

## AC486xx Voice over Packet Processor



- Independent multi-channel operation
- Toll quality voice compression
- Robust bandwidth-saving fax relay
- No need for external memory
- Low per-channel cost and power
- Field-proven reference designs
- Proprietary evaluation & development tools
- Lead free available

The **AC486xx** is an ideal solution for a single T1 or E1 Trunking Gateway, as well as a building block for high-density, carrier class Voice over IP gateways. Featuring high channel density, low power consumption and a compact footprint, the AC486xx enables the building of cost effective, low power high-density gateways, access devices and routing/switching equipment, without requiring an external RAM. Field-proven, feature-rich software enables the rapid development and fast time-to-market of the complete solution. The AC486xx is based on VolPerfect™ architecture, AudioCodes' underlying, best-of-breed, core media gateway technology for all of its products.

### DELIVER FEATURE-RICH SOLUTIONS

The AC486xx voice over packet processor combines up to twenty-four channels of toll quality low bit rate voice compression or forty-eight G.711 channels, with a G.168-2002 compliant echo canceller, and complete voice band processing functions in a single device. With configurable tail length of up to 128 msec, the AC486xx delivers an adaptive, state of the art echo canceller. Field-proven G3 Fax Relay, compliant with the T.38 ASN.1 standard, is a major enhancement to the AC486xx offering. Other advanced features include selection of Vocoders on the fly for each channel, dynamic packet size programming, high quality DTMF/MF R1/MF R2/Call Progress Tones, detection and generation of user defined tones and Caller ID, silence suppression, and automatic voice/fax/data discriminator.

### FAST INTEGRATION WITH SOFTWARE STACKS

The AC486xx is supported by the VoicePacketizer™ software stack which enables the processor to create a VoIP-compliant media stream as part of a Media Gateway entity. The VoicePacketizer™ is an ANSI-C software stack that supports the RTP/RTCP protocol. The software stack also provides a simple API for initialization and configuration of the AC486xx and for run-time call control.

### NEW IPMEDIA™ FEATURES

The AC486xx offers a new set of media processing technologies, such as fast/slow voice playback, announcements, automatic gain control, energy detector, answer detector, PCM pattern detector and packet to packet transcoding. These features enable developers of Media Server Platforms to exploit AudioCodes' vast experience in the voice over packet market for significantly shortening their time-to-market.

### BENEFIT FROM EXTENSIVE EXPERIENCE

AudioCodes is one of the world's leading providers of 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 over 12 million VoP ports to date.

### AC486XX FEATURES

- Wireline, wireless & cable low bit rate Vocoders
- Low power consumption & small footprint
- G.168-2002 compliant Echo Canceller
- T.38 compliant Fax Relay
- In Band Signaling
- Caller ID support

# AudioCodes Enabling Technology Products

## AC486xx

### SPECIFICATIONS

#### Software Specifications

Channel Density	Up to 24 low bit rate Up to 48 PCM
Voice Coders	G.729 AB CS-ACELP at 8 kbps G.729E at 11.8 kbps G.723.1 MP-MLQ at 6.3 kbps, ACELP at 5.3 kbps G.727 E-ADPCM at 16-40 kbps G.726 ADPCM at 16-40 kbps G.711 PCM ( $\mu$ -Law/A-Law) at 64 kbps GSM 6.10 FR at 13.2 kbps NetCoder <sup>®</sup> at 6.4-9.6 kbps, 800 bps steps Optional: G.728 LD-CELP at 16 kbps GSM-EFR at 12.2 kbps AMR at 4.75, 5.15, 5.9, 6.7, 7.4, 7.95, 10.2, 12.2 kbps QCELP8 up to 8.55 kbps & QCELP13 up to 13.3 kbps EVRC up to 8.55 kbps
Voice/Fax/Data	Automatic switching
Fax Support	G3 2.4 - 14.4 kbps, T.38 compliant fax relay or automatic switch to PCM
Modem Support	Up to V.92 rates, automatic switch to PCM
Echo Canceller	G.168-2002 Programmable 32 msec, 64 msec, 128 msec
Three-Way Conferencing	Conferencing of two IP participants with one PSTN participant
IPmedia™ Features	Automatic Gain Control Energy, Answer & Pattern Detectors Packet to Packet Transcoding
Caller ID Detection and Generation	Telcordia (Bellcore) Type 1 & 2 ETSI Type 1 & 2 NTT Number Display
In-band Signaling	DTMF (TIA 464B), MFR1,
Detection and Generation	MFR2, AC15, SS4, SS5, User Defined and Call Progress tones
Out-of-band Signaling	CAS ABCD (when connected to Standard Framers)
E&M Sampling Resolution	1 msec
Input/Output Gain Control	-31dB +31dB, 1.0 dB steps

#### Hardware Specifications

PCM Interface	2.048, 4.096 or 8.192 Mbps, $\mu$ -Law/A-Law
Host Port Interface	16 bit Bidirectional
Power Supply	+1.6V (core), +3.3V (I/O)
Digital Interface Levels	3.3V logic compatible
Power Consumption	550 mW (typ)
Package	169 pin BGA

### APPLICATIONS

- Carrier-class Voice over IP Gateways
- Voice over Cable Gateways
- Trunking & Access Gateways
- Wireless 2.5G & 3G Applications
- Multi Service Access Platforms
- IP-PBXs

### 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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