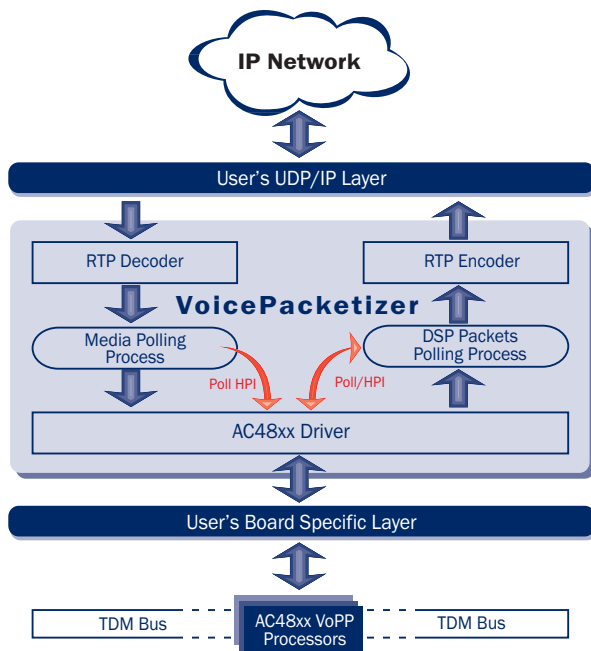


VoicePacketizer™ Voice over IP Streaming Protocol Stack

VoicePacketizer™ 2.xx Schematic Diagram



- Enables fast integration of VoP processors
- Minimizes development risks
- Field-proven in real networks
- Supports all AC48xxx VoP processors
- Provided with demo program for evaluation

AudioCodes' **VoicePacketizer™** is a highly portable ANSI C language software application library implementing RTP/RTCP encapsulation per RFC 3550/3551/2198/2833. It has been tested to be compatible with most of the popular communication processors and embedded operating systems. The VoicePacketizer™ is compliant and easy to integrate with the widely available software stacks (e.g. H.323, SIP). The VoicePacketizer typically runs on the master communication processor of a VoIP gateway, access multiplexer, or other packet network access/switching equipment.

EASY INTEGRATION TO GATEWAY APPLICATION

A VoIP gateway application consists of two main components: a call setup and signaling module and a stream processing module. The two are linked by the application layer. The VoicePacketizer™ provides all stream processing functions while the call setup and signaling modules can be purchased from a third party. The standard RTP/RTCP is extended to support a variety of voice coders: G.711, G.726, G.727, G.723.1, G.729AB, G.729E, GSM FR, GSM-EFR, AMR, QCELP, EVRC and the NetCoder®, as well as G3 fax relay (based on T.38) and DTMF relay (RFC 2833). The VoicePacketizer also provides the API for all DSP functionalities: Download, Initialization and Setup, and run time configuration.

CONVENIENT FUNCTIONS FOR FAST START-UP

Convenient Functions are a small set of functions that provides users with a simplified API. Containing larger building blocks, the API enables quick application construction. Using the Convenient Functions, users do not need to use directly the following functions: Initialization and Setup, AC48xx driver, and most of the Media Streaming. These functions may also serve as a reference code for users wanting to employ the basic VoicePacketizer stack's function set. An application demo program is provided to demonstrate the use of the Convenient Functions.

BENEFIT FROM EXTENSIVE EXPERIENCE

AudioCodes is one of the world's leading providers of VoP DSP solutions since 1996. During this period, the company successfully passed numerous interoperability tests while maintaining high levels of performance. AudioCodes' commitment to innovation yields consistently high-quality voice processing products that are feature-rich and field-proven. AudioCodes has deployed 12 million VoP ports to date.

AudioCodes Technology Products

VoicePacketizer™

SELECTED SPECIFICATIONS

Standard Compliance	RFC 3550 (formerly 1889), 3551 (formerly 1890), 2198, 2833
Compiler Compatibility	ANSI C, compiler independent
OS Compatibility	OS independent
Tested with Control Protocols	H.323, SIP, MEGACO, MGCP
Fax Support	T.38 Fax Relay or PCM bypass
Real-time Processing	Approximately 1 MIP per channel on MPC 860
Code Size	Approx. 4.3 Mbyte
Bus Data Arrangement	Little or big Endian
AC48xxxA-C Addressing	Memory mapped
Voice Coder	Supports basic Low Bit Rate Voice coders as specified in AC48xxx data sheet.
Echo Canceller	G.168-2002 compliant with programmable echo tail as specified for each AC48xxx.
Quality Enhancement	● Voice Activity Detection (VAD) ● Packet Loss Concealment (PLC) ● Comfort Noise Generation (CNG)
Voice/Fax/Data	Automatic detection and switching
Signaling Support	In-band signaling detection & generation Out-of-band signaling Caller ID detection & generation
IPmedia™ Features	● Automatic Gain Control ● Answer, Energy & Pattern detectors ● Three-way Conferencing

Functional Breakdown

AC48xxA-C High Level Driver Module	For initializing, reading, writing and setting channel parameters
Jitter Buffer Module	Dynamic delay of packets, ± 150 msec
RTP/RTCP Module	Enables and breaks down logical channels Encodes and decodes RTP/RTCP packets
Low Level Driver Module	Hardware drivers for interfacing the AC48xxx devices
Related Documentation	VoicePacketizer User's Manual

APPLICATIONS

- Voice over IP (VoIP) Gateways
- VoIP CPE devices
- IP Enabled PBXs
- 2G/3GPP Wireless Media Gateways
- Integrated Access Devices (IADs)

ABOUT AUDIOCODES

AudioCodes Ltd. (NASDAQ: AUDC) enables the new voice infrastructure by providing innovative, reliable and cost-effective Voice over Packet technology and Voice Network products to OEMs, network equipment providers and system integrators. AudioCodes provides its customers and partners with a diverse range of flexible, comprehensive media gateway and media processing technologies, based on VoIPerfect™ – AudioCodes' underlying, best-of-breed, core media gateway architecture. The company is a market leader in voice compression technology and is a key originator of the ITU G.723.1 standard for the emerging Voice over IP market. AudioCodes voice network products feature media gateway and media server platforms for packet-based applications in the converged, wireline, wireless, broadband access, and enhanced voice services markets. AudioCodes enabling technology products include VoIP and CTI communication boards, VoIP media gateway processors and modules, and CPE devices. AudioCodes' headquarters and R&D facilities are located in Israel with an R&D extension in the U.S. Other AudioCodes' offices are located in Europe, the Far East, and Latin America.

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