InstaV2IP™ Embedded Solutions

Introducing InstaV2IP™ Embedded

InstaV2IP™ (pronounced "Insta-V-2-I-P") Embedded from Unicoi Systems, Inc. is a video-enhanced V2IP (Voice and Video) software suite designed for stand-alone use or to be embedded into another application. InstaV2IP Embedded includes all of the trusted VoIP components from the InstaVoIP Embedded software suite like the Call Manager, Voice Engine, and Information Subsystem. But unlike InstaVoIP Embedded, InstaV2IP Embedded provides a full-featured Video Engine SDK providing developers with a comprehensive V2IP development solution for devices such as Video Phones, Video Callboxes, Softphone App with Video Support, Video Conferencing, and more.

About InstaV2IP Embedded

A full ANSI C source code release allows InstaV2IP Embedded to be used on virtually any platform. Simply porting the Fusion Common Layer (FCL) abstraction to a platform's RTOS/OS, network stack, and file system (optional), and implementing audio/video driver channels for the platform's audiovisual hardware is all that is necessary to start making voice & video calls. Additionally, having full source code allows customer changes to be made to the code (such as implementing newer or less popular RFCs) and aids in debugging low-level problems.

InstaV2IP Embedded Features

Core VoIP Networking Protocols

- SIP, SDP, RTP, STUN
- Optional: SIPS, SRTP for secure communications

Sample applications for InstaV2IP Embedded

- Video SoftPhone
- Desktop Video IP Phone
- V2IP Call Box/Door Entry Phone

Call Management

- Actions: place calls, answer calls, disconnect calls, on/off hold, transfer, conference, generate DTMF, etc.
- Events: incoming call, peer on/off hold, peer disconnect, being transferred, DTMF received, registered/unregistered, etc.
- Call management control via HTTP/JSON-based web service for remote control

Video engine

- Supported Codecs: H.264, H.263, H.263+, MPEG-4
- Algorithms: Camera Support, Configurable Video Frame Rate, Configurable Video Resolution, Dynamic Bitrate Configuration, Audio/Video Sync, Video Snapshot, Video Privacy (transmit image from file), Video Statistics, Audio/Video Recording, Error recovery, Video Jitter Buffer, IPv6 Support

Voice engine

- Codecs: G.711, G.726 (16/24/33/40 kbps), G.722, DVI4 (narrow/HD/Ultra HD), iLBC, Speex
- Optional Codecs: G.729
- Algorithms: Gain, Automatic Gain Control (AGC), DC Blocker, High-Pass Filter, Voice Activity Detector (VAD), Acoustic Echo Suppressor, Sample Rate Conversion, DTMF (Generator/Detector), Call Progress Tone Generator, Custom Ring Tone Generator, Comfort Noise Generator, Packet Loss Compensation
- Optional Algorithms: Custom Tone Generator, Acoustic Echo Canceller , Noise Reduction, Frequency Equalizer

Information Subsystem

- Configuration Information Management
- File-based by default
- Can integrate with platform's configuration style
- Runtime Information Management (e.g. call status)
- Access via HTTP/JSON-based web service for remote configuration and status monitoring

Web-Based Configuration UI

- Optional: HTTPS for secure access
- Expandable to include user-application configuration
  - *Not included in Android & iOS*