

vMRF High Level Statement of Compliance

Virtual Multimedia Resource Function

Statement of Compliance

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1 General

This document provides general information about compliances with standards for the Virtual Media Resource Function (vMRF). This document includes a listing of standard specifications, RFCs, technical reports, and other specifications applicable to the vMRF.

The Ericsson virtual media resource functionality consists of two main functional structures: Multimedia Resource Function Processor (MRFP) functionality and Multimedia Resource Function Controller (MRFC) + MRFP functionality, as shown illustrated in [unresolved external reference].

The MRFP functionality supports only announcement service and audio conferences. That must be in mind when reading the compliance statements.

This document indicates also the difference to legacy MRF running on Ericsson native hardware:

Standards which are supported by the native MRF, but not yet supported by vMRF are marked with *italic* text.

Standards which are supported only by vMRF and not in native MRF are marked with **bold** text.

Note: The MRFC functionality has not been implemented yet.

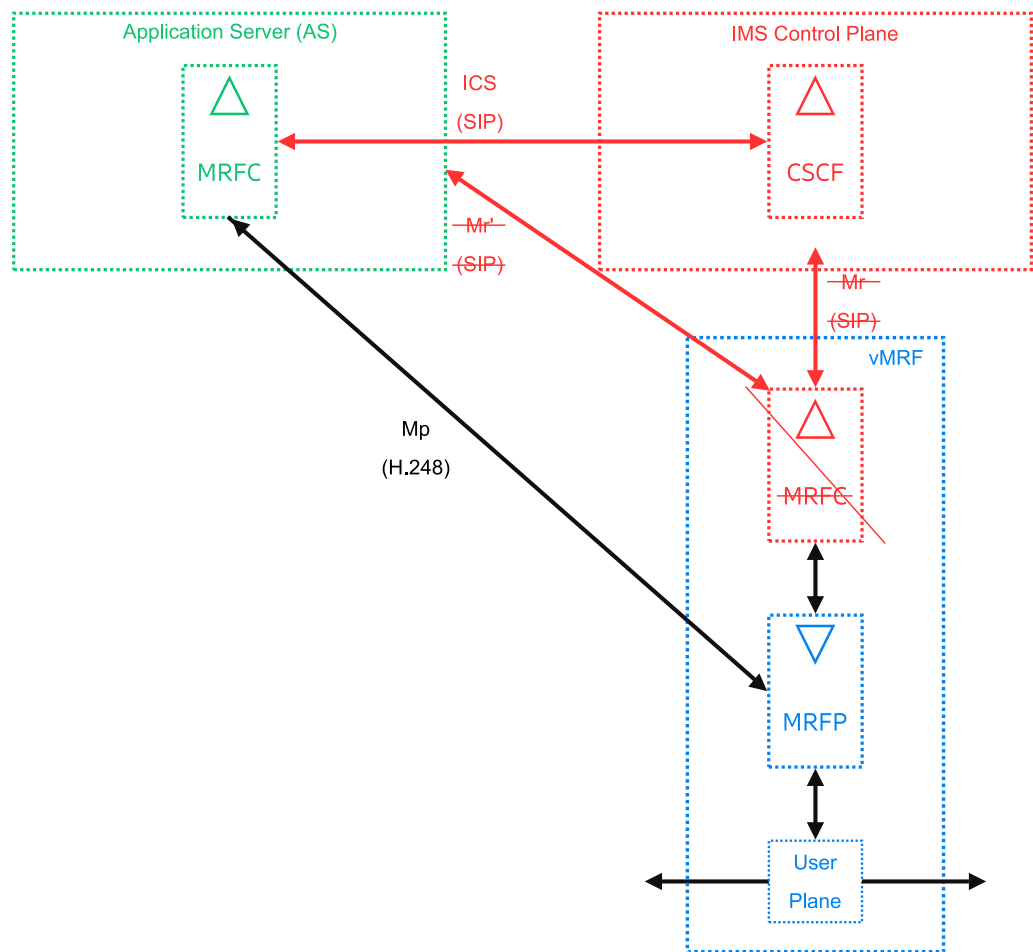


Figure 1 vMRF Functional Structure Overview



2 Statement of Compliance

Each specification is categorized by one of the following statements:

Compliant (C)

States that the functionality provided has been implemented according to the standard definition. The High-level SoC summarizes the important exceptions.

Partly Compliant (PC)

States that some part of the functionality that is provided has been implemented in a way that differs from the standard definition. The High-level SoC summarizes the important exceptions.

Not Compliant (NC)

States that the functionality that is provided has been implemented in a way that differs from the standard definition.

Not Implemented (NI)

States that the functionality specified in the standard is not provided at all. Note, that if, for example, a supplementary service standard is listed as "Not Implemented", it also means that sections in other standards covering, for example, interactions with this supplementary service are "Not Implemented". This will however not be visible in the list of limitations for those other standards.

Not Applicable (NA)

This category is used for the following cases:

- Descriptive specifications containing no normative requirements for vMRF.
- Specifications that only put requirements on the terminals.

2.1 ETSI NFV Standards

Generally, the vMRF VNF follows the principles set out in the ETSI NFV standards: <http://www.etsi.org/technologies-clusters/technologies/nfv>

The compliance with NFV standards is shown in [Table 1](#).



Table 1 ETSI NFV Standards

Standard Number	Standard Title
GS NFV 002	NFV; Architectural Framework
GS NFV-SWA 001	NFV; Virtual Network Functions Architecture
GS NFV-INF 001	NFV; Infrastructure Overview
GS NFV-INF 004	NFV; Infrastructure; Hypervisor Domain
GS NFV-REL 001	NFV; Resiliency Requirements
GS NFV-REL 002	Network Functions Virtualisation (NFV); Reliability; Report on Scalable Architectures for Reliability Management
GS NFV-MAN 001	NFV; Management and Orchestration

2.2 ITU-T Standards

The compliance with ITU-T standards is shown in [Table 2](#).

Table 2 ITU-T Standards

Standard	Name	Compliance		Comment
		M R F P	<i>M</i> <i>R</i> <i>F</i> <i>C</i> + <i>M</i> <i>R</i> <i>F</i> <i>P</i>	
E.180/ Q.35 (03/1998)	Technical characteristics of tones for the telephone service.	C	<i>N</i> <i>I</i>	
E.181 (11/1988)	Customer recognition of foreign tones.	C	<i>N</i> <i>I</i>	
E.182 (03/1998)	Application of tones and recorded announcements in telephony services.	C	<i>N</i> <i>I</i>	MRFP: Only some tones have been implemented. Missing tones can be played as announcements.



Standard	Name	Compliance		Comment
<i>G.100.1</i>	<i>The use of the decibel and of relative levels in speechband telecommunications</i>	<i>P</i> <i>C</i>	<i>N</i> <i>I</i>	<i>Compliant for G.722 codec.</i>
<i>G.664 (03/2003)</i>	<i>Optical safety procedures and requirements for optical transport systems</i>	<i>N</i> <i>A</i>	<i>N</i> <i>A</i>	
G.711 (11/1988)	Pulse Code Modulation (PCM) of Voice Frequencies	C	<i>N</i> <i>I</i>	
<i>G.719 (06/2008)</i>	<i>Low-complexity, full-band audio coding for high-quality, conversational applications.</i>	<i>NI</i>	<i>N</i> <i>I</i>	
G.722 (09/2012)	7 kHz audio-coding within 64 kbit/s.	C	<i>N</i> <i>I</i>	<p>—Annex B not implemented</p> <p>—Appendix 3 and 5 not implemented</p> <p>—Amendment 1 not implemented</p>
G.729 (01/2007)	Coding of speech at 8 kbit/s using conjugate-structure algebraic-code-excited linear prediction (CS-ACELP)	C	<i>N</i> <i>I</i>	<p>The following functions are not included:</p> <p>—Annexes C, C+ (Floating-point implementation)</p> <p>—Annex D (CS-ACELP speech coding algorithm at 6.4 kbit/s)</p> <p>—Annex E (CS-ACELP speech coding algorithm at 11.8 kbit/s)</p> <p>—Annex F (DTX functionality for the 6.4 kbit/s)</p> <p>—Annex G (DTX functionality for the 11.8 kbit/s)</p> <p>—Annex H (switching operation between 6.4 kbit/s and 11.8 kbit/s)</p>



Standard	Name	Compliance		Comment
				—Annex I (integration of G.729 main body with Annexes B, D and E). —Annex J (An interoperable 8-32 kbit/s scalable wideband extension to G.729) —Appendix I (external synchronous reset capability) —Appendix II (G.729 Annex B enhancements in voice-over-IP applications – Option 1)
H.248.1 (09/2005)	Gateway Control Protocol: Version 2	P C	N A	MRFP: For the supported commands, packages and descriptors, refer to IWD vMRF <i>H.248 Support</i> (1/155 19-AXM 101 04/1 Uen Rev. A).
H.264 (01/2012)	Advanced video coding for generic audiovisual services	NI	NI	
Q.23 (11/1988)	Technical features of Push button Telephone sets	C	NI	MRFP: Compliant regarding tones
Q.24 (11/1988)	Multifrequency Push button Signal reception	C	NI	MRFP: Compliant regarding tones

2.3 ETSI Standards

The compliance with ETSI standards is shown in [Table 3](#).

Table 3 ETSI Standards

Standard	Name	Compliance		Comment
		M R F P	M R F C + M	



Standard	Name	Compliance		Comment
			<i>R F P</i>	
ES 283 031 V1.1.2 (Historical)	TISPAN; IP Multimedia: H.248 Profile for controlling Multimedia Resource Function Processors (MRFP) in the IP Multimedia System (IMS); Protocol specification	P C	<i>N A</i>	MRFP: —The profile ETSPprof_MediaServer is used. —See compliance comments for 3GPP TS 23.333 and 3GPP TS 29.333.
TS 123 333 V10.4.0	Digital cellular telecommunica tions system (Phase 2+);Universal Mobile Telecommunica tions System (UMTS); LTE; Multimedia Resource Function Controller (MRFC) - Multimedia Resource Function Processor (MRFP) Mp interface: Procedures descriptions (3GPP TS 23.333 version 10.4.0)	P C	<i>N A</i>	MRFP: See compliance comments for 3GPP TS 23.333.
TS 129 333 V10.4.0	Digital cellular telecommunica tions system (Phase 2+);Universal Mobile	P C	<i>N A</i>	MRFP: See compliance comments for 3GPP TS 29.333.



Standard	Name	Compliance		Comment
	Telecommunications System (UMTS); Multimedia Resource Function Controller (MRFC) - Multimedia Resource Function Processor (MRFP) Mp interface; Stage 3 (3GPP TS 29.333 version 10.4.0 Release 10)			

2.4 3GPP Standards

The compliance with 3GPP standards is shown in [Table 4](#).

Table 4 3GPP Standards

Standard	Name	Compliance		Comment
		M R F P	M R F C + M R F P	
22.153(V14.1.0)	Multimedia priority service	P C	N I	All MPS traffic is treated in the same way, independent of priority level. Priority has not been implemented for all services.
23.218 (V14.0.0)	IP Multimedia (IM) session handling; IM call model; Stage 2	N A	N I	



Standard	Name	Compliance		Comment
23.228 (V14.5.0)	IP Multimedia Subsystem (IMS); Stage 2 (Release 10)	P C	N I	Not included functions in MRFP: —Explicit Congestion Notification (ECN) —Transcoding —Session Based Messaging
23.333 (14.2.0)	Multimedia Resource Function Controller (MRFC) - Multimedia Resource Function Processor (MRFP) Mp interface: Procedures Descriptions	P C	N A	MRFP: —Interworking is guaranteed only when the MRFP function is controlled through an Ericsson product. —The profile ETSIprof_MediaServer is used, refer to ES 283 031. The following functions are supported: —Play Tone —Play Announcement —DTMF Collection —Audio Conference —Multimedia Conference (except messaging), No MMCMH support —Floor Control (BFCP) —For the supported commands, packages and descriptors, refer to IWD vMRF H.248 Support (1/155 19-AXM 101 04/1 Uen Rev. A).
24.147 (V14.1.0)	Conferencing using the IP Multimedia (IM) Core Network (CN) subsystem; Stage 3	P C	N I	MRFP: Only audio conferences are supported
24.229 (V14.5.0)	IP multimedia call control protocol based on Session Initiation Protocol (SIP)	N A	N I	



Standard	Name	Compliance		Comment
	<i>and Session Description Protocol (SDP); Stage 3</i>			
26.071 (V14.0.0)	AMR speech Codec; General description	C	<i>N I</i>	AMR interface format 2 not implemented
26.073 (V14.0.0)	AMR speech Codec; C-source code	C	<i>N I</i>	
26.074 (V14.0.0)	AMR speech Codec; Test sequences	C	<i>N I</i>	
26.090 (V14.0.0)	AMR speech Codec; Transcoding Functions	C	<i>N I</i>	
26.091 (V14.0.0)	AMR speech Codec; Error concealment of lost frames	C	<i>N I</i>	
26.092 (V14.0.0)	AMR speech Codec; comfort noise for AMR Speech Traffic Channels	C	<i>N I</i>	
26.093 (V14.0.0)	AMR speech Codec; Source Controlled Rate operation	C	<i>N I</i>	
26.094 (V14.0.0)	AMR Speech Codec; Voice Activity Detector for AMR Speech Traffic Channels	C	<i>N I</i>	
26.101 (V14.0.0)	AMR speech Codec; Frame Structure	C	<i>N I</i>	AMR interface format 2 not supported
26.103 (V14.0.0)	<i>Speech Codec list for GSM and UMTS</i>	C	<i>N I</i>	<i>PDC_EFR and are not TDMA_EFR applicable</i>



Standard	Name	Compliance		Comment
26.114 (V14.5.0)	IP Multimedia Subsystem (IMS); Multimedia Telephony; Media handling and interaction	P C	N I	<p>vMRF only supports audio conferences and announcements.</p> <p>Compliance to Adaptation mechanisms (chapter 10): Reception of RTCP-APP-CMR (Codec Mode Request) is supported, but RTCP_APP_CMR is never sent by vMRF. The CMR is sent only in RTP packets. All other RTCP-APP messages are ignored if received.</p> <p>Not included functions:</p> <ul style="list-style-type: none"> —SDPCapNeg (RFC5939) —Redundant payload —RTCP bandwidth modifiers are not supported (RS/RR). RTCP always on by default —RTP packets are not accepted, if they are not received from same remote port where they are sent. —RTCP packets are not accepted, if they are not received from same remote port where they are sent —Up to 12 speech frames per RTP packet not accepted. Max. 40 ms of speech per RTP packet is supported —ICM operation for outgoing AMR/AMR-WB traffic not supported —Linear 16 bit PCM not supported —Freely chosen UDP port combinations for RTP and RTCP not supported. RTCP must be always RTP+1.
26.171 (V14.0.0)	Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; General description	C	N I	AMR-WB interface format 2 is not supported
26.173 (V14.0.0)	ANSI-C code for the	C	N I	



Standard	Name	Compliance		Comment
	Adaptive Multi Rate - Wideband (AMR-WB) speech codec			
26.174 (V14.0.0)	Speech codec speech processing functions; Adaptive Multi-Rate - Wideband (AMR-WB) speech codec test sequences	C	<i>N</i> <i>I</i>	
26.190 (V14.0.0)	Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; Transcoding functions	C	<i>N</i> <i>I</i>	
26.191 (V14.0.0)	Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; Error concealment of erroneous or lost frames	C	<i>N</i> <i>I</i>	
26.192 (V14.0.0)	Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; Comfort noise aspects	C	<i>N</i> <i>I</i>	
26.193 (V14.0.0)	Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; Source controlled rate operation	C	<i>N</i> <i>I</i>	



Standard	Name	Compliance		Comment
26.194 (V14.0.0)	Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; Voice Activity Detector (VAD)	C	<i>N</i> <i>I</i>	
26.201 (V14.0.0)	Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; Frame structure	C	<i>N</i> <i>I</i>	AMR interface format 2 not implemented
26.235 (V12.0.0)	Packet switched conversational multimedia applications; Default codecs	P C	<i>N</i> <i>I</i>	The video codecs are not supported. Text conversation not supported. DSR is not supported.
26.441 (V14.0.0)	<i>Codec for Enhanced Voice Services (EVS); General Overview</i>	<i>C</i>	<i>N</i> <i>I</i>	
26.442 (V14.0.0)	<i>Codec for Enhanced Voice Services (EVS); ANSI C code (fixed-point)</i>	<i>C</i>	<i>N</i> <i>I</i>	
26.444 (V14.0.0)	<i>Codec for Enhanced Voice Services (EVS); Test Sequences</i>	<i>C</i>	<i>N</i> <i>I</i>	
26.445 (V14.1.0)	<i>Codec for Enhanced Voice Services (EVS); Detailed Algorithmic Description</i>	<i>C</i>	<i>N</i> <i>I</i>	
26.446 (V14.0.0)	<i>Codec for Enhanced Voice Services</i>	<i>C</i>	<i>N</i> <i>I</i>	



Standard	Name	Compliance		Comment
	<i>(EVS); AMR-WB Backward Compatible Functions</i>			
26.447 (V14.1.0)	<i>Codec for Enhanced Voice Services (EVS); Error Concealment of Lost Packets</i>	C	N I	
26.448 (V14.0.0)	<i>Codec for Enhanced Voice Services (EVS); Jitter Buffer Management</i>	P C	N I	<i>Generic jitter buffer management is used instead of EVS JBM.</i>
26.449 (V14.0.0)	<i>Codec for Enhanced Voice Services (EVS); Comfort Noise Generation (CNG) Aspects</i>	C	N I	
26.450 (V14.0.0)	<i>Codec for Enhanced Voice Services (EVS); Discontinuous Transmission (DTX)</i>	C	N I	
26.451 (V14.0.0)	<i>Codec for Enhanced Voice Services (EVS); Voice Activity Detection (VAD)</i>	C	N I	
29.333 (V14.1.0)	Multimedia Resource Function Controller (MRFC) - Multimedia Resource Function Processor (MRFP) Mp	P C	N A	MRFP: —Interworking guaranteed only when the MRFP function is controlled through an Ericsson product. —The profile ETSIprof_MediaServer is used, refer to ES 283 031 The following functions are supported:



Standard	Name	Compliance		Comment
	Interface; Stage 3			—Play Tone —Play Announcement —DTMF Collection —Audio Conference —Multimedia Conference (except messaging), No MMCMH support —Floor Control (BFCP) —For the supported commands, packages and descriptors, refer to IWD <i>vMRF H.248 Support</i> (1/155 19-AXM 101 04/1 Uen Rev. A).
32.401 (V14.1.0)	Telecommunication management; Performance Management (PM); Concept and requirements	C	<i>NI</i>	
32.409 (V14.1.0)	Telecommunication management; Performance Management (PM); Performance measurements - IP Multimedia Subsystem (IMS).	P C	<i>NI</i>	MRFP: Octet counters not supported
46.051 (V14.0.0)	<i>Enhanced Full Rate (EFR) speech processing functions; General description</i>	<i>NI</i>	<i>NI</i>	
46.054 (V14.0.0)	<i>Test sequences for the GSM Enhanced Full</i>	<i>NI</i>	<i>NI</i>	



Standard	Name	Compliance		Comment
	<i>Rate (EFR) speech codec</i>			
<i>46.060 (V14.0.0)</i>	<i>Enhanced Full Rate (EFR) speech transcoding</i>	<i>NI</i>	<i>NI</i>	
<i>46.061 (V14.0.0)</i>	<i>Substitution and muting of lost frames for Enhanced Full Rate (EFR) speech traffic channels</i>	<i>NI</i>	<i>NI</i>	
<i>46.062 (V14.0.0)</i>	<i>Comfort noise aspects for Enhanced Full Rate (EFR) speech traffic channels</i>	<i>NI</i>	<i>NI</i>	
<i>46.081 (V14.0.0)</i>	<i>Discontinuous Transmission (DTX) for Enhanced Full Rate (EFR) speech traffic channels</i>	<i>NI</i>	<i>NI</i>	
<i>46.082 (V14.0.0)</i>	<i>Voice Activity Detector (VAD) for Enhanced Full Rate (EFR) speech traffic channels</i>	<i>NI</i>	<i>NI</i>	
<i>3GPP2 C.S0014-D (V3.0)</i>	<i>Enhanced Variable Rate Codec, Speech Service Options 3, 68, 70, and 73 for Wideband Spread Spectrum Digital Systems</i>	<i>NI</i>	<i>NI</i>	



2.5 IETF Standards

The compliance with IETF standards is shown in [Table 5](#).

Table 5 IETF Standards

Standard	Name	Compliance		Comment
		M R F P	<i>M</i> <i>R</i> <i>F</i> <i>C</i> + <i>M</i> <i>R</i> <i>F</i> <i>P</i>	
RFC 768	User Datagram Protocol	C	<i>N</i> <i>I</i>	
RFC 791	Internet Protocol	P C	<i>N</i> <i>I</i>	IP options are not supported. Fragmented packets are not supported for media.
RFC 792	Internet Control Message Protocol	C	<i>N</i> <i>I</i>	
RFC 793	Transmission Control Protocol	C	<i>N</i> <i>I</i>	Used for O&M interface.
RFC 826	Ethernet Address Resolution Protocol	C	<i>N</i> <i>I</i>	
RFC 894	A Standard for the Transmission of IP Datagrams over Ethernet Networks	C	N I	
RFC 1042	A Standard for the Transmission of IP Datagrams over IEEE 802 Networks	C	<i>N</i> <i>I</i>	



Standard	Name	Compliance		Comment
RFC 1122	Requirements for Internet Hosts – Communication Layers.	C	<i>N I</i>	Fragmented packets are not accepted. ICMP redirect is silently discarded.
RFC 1305	Network Time Protocol (Version 3)	C	<i>N I</i>	
<i>RFC 1868</i>	<i>ARP Extension - UNARP</i>	C	<i>N I</i>	
RFC 2131	Dynamic Host Configuration Protocol	C	<i>N I</i>	Compliant as a client.
<i>RFC 2046</i>	<i>Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types</i>	<i>N A</i>	<i>N I</i>	
RFC 2460	Internet Protocol, Version 6 (IPv6) Specification	P C	<i>N I</i>	User Plane: Partly Compliant. Packets containing the following types will be discarded: —Fragment —Authentication —Encapsulating Security Payload O&M and SCTP signalling: Not implemented.
RFC 2464	Transmission of IPv6 Packets over Ethernet Networks	C	<i>N I</i>	
RFC 2474	Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers	C	<i>N I</i>	
<i>RFC 2616</i>	<i>Hypertext Transfer</i>	C	<i>N I</i>	



Standard	Name	Compliance		Comment
	<i>Protocol-HTTP/1.1</i>			
<i>RFC 2976</i>	<i>The SIP INFO Method</i>	<i>N A</i>	<i>N I</i>	
<i>RFC 3261</i>	<i>SIP: Session Initiation Protocol</i>	<i>N A</i>	<i>N I</i>	
<i>RFC 3311</i>	<i>The Session Initiation Protocol (SIP) UPDATE Method</i>	<i>N A</i>	<i>N I</i>	
<i>RFC 3389</i>	<i>Real-time Transport Protocol (RTP) Payload for Comfort Noise (CN)</i>	<i>NI</i>	<i>N I</i>	
RFC 3410	Introduction and Applicability Statements for Internet Standard Management Framework	<i>N A</i>	<i>N A</i>	Descriptive Specification
RFC 3411	An Architecture for Describing Simple Network Management Protocol (SNMP) Management Frameworks	<i>N A</i>	<i>N A</i>	Descriptive Specification
RFC 3412	Message Processing and Dispatching for the Simple Network Management Protocol (SNMP)	<i>P C</i>	<i>N I</i>	Used only for alarms.
RFC 3413	Simple Network	<i>P C</i>	<i>N I</i>	Used only for alarms.



Standard	Name	Compliance		Comment
	Management Protocol (SNMP) Applications			
RFC 3414	User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)	P C	<i>N</i> <i>I</i>	Used only for alarms.
RFC 3415	View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)	NI	<i>N</i> <i>I</i>	
RFC 3416	Version 2 of the Protocol Operations for the Simple Network Management Protocol (SNMP)	P C	<i>N</i> <i>I</i>	Used only for alarms.
RFC 3417	Transport Mappings for the Simple Network Management Protocol (SNMP)	P C	<i>N</i> <i>I</i>	Used only for alarms.
RFC 3418	Management Information Base (MIB) for the Simple Network Management Protocol (SNMP)	NI	<i>N</i> <i>I</i>	
RFC 3550	RTP: A Transport Protocol for	P C	<i>N</i> <i>I</i>	Exceptions: —RTCP uses 5 s sending interval



Standard	Name	Compliance		Comment
	Real-Time Applications.			—SR, RR, SDES (CNAME) and BYE packets supported
RFC 3551	RTP Profile for Audio and Video Conferences with Minimal Control	P C	N I	Exceptions: —Only PCM A-law, PCM μ -law, G.722, and G.729 codecs are supported —Silence suppression is not supported
<i>RFC 3558</i>	<i>RTP Payload Format for Enhanced Variable Rate Codecs (EVRP) and Selectable Mode Vocoders (SMV)</i>	<i>NI</i>	<i>N I</i>	
RFC 3584	Coexistence between Version 1, Version 2, and Version 3 of the Internet-standard Network Management Framework	P C	N I	
RFC 3826	The Advanced Encryption Standard (AES) Cipher Algorithm in the SNMP User-based Security Model	P C	N I	Not implemented: —Key Localization —Password Storage
<i>RFC 3986</i>	<i>Uniform Resource Identifier (URI): Generic Syntax</i>	<i>NI</i>	<i>N I</i>	
<i>RFC 4028</i>	<i>Session Timers in the Session Initiation Protocol (SIP)</i>	<i>NI</i>	<i>N I</i>	



Standard	Name	Compliance		Comment
<i>RFC 4240</i>	<i>Basic Network Media Services with SIP</i>	<i>N</i> <i>A</i>	<i>N</i> <i>I</i>	
RFC 4291	IP Version 6 Addressing Architecture	C	<i>N</i> <i>I</i>	
RFC 4443	Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification	C	<i>N</i> <i>A</i>	
RFC 4566	SDP: Session Description Protocol	C	<i>N</i> <i>I</i>	MRFP: Refer to the SoC for 3GPP TS 29.333.
<i>RFC 4582</i>	<i>The Binary Floor Control Protocol (BFCP)</i>	<i>NI</i>	<i>N</i> <i>I</i>	
<i>RFC 4583</i>	<i>Session Description Protocol (SDP) Format for Binary Floor Control Protocol (BFCP) Streams</i>	<i>NI</i>	<i>N</i> <i>I</i>	
<i>RFC 4585</i>	<i>Extended RTP Profile for Real-time Transport Control Protocol (RTCP)-Based Feedback (RTP/AVPF)</i>	<i>NI</i>	<i>N</i> <i>I</i>	
<i>RFC 4588</i>	<i>RTP Retransmission Payload Format</i>	<i>NI</i>	<i>N</i> <i>I</i>	



Standard	Name	Compliance		Comment
RFC 4733	RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals	P C	N I	Only DTMF telephone events 0–15 are supported
<i>RFC 4788</i>	<i>Enhancements to RTP Payload Formats for EVRC Family Codecs</i>	<i>NI</i>	<i>N I</i>	
RFC 4855	MIME Type Registration of RTP Payload Formats	P C	N I	Only PCM A-law, PCM μ -law, G.722, and G.729 codecs are supported
RFC 4867	RTP Payload Format and File Storage Format for the Adaptive Multi-Rate (AMR) and Adaptive Multi-Rate Wideband (AMR-WB) Audio Codecs	C	N I	
RFC 4960	Stream Control Transmission Protocol	C	N A	MRFP; IPv6 addresses and path MTU discovery mechanism not supported
<i>RFC 5022</i>	<i>Media Server Control Markup Language (MSCML) and Protocol</i>	<i>N A</i>	<i>N I</i>	
<i>RFC 5104</i>	<i>Codec Control Messages in the RTP Audio-Visual Profile with Feedback (AVPF)</i>	<i>NI</i>	<i>N I</i>	



Standard	Name	Compliance		Comment
<i>RFC 5404</i>	<i>RTP Payload Format for G.719</i>	<i>NI</i>	<i>NI</i>	
RFC 5707	Media Server Markup Language (MSML)	N A	N I	
RFC 5952	A Recommendation for IPv6 Address Text Representation	C	N I	
<i>RFC 6184</i>	<i>RTP Payload Format for H.264 Video</i>	<i>NI</i>	<i>NI</i>	
RFC 6241	Network Configuration Protocol (NETCONF)	P C	N I	<p>—Only <running> data store is supported. Therefore <copy-config> and <delete-config> operations are not supported as they are not applicable for <running> data store.</p> <p>—XML namespaces in NETCONF request are ignored.</p> <p>—The <lock> and <unlock> operations are not supported. The MOs are implicitly locked when they are edited in an ongoing operation.</p> <p>—The remove operation is not supported for <edit-config> operation.</p> <p>—Filtering on XML attributes, namespace, structure name, and unset MO attribute for NETCONF subtree filter is not supported.</p> <p>The following capabilities are not supported:</p> <p>—XPath Capability</p> <p>—Validate Capability</p> <p>—Candidate Configuration Capability</p> <p>—Distinct Startup Capability</p>



Standard	Name	Compliance		Comment
				—URL Capability
<i>RFC 6386</i>	<i>VP8 Data Format and Decoding Guide</i>	<i>NI</i>	<i>NI</i>	
<i>RFC 6716</i>	<i>Definition of the Opus Audio Codec</i>	<i>NI</i>	<i>NI</i>	
<i>RFC 6884</i>	<i>RTP Payload Format for the Enhanced Variable Rate Narrowband-Wideband Codec (EVRC-NW)</i>	<i>NI</i>	<i>NI</i>	
https://tools.ietf.org/html/draft-ietf-secsh-filexfer-02	SSH File Transfer Protocol, version 3	C	<i>NI</i>	<i>The Performance management data can be transported to external server according to IETF draft SSH File Transfer Protocol, version 3.</i>

2.6 IEEE Standards

The compliance with IEEE standards is shown in [Table 6](#).

Table 6 IEEE Standards

Standard	Name	Compliance		Comment
		M R F P	<i>M R F C + M R F P</i>	
IEEE 802.2 (1998 Edition)	Local and metropolitan area networks.	P C	<i>NI</i>	Partly Compliant. —DIX (Ethernet II) formatted frames are supported



Standard	Name	Compliance		Comment
	Specific requirements Part 2: Logical Link Control			—LLC/SNAP not supported

2.7

GSMA Standards

The compliance with GSMA standards is shown in [Table 7](#).

Table 7 GSMA Standards

Standard	Name	Compliance		Comment
		M R F P	M R F C + M R F P	
PRD IR.92, v7.1	IMS Profile for Voice and SMS	P C	N I	For applicable parts, refer to <i>GSMA PRD IR.92 Statement of Compliance</i> (2/174 02-HSC 113 06 Uen).
<i>PRD IR.94, v6.0</i>	<i>IMS Profile for Conversational Video Service</i>	<i>NI</i>	<i>NI</i>	