VOIP ENGINE/SIP SDKs

Develop VoIP applications for iPhone®, iPod touch®, and iPad® devices.

Add VoIP communication to your iPhone®, iPod touch® and iPad® apps. Adaptive Digital's iPVoice VoIP Engine™/SIP Reference Kit enables you to develop VoIP applications for iPhone, iPad, and iPod touch without having to worry about the VoIP functionality.

iPVoice makes it simple to integrate VoIP capabilities into an iOS application. In fact, developing your own VoIP enabled app is as easy as customizing one of our sample SIP Phone apps, which are provided in source code format as part of the Reference Kit. No need to know anything about SIP.

iPVoice demo App: SIP and VoIP Test screens shown.

iPVoice

iPVoice™ – VoIP/SIP Reference Kit includes

- SIP Phone Sample Project with source code
- **iPVoice SDK** (includes an evaluation version of the VoIP class library, header file and docs)
- **iPVoice SIP SDK** (includes an evaluation version of the SIP class library, header file and docs)
- SDK Quick Start Guide
- Developer Quick start (Read Me)

iPVoice™ demo app featuring SIP is currently available for free download at the App Store.

Features

- **Want to use SIP?** *It's built right in.*
  Adaptive Digital's VoIP Engine SDK handles the entire VoIP call process.

- **Easy-to-Use**
  The API is clean and simple to use, and the source code for our demo application is available to help you get started.

- **Advantages**
  Every call made with the SDK uses Adaptive Digital's high quality audio algorithms without any additional work.

VOIP ENGINE/SIP iPV

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T E C H N O L O G I E S

Adaptive Digital is the leading developer of VoIP technology. Our VoIP Engine/SIP Reference Kit provides a powerful and highly customizable software environment to quickly add SIP based dial, answer call features in your application.

Become an iPVoice VoIP Engine/SIP SDK developer

iPVoice VoIP Engine software, which runs on iPhone, iPod Touch, and iPad, exercises Voice over IP functionality over a WiFi or mobile data network. For the purpose of this document, when iPhone is used, it refers to iPhone, iPod Touch, or iPad interchangeably. iPVoice enables the user to set up a VoIP voice connection between multiple iPhones using direct IP to IP connections over WiFi. It also enables the user to make and receive SIP voice calls over WiFi or mobile data network.

The iPVoice test software can be used as a piece of test equipment to facilitate the testing of VoIP phones and gateways rather than as a full featured SIP phone application.

The VoIP engine is purely a data processing engine. It is is a framework that gets integrated into your VoIP application, typically running on an ARM device. VoIP Engine has no interface to drivers or peripherals and performs processing solely at the request of the host application. The host application feeds the VoIP engine PCM samples from the audio input and and RTP packets from the network input. The VoIP engine in turn returns, via callbacks to the host application, PCM samples to be sent to the audio output device and RTP packets to be sent to the network interface.

Using Adaptive Digital's iPVoice VoIP Engine/SIP Reference Kit accelerates the development of SIP compliant voice applications. Developers can add VoIP features to an existing hardware or software project or create a fully customized SIP application.

The sample SIP Phone app is a fully functioning SIP phone.
The app can be configured to connect to a standard SIP server. The app can place outgoing phone calls as well as receive inbound phone calls. Furthermore, it supports peer to peer VoIP for applications that do not require SIP.

The SIP phone app makes use of underlying SIP and VoIP Engine services that are accessed through their respective APIs. Both services run autonomously.

In the case of the SIP service, it runs in its own thread but under control of the sample application. Callbacks to the application are used as needed. The SIP service takes care of UDP/IP socket communication with the SIP server.

In the case of the VoIP Engine Service, it too runs its own threads under control of the sample application. The VoIP Engine Service interfaces directly with the audio drivers as well as the UDP/IP stack. The host application does not need to deal with audio buffers or RTP packets.

Peer to Peer operation opens up the door to many new applications, limited only by your imagination. Download our sample app on to two or more phones and try it out for yourself.

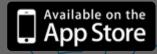### Software Features
SIP Phone Application
- SIP Client Protocol
- RTP/Jitter Buffer
- SRTP
- Voice Conferencing (up to 4 users)
- G.711 mu-law and a-law with packet loss concealment
- G.729A 8 kbps speech compression
- G.722 16 kbps speech compression
- Noise Reduction
- Enhanced Acoustic Echo Cancellation Operates on most Android handsets without customization/tuning.
- Automatic Gain Control
- Tone Generation
- Tone Relay Transmit
- Peer to Peer Operation
- Fully Configurable via GUI

Test Features
- Tone transmit
- Tone receive
- CSS transmit
- CSS receive
- Acoustic Delay Measurement

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