, requires SW settings

²For Notebook applications, SPDIF out must be implemented. For Desktop applications, Home Theater is not available.

Product numbering

