VoicePacketizer™ Voice over IP Streaming Protocol Stack

VoicePacketizer™ 1.xx Schematic Diagram

Voice/Fax Packets
AC48xx
VoP Processor
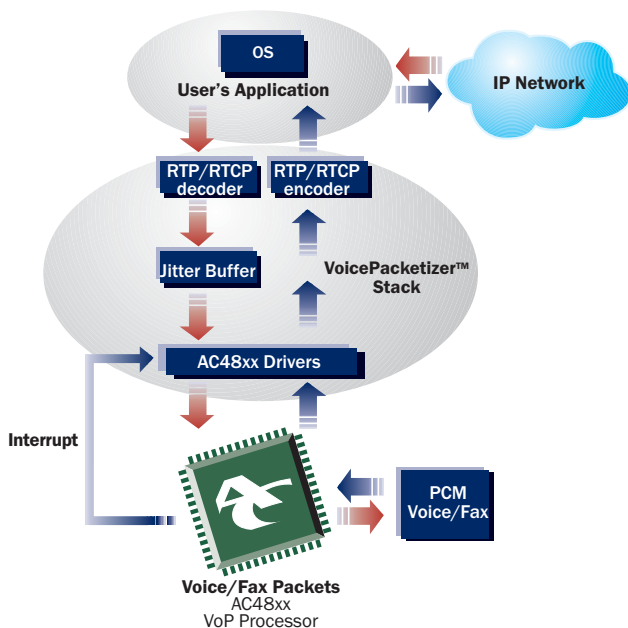
- **Enables fast integration of VoP processors**
- **Minimizes development risks**
- **Field-proven in real networks**

AudioCodes' **VoicePacketizer™** is a highly portable ANSI C language software application library implementing RTP/RTCP encapsulation per RFC 1889/1890/2198/2833. 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 or 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 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.729A/B and the NetCoder® as well as G3 fax relay (based on T.38) and DTMF relay (RFC 2833). The VoicePacketizer™ provides also 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, providing users with simplified API containing larger building blocks to enable quick application construction. Using the Convenient Functions, users do not need to directly use the Initialization and Setup functions, AC48xx driver functions and most of the Media Streaming Functions. These functions may also serve as a reference code in case users want to use the basic VoicePacketizer™ stack's function set. An application demo program is provided to show how to use 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 more than 5 million VoP ports to date.

AudioCodes

AudioCoded™ Enabling Technology Products

VoicePacketizer™

SELECTED SPECIFICATIONS

Standard Compliance	RFC 1889, 1890, 2198, 2833
Compiler Compatibility	ANSI C, compiler independent
OS Compatibility	OS independent
Tested with Control Protocols	H.323, SIP, MEGACO, MGCP
T.38 Fax Relay	Using OSS Nokalva T.38 stack[1]
Real-time Processing	Approximately 1 MIP per channel on MPC 860
Code Size	Approximately 1.4 MByte
Bus Data Arrangement	Little or big Endian
AC48xxxA-C Addressing	Memory mapped

Functional Breakdown

AC48xxA-C High Level Driver Module	For initializing, reading, writing and setting channel parameters
Jitter Buffer Module[2]	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 Manual

1   For VoicePacketizer™ 1.xx, the T.38 stack can be purchased separately from OSS Nokalva (www.oss.com)

2   In VoicePacketizer™ 2.xx, the Jitter Buffer is implemented in the DSP

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) designs, develops and markets Voice over Packet media gateway technologies and systems for converged networks. The company is a market leader in voice compression technology and the key originator of the ITU G.723.1 standard for the emerging Voice over IP market. AudioCodes' product line includes enabling technology products such as Voice over Packet chip processors, VoIP communication boards, VoIP media gateway modules and CPE devices. In addition, AudioCodes provides OEMs with media gateway system solutions for packet networks in the wireline, wireless, broadband access and media server markets.

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