Audio IP Solutions

Overview

Multimedia market has undergone enormous changes during the past decade. To support the continuous demand for high performance, low power and low cost audio solutions, Archband researches and develops a complete portfolio of innovative audio IPs to meet various applications.

Portfolio

- Stereo CODECs
- Stereo ADCs
- Stereo DACs
- Mono CODECs
- Mono DACs
- Mono ADCs
- Class AB Amp and PWM

Applications

- MP3 Music Player
- Game Station
- Set-top Box
- Car Audio
- GPS
- Mobile Phone
- Multimedia Players

Foundries and Processes

- TSMC 0.18um
- SMIC 0.18um, 0.165um, 0.13um, 0.11um, 90nm
- Fujitsu 90nm
- XFab 0.25um
- Portable to different CMOS foundries and process nodes

Key Features

- Audio A/D, D/A conversion
- Line in, microphone input with microphone boost and bias
- Class AB Amplifiers with headphone, speakerphone drivers
- PWM Controller for pure digital audio
- DAI Interface
- Automatic Gain Control (AGC) for (digital) microphone
- Automatic Sampling Frequency Conversion

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IP CODE	FEATURE	FOUNDRY	NODE
AR34T3B	16~24Bit 90dB Stereo CODEC Line in and line out, Class AB headphone driver Microphone input boost and bias 32Bit headphone volume control Signal mixing, digital loop back I2C, SPI, MCU digital interface, DAI interface	TSMC	0.18um
AR34S1	16~24Bit 93dB Stereo CODEC Line in and line out, Class AB headphone driver Signal mixing and digital loop back I2C digital interface, DAI interface	SMIC	0.18um
AR34S3E	16~24Bit 93dB Mono CODEC Line in and line out, Microphone input boost and bias, Class AB headphone driver, PWM digital audio output, Signal mixing and Digital loop back 5bit(32levels) DAC Volume control, ADC Automatic Gain Control (AGC) I2C, SPI, MCU digital interface, DAI interface On-chip LDO Regulators	SMIC	0.18um

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IP CODE	FEATURE	FOUNDRY	NODE
AR34S4C	16~24Bit 93dB Stereo CODEC Microphone inputs and Bias, Line in and Line out, Class AB headphone & Speaker drivers, Mixing and Loop Back, Automatic Gain Control (AGC) I2C, SPI, MCU digital interface, DAI interface On-chip LDO Regulators	SMIC	0.13um
AR34S5C	AR34S4C Shrink-down Version with Digital Microphone Interface	SMIC	0.11um
AR34S6C	24Bit 95dB Stereo CODEC Line in and Line out, Class AB/Class D drivers Differential Microphone Inputs, Microphone Bias Volume control and Automatic Gain Control (AGC) Signal Mixing and Digital Loop Back I2C, SPI, MCU digital interface, DAI interface On-chip LDO Regulators	SMIC	90nm
AR32X3A	16Bit 85db Mono ADC 2~9 Channels Input channels I2C, SPI, MCU digital interface, DAI interface On-chip LDO Regulators	XFab	0.25um

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IP CODE	FEATURE	FOUNDRY	NODE
AR34F5A	24Bit 85dB Stereo CODEC Line in and Line out, Class AB headphone driver Signal Mixing and Digital Loop Back I2C, SPI, MCU digital interface, DAI interface	Fujitsu	90nm
AR34T3C	24Bit 93dB Mono CODEC Microphone Input and bias Dual-channel Class AB headphone/speaker drivers, 32bit Volume control Signal Mixing and Digital Loop Back I2C, SPI, MCU digital interfaces, DAI interface On-chip LDO Regulators	TSMC	0.18um
AR32T3D	24Bit 90dB Stereo ADC Stereo line in and microphone inputs On-chip Microphone Bias On-chip LDO Regulators I2C, SPI, MCU digital interface, DAI interface	TSMC	0.18um