

## AC482xx Voice over Packet Processor



- Direct replacement for AC481xx
- Independent multi-channel operation
- Toll quality voice compression
- Robust bandwidth-saving fax relay
- Field-proven reference designs
- Lead free available

The highly featured, low cost and low power consumption **AC482xx** enables the rapid development of medium density gateways, access devices and routing/switching equipment, Residential Gateways and Integrated Access Devices (IAD). With AudioCodes' field-proven, feature-rich software, the route to the complete solution is fast and smooth. The AC482xx can serve as a low cost direct replacement for the AC481xx. The AC482xx is based on VoIPerfect™ architecture, AudioCodes' underlying, best-of-breed, core media gateway technology for all of its products.

### DELIVER FEATURE-RICH SOLUTIONS

The AC482xx voice over packet processor combines up to four channels of toll quality low bit rate voice compression, 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 64 msec, the AC482xx 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 AC482xx offering. Other advanced features include 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 AC482xx 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 AC482xx and for run-time call control. The VoicePacketizer™ enables easy control of the packet processor and fast time-to-market.

### SOFTWARE UPGRADES

The complete functionality of the multi-channel processor is implemented in the internal firmware, which is downloaded into the processor by the host prior to start of the operation. This allows the addition of new features in future product releases without system hardware modifications.

### 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.

### AC482xx FEATURES

- 4 channels of two LBR Vocoders (G.723.1 and G.729)
- Low power consumption & small footprint
- Up to 64 msec G.168-2002 compliant Echo Canceller
- T.38 compliant Fax Relay
- Complete Voice Band Signaling support
- Caller ID support

# AudioCodes Enabling Technology Products

## AC482xx

### SOFTWARE SPECIFICATIONS

Channel Density	
Compressed Voice	4 channels
Voice Functions	
Voice Coders	<ul style="list-style-type: none"><li>• G.711 PCM (<math>\mu</math>/A-law) at 64 kbps</li><li>• G.726 ADPCM at 16-40 kbps</li><li>• G.727 E-ADPCM at 16-40 kbps</li><li>• G.729AB CS-ACELP at 8 kbps</li><li>• G.723.1 MP-MLQ at 6.3 kbps</li><li>• G.723.1 ACELP at 5.3 kbps</li><li>• NetCoder® at 6.4-9.6 kbps</li></ul>
Echo Canceller	G.168-2002 compliant with programmable echo tail of up to 64 msec
Quality Enhancement	<ul style="list-style-type: none"><li>• Voice Activity Detection (VAD)</li><li>• Packet Loss Concealment (PLC)</li><li>• Comfort Noise Generation (CNG)</li></ul>
Data Functions	
Voice/Fax/Data	Automatic detection and switching
Fax Support	T.38 compliant G3 Fax Relay, 2.4-14.4 kbps or PCM bypass
Modem Support	Automatic switch to PCM for up to V.92 rates
Signaling	
In-band Detection and Generation	<ul style="list-style-type: none"><li>• DTMF TIA 464B</li><li>• MF R1, R2</li><li>• SS4, SS5</li><li>• User Defined and Call Progress tones</li></ul>
Out-of-band Signaling	CAS ABCD (From Standard Framers)
Caller ID Detection and Generation	<ul style="list-style-type: none"><li>• Telcordia (Bellcore) On Hook and Off Hook Service (Type 1 &amp; 2)</li><li>• ETSI On Hook and Off Hook Service (Type 1 &amp; 2)</li><li>• NTT Number Display (Type 1)</li></ul>

### HARDWARE SPECIFICATIONS

PCM Interface	2.048, 4.096 or 8.192 Mbps, A/ $\mu$ -Law
Host Post Interface	8 bit Bidirectional
Power Supply	+1.8V (core), +3.3V (I/O)
Power Consumption	150 mW (typ)
Operational Temperature Range	-40°C - 100°C
Package	22 x 22 mm <sup>2</sup> , 144 pin TQFP, (AC482-C) 12 x 12 mm <sup>2</sup> , 144 pin BGA, 0.8 mil, (AC482-CB)

### APPLICATIONS

- Voice over IP Gateways
- Integrated Access Devices (IAD)
- Multi Service Access Platforms
- Residential Gateways
- Edge Switching Equipment

### 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 VolPerfect™ – 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.

#### International Headquarters

1 Hayarden Street, Airport City  
Lod, Israel 70151  
Tel: +972-3-976-4000  
Fax: +972-3-976-4040

#### US Headquarters

2099 Gateway Place, Suite 500  
San Jose, CA 95110  
Tel: +1-408-441-1175  
Fax: +1-408-451-9520

[info@audiocodes.com](mailto:info@audiocodes.com)

[www.audiocodes.com](http://www.audiocodes.com)

© 2005 AudioCodes Ltd. All rights reserved. AC, Ardito, AudioCodes, AudioCodes logo, AudioCodes, IPmedia, Mediant, MediaPack, MP-MLQ, NetCoder, Stretto, TrunkPack, VoicePacketizer and VolPerfect are trademarks or registered trademarks of AudioCodes Ltd. All other marks are the property of their respective owners. The information and specifications in this document and the product(s) are subject to change without notice.

Ref. # LTRT-36501 08/05 V.1