



Enterprise

Virtualized 4G network core optimized to enable service offerings tailored for enterprises. Operates standalone or integrated with existing cellular infrastructure, enabling edge-based services, local voice and data offload, and flexible PBX integration

Quortus Enterprise consists of a complete set of virtualized implementations of 4G LTE core entities. It enables the definition and delivery of a broad range of edge-based services, based on mobile edge computing (MEC) principles.

By moving intelligence to the network edge, Quortus Enterprise allows communications service providers to offer integrated solutions to enterprise customers. It is suitable for a variety of deployment scenarios, including standalone or MNO-integrated "intelligent RAN" architectures, and can be hosted in the cloud, on customer premises equipment, or tightly integrated with the radio itself.

Quortus Enterprise allows 4G voice and data services (2G and 3G services are optional additions) that integrate gracefully with IT infrastructure. It includes an integrated HQ VoIP feature providing dedicated bearer support for regular SIP calls (a lightweight IMS for VoLTE calls is also available) and enables both LIPA-and SIP-style offload, so that cellular handsets can act as extensions on the local PBX, with enterprise / macro mobility and full feature

transparency; while data services can be provided seamlessly via the local LAN or cellular network. Thus, providing guaranteed coverage and capacity solely for those internal users with the added security benefits of keeping all the traffic local.

Quortus Enterprise provides secure voice/data offload, signaling aggregation and mobility offload functions. It can be used with any 4G radio technology, allowing advanced features such as CSFB and SRVCC.

With a split control / user plane architecture, Quortus Enterprise aligns with MEC principles, creating an IT-style service platform at the network edge, and allowing operators to harness capabilities such as location and presence awareness, fixed-mobile convergence, third party applications and web services, very low latency, and big data analytics.

As well as providing a coverage and offload solution for offices and business other indoor facilities, Quortus Enterprise offers an ideal solution for organizations in the maritime, mining, rural/remote facilities and oil & gas sectors.

The solution runs on a broad range of hardware, from embedded ARM and MIPS processors to MEC appliances, enterprise customer premises equipment and x86-based cloud-based servers.

Highlights

- 4G virtualized core
 - MEC-aligned: split control / user plane architecture
 - Suitable for cloud hosted or on-premise deployment
 - Standalone or MNO-integrated
 - Lightweight embedded IMS for VoLTE support available
 - PBX integration: cellular handsets appear as PBX extensions with feature transparency
 - Radio agnostic
 - Allows CS fallback, high mobility, SMS over LTE
 - Small footprint high performance application means minimal hardware requirements
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Key facts

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| What's included | Quortus 4G Core ECX-FEAT-SIPMON - High Quality Voice over SIP Feature License ECX-FEAT-SIP - External SIP Interface ECX Feature License (per SIP Interface) |
| Optional Features | ECX-FEAT-DIA - External Diameter Interface Quortus Feature License ECX-RTUEXT-2G - ECX Multi-Technology License Extension for 2G ECX-RTUEXT-3G - ECX Multi-Technology License Extension for 3G ECX-FEAT-IMS - IMS / VoLTE ECX Feature License ECX-4G-RTU-MEC-UP-FULL-P – User plane scaling and local MEC breakout ECX-FEAT-VTCODE - Voice Transcoding ECX Feature License ECX-FEAT-MAP - External MAP Interface ECX Feature License ECX-FEAT-HA - High Availability (HA) ECX Feature License ECX-RTU-LS-FULL-P - ECX Server Hosted License Server RTU Full License |
| Integrated core elements | HSS, MME, SGW and PGW |
| CN side interfaces | SIP/RTP for voice, SGI (for packet data) |
| Management (OAM) interfaces | Command line, SOAP XML interface, Web screens, SNMP, Remote syslog output. |
| IP interfaces | User plane data drops directly to local LAN (SGi interface), IPv4 or IPv6. |
| External interfaces | SGs interface to CS VLR for SMS and legacy mobility. Interface to external HSS (DIAMETER/S6a) |
| Authentication, integrity and ciphering | EIA1 (SNOW) for integrity protection. Ciphering available subject to radio support |
| HSS per-user session control | Configurable UL/DL AMBR thresholds, and EPS QoS/QCI configurable for GBR and non-GBR sessions |
| Packet gateway features | Multiple APN and PDP address pools. Built-in PGW NAT ability to ease IP routing management IP traffic placed on LAN Multiple bearers per UE |
| Voice interfaces | Embedded IMS / P-CSCF, allowing localized VoLTE for 'CS' offload SIPV2 UAC (REGISTER, INVITE, REFER, NOTIFY). Local call switching to IP-PBX, short-code dialing. MO and MT calls. Offload based on MNO controlled filters on dialed digits DTMF: RFC2833, in-band or SIP INFO. Call waiting, transfer, hold & retrieve SS services. |
| Subscription management | Local HSS/AuC allows for local-use only users, similar to 'DECT'. Other users managed and authenticated via S6a/S8 to home PLMN. |
| Management (OAM) interfaces | CLI, Web GUI, SNMP and SOAP/XML for automated access counters and KPIs. |
| Server hardware | x86, ARM, MIPS |
| Operating System | Linux (typically CentOS 6 32-bit & 64-bit or CentOS 7 64-bit) |
| Operating environment | VirtualBox, VMware, VMware vSphere, VMware OpenStack, KVM, Docker, plus more |

| Benefits to Operators | Benefits to Enterprises |
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| <ul style="list-style-type: none"> Enables integrated cellular / IT services Expands MNO "channel" to 3rd-party service and app providers Lower capex & opex due to reduced load on the core Improved customer satisfaction; less churn New revenue streams from enabling access to premium enterprise services Minimizes impact on main core network | <ul style="list-style-type: none"> Secure access to enterprise voice and data services from controlled mobile devices Improved user experience with dedicated indoor capacity and tailored QoS More efficient employee working methods, increased user satisfaction More flexible device range than other internal communication systems Deal with an integrated communications service provider |