



A new generation of scalable virtualized, software-based 4G LTE, 3G and GSM core network solutions with VoLTE / VoIP / CSV, packet data and SMS. Deployable both standalone and with operator interconnect, and architected in alignment with 5G principles including network slicing and control user plane separation (CUPS).

ECX Core is a multi-standard fully-featured virtualized cellular core network solution which provides ultimate deployment flexibility for service providers and systems integrators. It can run as a 4G LTE evolved packet core (EPC); as a 3G UMTS or GSM core network; or as all three simultaneously.

ECX Core provides all standards compliant functions required of a 3GPP 4G EPC, specifically the MME, SGW, PGW, PCRF and HSS. It is architected in alignment with Edge Computing principles, including separation between user and control plane functions and advanced IoT driven architectures supporting network slicing and secure local breakout. Features such as S1/X2 handover, dedicated bearers, VoLTE, CS fallback (CSFB), SMS, inter-RAT and SRVCC are fully supported.

Because it supports a full set of flexibly configured EPC functions, it reduces costs and integration complexity, while offering configuration options that enable powerful new network features. As well as supporting a distributed 'edge hosted' architecture, ECX Core scales to support millions of connected users in MVNO deployments.

Multi-standard support reduces costs and integration complexity, while the ability to freely choose feature configurations permits powerful new network features, such as mobility between RAN technologies (including Wi-Fi with SRVCC) and SMS over 4G.

ECX Core supports both integrated P-GW and remote P-GW architectures, allowing data to be placed directly on a local LAN or routed to a central P-GW.

HSS/HLR functionality enables the creation of standalone private networks. Alternatively, ECX Core can interconnect to MNO infrastructure using Diameter-based capabilities or a MAP/M3UA interface, creating a seamless service transition.

Based on Quortus' award winning EdgeCentrix edge computing technology, ECX Core provides the ultimate cellular core network solution for deploying at the network edge or part of a public, private or hybrid centralized cloud core infrastructure deployment.

ECX Core runs on a broad range of hardware, from embedded ARM processors to enterprise CPE and cloud-based servers. It provides the foundation for a range of Quortus

products, including ECX Enterprise, ECX Tactical for public safety and emergency service applications, and ECX Sentinel for managed access requirements.

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## Highlights

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- Virtualized 3GPP-compliant evolved packet core (EPC) Embedded IMS / VoLTE
  - Fully featured: deployable software for commercial, private or government networks
  - Multi-technology: 4G LTE, 3G UMTS, GSM; voice and packet data
  - Radio agnostic: supports a wide range of 3rd party GSM, 3G and 4G radios
  - Multi-platform: functions virtualized in software, runs on x86, ARM and MIPS64
  - Scalable: runs in cloud, at edge or embedded
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# Core



## Key facts

<b>Integrated 3GPP core elements</b>	HSS/HLR/AuC, MSC (Gateway and Serving), MME, SGW, PGW SMSC, SGSN/GGSN, PCRF luh femto gateway for UTRAN. Software BSC for GERAN.
<b>Roaming interfaces</b>	S8 / S6a Diameter, MAP (3GPP 29.002) over M3UA connectivity, C and D interfaces to external HLR and SMSC. SIP with extensions as part of ECX Core.
<b>Billing Interfaces</b>	Post Paid: CDRs Pre-Paid: Gy/Ro
<b>CS/voice services</b>	Calls handset to handset, including any technology to any technology (ie any user to any user on any of 2G, 3G, VoLTE, IMS, SIP). MO and MT Calls between handset and external SIP server. Call transfer (ECT), call hold & retrieve, call waiting. Integrated IMS server for VoLTE support.
<b>SIP support</b>	UAC/UAS, SIP Trunking, SIP-I (ISUP) and IMS. Each attached handset/MSISDN modelled as a SIP client. REGISTER for PBX integration. NOTIFY for message waiting indications. REFER for attended call transfer.
<b>Management (OAM) interfaces</b>	Command line tool, SOAP XML interface and web screens and SNMP. Remote syslog output.
<b>Server hardware</b>	X86, ARM, MIPS
<b>Operating System</b>	Linux
<b>Operating environment</b>	VirtualBox, VMware, VMware vSphere, VMware OpenStack, KVM, Docker, plus more