

# Fusion Embedded™ SIP with SIPS

The Session Initiation Protocol (SIP) is most commonly found setting up calls for VoIP enabled devices. It is a protocol used to contact peers and request communications. As the world moves more and more into the IP realm, it will continue to embrace VoIP as the main means of communication with SIP at its core.

Fusion Embedded SIP is the cornerstone of the Fusion VoIP product line. As a standalone product or part of the greater whole, it provides the ability to register with servers, start communication sessions, track active sessions, subscribe to events, and enable instant messaging.

Fusion SIP was built from the ground up for the embedded realm. The software is ANSI C compliant and is provided with source code. Furthermore, it was written without the use of Open Source software, thus avoiding any pitfalls associated with Open Source licensing.



## **Portable**

The Fusion Embedded SIP stack has been developed over the years to run with any networking stack and on any hardware.

## **Reduced Footprint**

Fusion Embedded SIP has a small code and data footprint reducing the demand on RAM. Furthermore, it does not perform processor intensive calculations. Both of these features leads to a reduced overall BOM.

## **Flexible and Configurable**

Fusion SIP has a number of API's and configurable parameters to allow you to make the SIP UA you need. Furthermore, if this is not enough, source code is provided giving your application full access to all of the SIP internal algorithms.  
Portable

## **More than SIP**

The software delivered with Fusion Embedded SIP includes all that is necessary to create and parse SDP, and perform instant messaging.

## **Interoperability**

Unicoi Systems tests with devices found in the marketplace to assure that when your device is deployed, it will work in the real world.

## RFC Compliance

### SIP

- RFC 2617 - Basic and Digest Authentication
- RFC 2976 - Info Method
- RFC 3261 - SIP Version 2
- RFC 3262 - Reliability of Provisional Responses in SIP
- RFC 3263 - Locating SIP Servers
- RFC 3265 - Specific Event Notification
- RFC 3420 - Internet Media Type message/sipfrag
- RFC 3515 - Refer method
- RFC 3891 - SIP "Replaces" Header
- RFC 3892 - SIP Referred-By Mechanism
- RFC 3959 (Sender & receiver tables for session members)

### IM & Presence

- RFC 2778 (Model for Presence and Instant Messaging)
- RFC 3428 (Extensions for instant messaging)
- RFC 3856 (A presence Event Package for SIP)
- RFC 3857 (A Watcher Information Event Template Package for SIP)
- RFC 3858 (XML Based Format for Watcher Information)
- RFC 3863 (Presence Information Data Format (PIDF))

### SDP

- RFC 4566 "SDP: Session Description Protocol"
- RFC 3264 "An Offer/Answer Model with the Session Description Protocol (SDP)"
- RFC 4568 "Session Description Protocol (SDP) Security Descriptions for Media Streams"
- T.38 FAX sessions

### Fusion Embedded SIP Highlights

- Provided with ANSI C Compliant source code
- Portable across networking stacks
- Multiple users can make multiple calls
- Secure SIP (SIPS) enabled
- UDP and TCP Support
- Supports call hold, call waiting, call transfer, call forward, etc.
- Includes both SIP & SDP

## Fusion Embedded Products

Networking					Web		Security	Voice	File	Reference Designs
POP3	PPP	IPv6	SMTP	RTP	Browser	DOM	SSL/TLS	Algorithms	NOR	IP Media
SDP	PPPoE	IPv4	SNMP	RTCP	HTML UI	SAX	IPsec	Codecs	NAND	VoIP Phone
IGMP	NAT	FTP	DHCP	TFTP	HTTP	SOAP	IKE	Voice Engine	SD	Terminal Adapter
CIFS	SIP	RTSP	RIP	SNTP			SRTTP		SDHC	VoIP Gateway
Telnet	STUN	DNS					SIPS		CIFS	