

Rhino TAS for VoLTE, VoNR and VoWiFi

Rhino VoLTE TAS provides open and extendable network-hosted IMS functions for voice, video-calling and messaging over LTE, 5G NR and Wi-Fi.

MMTel (Multimedia Telephony Applications)

Delivers the core call control services for voice and video communications, as well as the supplementary services for VoLTE (equivalent to the switch and supplementary services in GSM). Rhino VoLTE TAS delivers these services in an LTE/IMS network, following the standards-based architectural blueprint for implementing VoLTE. It is also fully 5G ready to be able to offer Voice over New Radio (VoNR).

SCC (Service Centralisation and Continuity Functions)

Implements session anchoring in the IMS; terminating access domain selection; and enhanced single radio voice call continuity function (eSRVCC). SCC provides network-based circuit-switched hand-over to the 2G/3G network when there is inadequate LTE radio coverage.

IP-SM-GW

Enables sending and delivery of short messages (SMS) over IMS via LTE and Wi-Fi connections.

USSI-AS

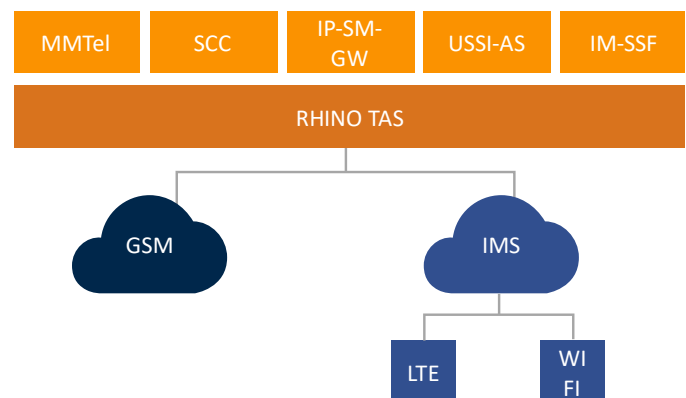
Supports USSD over IMS functionality.

IM-SSF

Enables IMS services to access IN SCP services in a GSM network.

Benefits

- » The essentials for VoLTE: Ready-to-go straight out-of-the-box for post-paid and pre-paid subscribers
- » Software product deployable as a virtualized network function in the cloud
- » Single solution for VoLTE and VoWiFi
- » Cost-effective innovation and differentiation and reduced time-to-market
- » Industry-leading Total Cost of Ownership (TCO)
- » Open: No vendor lock-in



MMTel Features

GSMA IR.92 AND IR.94 Services

GSMA IR.92 (v9.0) and IR.94 (v8.0) supplementary services required for IMS Profile for voice, video-calling and SMS:

- Originating Identification Presentation/Restriction
- Terminating Identification Presentation/Restriction
- Communication Forwarding
- Communication Barring
- Communication Hold
- Communication Waiting
- Ad-hoc Multi-Party Conference
- Conversational Video

Additional 3GPP Services

Rhino VoLTE TAS also provides additional supplementary services. These additional services include Anonymous Call Rejection, Communication Deflection, Flexible Alerting, Explicit Call Transfer and more. Please contact us for further options. Rhino VoLTE TAS includes XCAP support (Ut) to enable subscribers to manage their supplementary service settings in IMS. Rhino VoLTE TAS also provides a Ut Authentication Proxy.

Flexible Service Creation

All MMTel capabilities are built using the Sentinel OpenCreate Service Creation Framework and run on the open, carrier-grade Rhino TAS. Using Sentinel OpenCreate, customers and third party developers are free to enhance existing services, or create new advanced services.

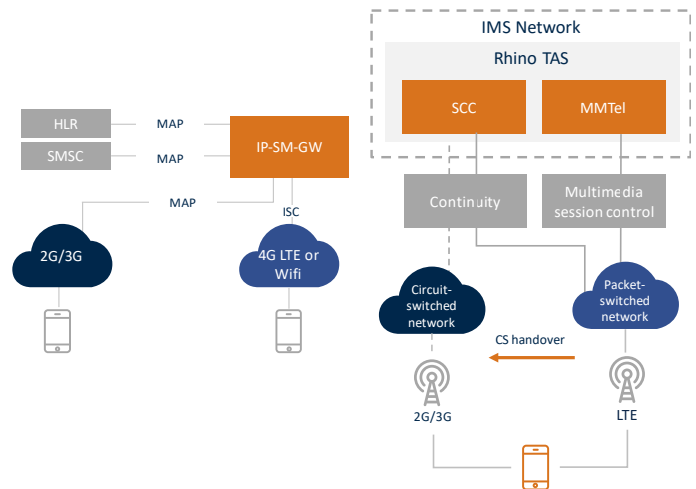
Other Rhino VoLTE TAS Features

- Support **online and offline charging (Diameter Ro, CAP, Diameter Rf, CDRs)** supporting pre-paid and post-paid subscribers in one product.
- **Connectivity and integration** – A full range of resource adapters enable connectivity options for data access and integration with other network elements, including HLR/HSS service data.
- **Carrier-grade** – Rhino VoLTE TAS utilises a multi-node clustering technology to ensure there is no single point of failure. Multiple clusters across sites may also be deployed for additional redundancy.
- **Cloud native** – Rhino VoLTE TAS is a software-based product that is designed to be deployed in a virtualized, cloud-based environment – enabling telecom operators to reap the elasticity benefits of cloud as they roll-out their telecom services.

SCC-AS Features

Terminating Access Domain Selection (T-ADS)

Selects which network and device to use to terminate the session. Rhino VoLTE TAS enables flexible customisation of the T-ADS algorithm to support sophisticated multi-domain support, including support for VoWiFi.



IMS Service Centralization

Enables consistent use of the services implemented in IMS regardless of whether call participants are connected via LTE, Wi-Fi or via the legacy circuit-switched (2G/3G) network.

Service Continuity

This is provided to enable call transfer between LTE and 2G/3G connections in the case that the subscriber moves into an area where their current mode of connection is not available. Rhino VoLTE TAS implements Enhanced Single Radio Voice Call Continuity (eSRVCC) from 3GPP Rel 10.

SCC-AS

Compliant with GSMA IR.64 (v12) IMS Service Centralization and Continuity Guidelines. The SCC-AS also fulfils the role of a VCC-AS in a CDMA network as per 3GPP2 X.S0042-D.

IP-SM-GW Features

IP-SM-GW

Supports sending and receiving of short messages over LTE. Existing SMSCs are used for message storage and for charging, however IP-SM-GW can produce additional records (CDRs) if required.

IP-SM-GW provides Transport Level Interworking as specified in IR.92 v9.0 and is compliant to 3GPP TS24.341.

Message submission uses MAP Phase 2.