

# Supported Standards

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## Supported Standards

### GSMA

**Table 1:** Supported GSMA Standards

Standard	Description
GSMA IPX	IP-based interconnection for wireless networks

### IETF

**Table 2:** Supported IETF Standards

Standard	Title/Description
RFC 2327	SDP
RFC 2617	HTTP Authentication: Basic and Digest Access Authentication
RFC 2671	Extension Mechanisms for DNS (EDNS0)
RFC 2833	RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals
RFC 2865	Remote Authentication Dial In User Service (RADIUS)
RFC 2915	The Naming Authority Pointer (NAPTR) DNS Resource Record
RFC 2976	SIP INFO Method
RFC 3087	Control of Service Context using SIP Request-URI
RFC 3204	MIME media type ISUP
RFC 3261	Session Initiation Protocol
RFC 3262	Reliability of Provisional Responses
RFC 3264	An Offer/Answer Model with the Session Description Protocol (SDP)
RFC 3265	SIP-Specific Event Notification
RFC 3267 (2002)	Real-time Transport Protocol RTP Payload Format and File Storage Format for the Adaptive Multi-Rate (AMR) and Adaptive Multi-Rate Wideband (AMR-WB) Audio Codecs

RFC 3311	SIP UPDATE method
RFC 3312	Integration of Resource Management and SIP
RFC 3313	Private Session Initiation Protocol (SIP) Extensions for Media Authorization <b>NOTE:</b> <i>Supported in pass-through mode only.</i>
RFC 3323	A Privacy Mechanism for the Session Initiation Protocol (SIP)
RFC 3324	Short Term Requirements for Network Asserted Identity
RFC 3325	Asserted Identity
RFC 3326 (2002)	The Reason Header Field for the Session Initiation Protocol (SIP)
RFC 3327	SP Extension Header Field for Registering Non-Adjacent Contacts
RFC 3372	SIP-I
RFC 3389	Real-time Transport Protocol (RTP) Payload for Comfort Noise (CN)
RFC 3398	ISUP to SIP Mapping
RFC 3411	An Architecture for Describing SNMP Management Frameworks
RFC 3412	Message Processing and Dispatching for SNMP
RFC 3413	Simple Network Management Protocol (SNMP) Applications
RFC 3414	User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)
RFC 3415	View-based Access Control Model (VACM) for the SNMP
RFC 3418	Management Information Base (MIB) for the SNMP
RFC 3420	Internet Media Type message/sipfrag
RFC 3428	SIP Extension for Instant Messaging
RFC 3515	SIP Refer Method
RFC 3550 (2003)	RTP: A Transport Protocol for Real-Time Applications
RFC 3551 (2003)	RTP Profile for Audio and Video Conferences with Minimal Control
RFC 3581	SIP Extension for Symmetric Response Routing
RFC 3584	Coexistence between Version 1, 2 and 3 of the Internet-standard Network Management Framework
RFC 3605	RTCP Attribute in SDP
RFC 3608	Session Initiation Protocol (SIP) Extension Header Field for Service Route Discovery During Registration
RFC 3680	A Session Initiation Protocol (SIP) Event Package for Registrations
RFC 3711	Secure Real-time Transport Protocol
RFC 3824	Using E164 numbers with the Session Initiation Protocol (SIP)

RFC 3826	The Advanced Encryption Standard (AES) Cipher Algorithm in the SNMP User-based Security Model
RFC 3840	Indicating User Agent Capabilities in SIP
RFC 3841	Caller Preferences for the Session Initiation Protocol (SIP)
RFC 3842	A Message Summary and Message Waiting Indication Event Package for the SIP
RFC 3891	The Session Initiation Protocol (SIP) "Replaces" Header
RFC 3892	The SIP Referred-By Mechanism
RFC 3960	Early Media and Ringback Tone Generation in the Session Initiation Protocol
RFC 3966	The tel URI for Telephone Numbers
RFC 4022	Management Information Base for the Transmission Control Protocol (TCP)
RFC 4028	Session Timers in SIP
RFC 4103	RTP Payload for Text Conversation
RFC 4113	Management Information Base for the User Datagram Protocol (UDP)
RFC 4117	Transcoding Services Invocation in the Session Initiation Protocol (SIP) Using Third Party Call Control (3pcc)
RFC 4123	Session Initiation Protocol (SIP)-H.323 Interworking Requirements
RFC 4145	TCP-Based Media Transport in the Session Description Protocol (SDP)
RFC 4244	An Extension to the Session Initiation Protocol (SIP) for Request History Information
RFC 4293	Management Information Base for the Internet Protocol (IP)
RFC 4412	Communications Resource Priority for the Session Initiation Protocol (SIP)
RFC 4458	Session Initiation Protocol (SIP) URIs for Applications - Voicemail and Interactive Voice Response (IVR)
RFC 4566	Session Description Protocol
RFC 4567	Key Management Extensions for SDP and RTSP
RFC 4568	SDP Security Descriptions for Media Streams
RFC 4572	Connection-Oriented Media Transport over the Transport Layer Security (TLS) Protocol in the Session Description Protocol (SDP)
RFC 4573	MIME Type Registration for RTP Payload Format for H.224
RFC 4583	Session Description Protocol (SDP) Format for Binary Floor Control Protocol (BFCP) Streams
RFC 4585	Extended RTP Profile for RTCP-Based Feedback (RTP/AVPF)

RFC 4730	A Session Initiation Protocol (SIP) Event Package for Key Press Stimulus (KPML)
RFC 4753	ECP Groups for IKE and IKEv2
RFC 4861	Neighbor Discovery for IP version 6 (IPv6)
RFC 4961	Symmetric RTP / RTP Control Protocol (RTCP)
RFC 4975	Message Session Relay Protocol (MSRP)
RFC 5104	Codec Control Messages in the RTP Audio-Visual Profile with Feedback (AVPF)
RFC 5168	XML Schema for Media Control
RFC 5227	IPv4 Address Conflict Detection
RFC 5343	Simple Network Management Protocol (SNMP) Context EngineID Discovery
RFC 5547	SDP Offer/Answer Mechanism To Enable File Transfer
RFC 5590	Transport Subsystem for the Simple Network Management Protocol (SNMP)
RFC 5626	Managing Client-Initiated Connections in SIP
RFC 5627	Obtaining and Using Globally Routable User Agent URIs (GRUUs) in the Session Initiation Protocol (SIP)
RFC 5705	Keying Material Exporters for Transport Layer Security (TLS)
RFC 5763	Framework for Establishing a Secure Real-time Transport Protocol (SRTP) Security Context Using Datagram Transport Layer Security (DTLS)
RFC 5764	Datagram Transport Layer Security (DTLS) Extension to Establish Keys for the Secure Real-time Transport Protocol (SRTP)
RFC 5806	Diversion Indication in SIP
RFC 5996	Internet Key Exchange Protocol Version 2 (IKEv2)
RFC 6044	Mapping and Interworking of Diversion Information between Diversion and History-Info Headers in SIP
RFC 6135	Alternative Connection Model for MSRP UA
RFC 6140	RFC 6140—Registration for Multiple Phone Numbers in the Session Initiation Protocol (SIP)
RFC 6223	Indication of Support for Keep-Alive
RFC 6337	Session Initiation Protocol (SIP) Usage of the Offer/Answer Model
RFC 6347	Datagram Transport Layer Security Version 1.2
RFC 6442	Location Conveyance for the Session Initiation Protocol
RFC 6714	Connection Establishment for Media Anchoring

RFC 6716	Definition of the Opus Audio Codec
RFC 6733	Diameter Base Protocol
RFC 6891	Extension Mechanisms for DNS (EDNS (0))
RFC 7135	Registering a SIP Resource Priority Header Field Namespace for Local Emergency Communications
RFC 7245	An Architecture for Media Recording Using the Session Initiation Protocol
RFC 7865	Session Initiation Protocol (SIP) Recording Metadata
RFC 7866	Session Recording Protocol
RFC 8068	Session Initiation Protocol (SIP) Recording Call Flows
draft-yu-tel-url-08	New Parameters for the 'tel' URL to Support Number Portability and Freephone Service
draft-ietf-payload-rtp-opus-03	RTP Payload Format for Opus Speech and Audio Codec

## ITU

**Table 3:** Supported ITU Standards

Standard	Description
G.722.1	Low-complexity coding at 24 and 32 kbit/s for hands-free operation in systems with low frame loss
Q.1912.5	SIP Interworking
T.38 v.3	Procedures for real-time Group 3 facsimile communication over IP networks

## NENA

**Table 4:** Supported NENA Standards

Standard	Description
08-001 v2	Interim VoIP Architecture for Enhanced 9-1-1 Services (i2)

## SIP Forum

**Table 5:** Supported SIP Forum Standards

Standard	Description
SIPConnect 1.0	Direct IP peering between SIP-enabled IP PBXs and VoIP service provider networks
SIPConnect 1.1	SIP-PBX / Service Provider Interoperability
SIPConnect 2.0	Updated guidelines for SIP-PBX / Service Provider Interoperability

## 3GPP

**Table 6:** Supported 3GPP Standards

Standard	Description
3GPP TS 24.229 v11.5.0	IP multimedia call control protocol based on SIP and SDP
3GPP TS 23.167	IP Multimedia Subsystem (IMS) emergency sessions.
3GPP TS 26.114	IP Multimedia Subsystem (IMS); Multimedia telephony; Media handling and interaction
3GPP TS 29.214	Policy and Charging Control over Rx reference point
3GPP TS 32.260	IP Multimedia Subsystem (IMS) charging
3GPP TS 32.299	Diameter Charging Applications
3GPP TS 33.328	IP Multimedia Subsystem (IMS) media plane security

## References

The following public websites provide standards definition details.

- <http://www.ietf.org/>
- <http://www.rfc-editor.org/index.html>
- [http://en.wikipedia.org/wiki/Main\\_Page](http://en.wikipedia.org/wiki/Main_Page)
- <http://www.3gpp.org>
- <http://www.nena.org>

