

iCore® HLR/HSS

GSM/3G/4G Centralized Subscriber Database

The iCore Home Location Register/Home Subscriber Server (HLR/HSS) provides a comprehensive, centralized subscriber database management solution across current and next-generation wireless technologies. With the integrated support of an HLR and Authentication Center, and leveraging the patented multi-technology architecture of the iCore Network Center, the iCore HLR/HSS supports subscribers from GSM, GPRS/EDGE, UMTS, LTE and SIP-based networks from a single platform.

As networks evolve from TDM-based technology to the next generation of IP networking, the subscriber profile is the key element to convergence and support across traditionally disparate network technologies. The iCore HLR/HSS bridges the gap. The multi-technology profile structure allows users and devices to move seamlessly from one network to another, all the while experiencing a single, consistent feature set. Whether bridging: 2G (GSM) and 3G (UMTS); SIP Hosting (WiMAX/Wi-Fi); dual technologies (GSM); or, fixed-mobile convergence (FMC) across 2G, 3G and VoIP (wireline and wireless), the iCore HLR/HSS has the flexibility to accommodate the management and configuration of multiple subscribers' profiles into an IP-centric architecture.

Protocol Interworking

The key to multi-technology support is the ability to provide a consistent, rich feature set to subscribers from any technology type by applying and communicating the proper protocol to the serving network, regardless of type, from a single profile. This also allows access to the IMS domain and its vast array of services and features without compromising data integrity while navigating the different standards among networks. Data integrity and QoS are maintained throughout the networks to rival any industry standards. The multitechnology core of the iCore HLR/HSS incorporates Tecore's patented software-defined architecture, which applies the appropriate external connectivity based on the subscriber type, while operating internally through common application processing. The result is an industry-leading any-to-any connection model across protocol and technology.



FEATURES AND BENEFITS

- ▶ The most compact and cost-effective solution available on the market
- ▶ Standards-driven support for HSPA/ HSPA+, LTE, GSM, and SIP networks from a common platform
- ▶ Integrated into iCore or available as a standalone system
- ▶ Converged IP-centric database for HLR/HSS with redundancy for HA support
- ▶ Standard interface to AAA servers
- ▶ Plug-ins for CORBA interface for customized AS for database access and billing
- ▶ Supports standard-based authentication and data encryption
- ▶ OAM&P that can be accessed remotely or locally for easy user-friendly configuration and profile management
- ▶ Network specific roaming controls
- ▶ Multi MCC/MNC support

ICORE HLR/HSS Specifications

GENERAL

Multi-Technology Capabilities	HSPA/HSPA+, LTE, GSM, SIP
Operating System	Linux-based
Interface Capabilities	CSCF, SIP-AS, and IN-SSF/SCF
Subscriber Capabilities	Scalable, Modular, Unlimited
Signaling Capabilities	3GPP IMS, GSM MAP V1/2/3, ANSI-41 Rev A/B/C/D, SIP, SIGTRAN, SS7 ITU and ANSI
Protocol Stack Capabilities	SS7: MAP, TCAP, SCCP, MTP (ANSI & ITU), SIGTRAN: M3UA, SUA, SCTP SIP, TCP/UDP, IP RADIUS, DIAMETER
Services	Location Management, Fault Recovery, Authentication, Call and SMS handling AoCI, AoCC, BAIC, BAIC-ROAM, BAOC, BOIC, BOIC-exHC CFU, CFB, CFNRy/CFD, CFNRc/CFNA, HOLD, CW, CLIP/CNIP, CLIR/CNIR, COLP, COLR, CNAP (optional) MPTY, CUG, ECT, ODB GPRS MAP version negotiation Mobile-initiated and Network-initiated USSD Handling AuC algorithms: GSM/UMTS MILENAGE, XOR, COMP128-1, 2, 3 CAMEL subscription: Phase 2, Phase 3, Phase 4
Roaming	Multi-IMSI low-cost roaming Local & International Virtual Numbers Steering of Roaming (Operator-controlled PLMN selection) Operator-controlled IMSI selection Multi-Country HLR numbers, Multi-PLMN Support USSD Callback VLR number forwarding Dynamic MSISDN & IMSI Pooling HLR MAP Proxy Services



Standalone or Integrated

The iCore HLR/HSS is in full compliance with 3GPP IMS for GSM, GPRS/EDGE, UMTS, LTE and SIP subscribers. These capabilities can be supported whether it is integrated as part of the complete iCore Network Center, or whether it stands alone on its own server blade. Scalability of the HLR/HSS gives operators a wide range of different configuration models, starting from as few as fifty thousand subscribers and building into the millions. In any model, the HLR/HSS feature sets remain consistent and robust, and all network interfaces will be supported.

