

Competitive advantages :

- complete and modular solution from one unique editor which unifies SBC, IMS core and IMS application servers
- available as software running on COTS servers, in virtualized environment or in the Cirpack Cloud.
- scalable from 10k users to tens of millions subscribers
- support traditional telecom regulatory services : emergency calls, regulated interconnection, number portability.

Use cases

Cirpack IMS can be used as a core network solution in the following use cases:

Fixed network NGN modernization

Built historically on NGN architecture (i.e. based on Call Servers and Media Gateways), the fixed telephony services can be upgraded with Cirpack IMS to benefit from advanced multimedia services and open interfaces allowing communication services enrichment. Cirpack IMS also complies to recent standardization such as PacketCable2.0 providing better QoS handling.

VoLTE/ViLTE/VoWifi

Cirpack IMS supports VoLTE (Voice over LTE), ViLTE (Video over LTE) and VoWifi (Voice over Wifi) defined respectively in GSMA IR.92, IR.94 and IR.51. It also supports eSR-VCC (enhanced Single Radio Voice Call Continuity) which allows a mobile terminal losing 4G radio coverage to continue an established call under 3G/2G or Wifi coverage.

FMC

Cirpack IMS solution provides a core network solution for MVNO. In this type of deployment, subscribers benefit from a "one number service" which gathers the fixed service, e.g. a PBX service, mobile service, and Uniquity For Business, the Cirpack Unified Communication and Collaboration solution.

Cirpack IMS is a highly scalable, core network solution that enables standard compliant deployments of voice and multimedia services for fixed and mobile networks.

Based on a flexible implementation of industry standards, Cirpack IMS applies to both fixed networks (from V5.2 access network to the latest standards such as PacketCable2.0) and to mobile networks such as VoLTE or Mobile Virtual Network configurations.

Thanks to Cirpack IMS infrastructure, end users benefit from carrier grade and modern communications such as HD voice, video calls and messaging, that can interoperate with other services and networks.

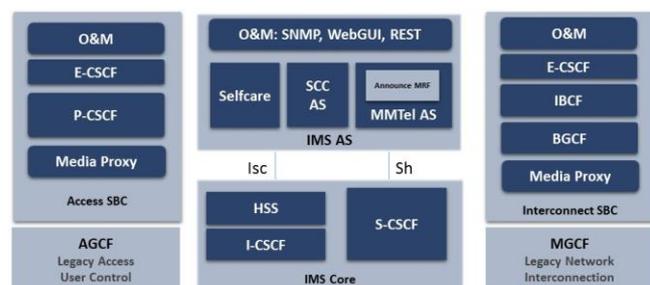
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Architecture and functions

Cirpack IMS is a complete solution, based on :

- Cirpack SBC, composed of P-CSCF, E-CSCF, BGCF and IBCF fonctions, as defined by IMS standardisation
- Cirpack IMS core, composed of I-CSCF, HSS and S-CSCF,
- and Cirpack AS

This homogeneous solution provides end user authentication, profile and service management, call control, modern telephony and multimedia services, call routing and interconnection.



Cirpack IMS architecture

Cirpack IMS core network is compliant with IMS standards such as 3GPP 24.229 ; as a consequence, operators can quickly enrich their offers with new end user services by simply adding new Application Servers according to IMS architecture.

Fully software based, the Cirpack IMS solution can be deployed on selected Commercial off-the-shelf hardwares or as a virtualized application.

Cirpack IMS solution is also highly scalable, operators can adapt to the growth of their business and extend the capacity of their solution to serve from 10k to several millions of subscribers while optimizing their CAPEX and OPEX.

Key features

Access, interconnection and Security features

- SIP, SIP-I, SIP-T support
- IMS registration control
- Topology hiding with dynamic pinholing
- SIP DDoS protection : common traffic limitation, and individual user traffic limitation
- Deep SIP packet inspection and SIP policy enforcement
- SIP header manipulation
- Encryption : TLS and sRTP
- Emergency calls with fixed or mobile localization (IETF PIDF-LO support from RFC 5139).
- IP white list per user
- Priority subscriber regulation
- REGISTER frequency manipulation
- QoS management/interconnection to PCRF
- Phone number/SIP address normalization/manipulation
- Support of non-SIP terminals : V5.2, MGCP deployment with AGCF
- Support of non- SIP terminals : MVNO with SIP forced routing
- Rx interface to EPC

Core network features

- SIP forking
- User and User Service profile management
- Service Orchestration based on Initial Filter Criteria
- 3rd party registration for advanced AS scenario
- Multimedia telephony services (MMTel) with embedded MRF
- Hunting group
- Restriction
- Subscriber suspending
- Malicious call identification
- Routing on Tel-URI and SIP-URI, enum interface
- PBX trunking, including SIP connect2.0 support
- SMS over SIP
- eSR-VCC support : ATCF/ATGW and SC AS for 4G to 3G and VoWifi handover
- Number portability
- Offline charging (CDR and Rf) and on line charging (Ro)

System management

- Web based GUI for whole solution configuration and monitoring
- REST API for provisioning
- Real time fault and performance management, real time trace tool
- SNMP traps
- Selfcare server allowing end-user to configure their services

About Cirpack

Cirpack is a leading software company that provides "Full IP" scalable and multi-service IP Unified Communications and Core Network solutions for the use of corporates, telecommunications operators and service providers.

Cirpack solutions help telecom operators to address both "Home" and "Enterprise" markets.

Cirpack product lines are based on highly innovative technological solutions designed for Unified Communications (Voice, Video, Data, WebRTC, Softphone, Fixed Mobile Convergence ...) and Core Network (Softswitch and IMS, SBC, SIP Trunking, Centralized routing ...) and associated professional services.

Cirpack technologies are marketed both in Licence and SaaS mode and benefit of a 24/7 support. Cirpack has offices in France, Germany, Mexico, Lebanon and Vietnam. Cirpack operates via a VAR network. More than sixty million business and residential customers daily enjoy the benefits of Cirpack solutions and services through strong relationships with over 120 customers acting on three continents.

Renowned for robustness, scalability and reliability of its solutions, Cirpack is the ideal partner, offering agility and responsiveness to support its customers in their development strategies.

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