

aCore:Comprehensive LTE Core Network

Airspan's aCore system is the Long Term Evolution (LTE) Evolved Packet Core (EPC) enabling intelligent, reliable, rich services and security for the fourth generation operators.

Evolved Packet Core

The EPC is designed to provide an all-IP, flat architecture which provides high throughput and reduced latency. EPCs reduce costs and support real-time media-rich services with enhanced quality of experience while also providing interworking with legacy 2G/3G networks connected via SGSN. The EPC controls all of the components of a 4G network including macro, micro and pico base stations and the user devices they communicate with.

The EPC provides enhanced service control, advanced provisioning and ensures efficient use of network resources. The EPC components provide the functionality of access control, packet routing and transfer, mobility management, security, radio resource and network management. The aCore EPC is an integrated solution consisting of MME, Serving GW, PDN GW, HSS and PCRF components, or any combination of these, providing a single box fully functional solution. Airspan's aCore is a low-footprint LTE mobility platform supporting from 50 up to 200,000 simultaneous attached subscribers (active and idle), and offers one of the best performance-to-price ratios in the industry.

A Single Box EPC

aCore is a state-of-the-art family of products, enabling the comprehensive management and operation of LTE networks. aCore supports a wide range of networks including very small, rural networks; large, urban networks; specialized industrial applications; or anything in between.

aCore is a single component which integrates a large number of capabilities to fully manage the functionality of every aspect of a mobile, wireless network. All EPC modules can be located in a single box or separated according to network operator requirements.

aCore enables system management including fault management, configuration, monitoring, performance and security. It is an easily scalable, seamless EPC solution to fit the needs of any LTE network operator.



aCore 10xx



aCore 20xx



aCore 30xx

Interfaces

- S1-MME (eNodeB and MME)
- S1-U (eNodeB and S-GW)
- S1-C (MME and eNodeB)
- S5/S8 (S-GW toward P-GW)
- S6a (MME and HSS)
- S8 (S-GW in VPLMN and P-GW in HPLMN)
- S10 (between MMEs)
- S11 (MME and S-GW)
- SGi (P-GW and packet data network)
- Rx (PCRF towards AF)
- Gx (PGW towards PCRF)
- Gz (SGW/PGW towards CDF)
- Gn (PGW [functioning as GGSN] to SGSN)
- S2a (PGW towards SaMOG)
- S2b (PGW towards ePDG)

aCore Differentiators

- Multi-scenario deployment – Support for static, nomadic and mobile subscribers ranging from 50 to 200,000 in number.
- Low-footprint, low power consumption, scalable LTE Mobility Platform
- Distributed Architecture – Flexible licensing and low costs allows distributed architecture according operator needs
- Optimized CapEx – Complete EPC network components in a single Network Element (single binary). Components can be enabled/disabled as per deployment needs.
- Flexible Licensing model based on number of subscribers.
- Multiple combinations to serve varied subscriber ranges
- Easily scalable – low up-front capital investment; upscale after building user base
- Software-based upgrade model – uses same hardware to support higher number of subscribers
- Easy Interoperability – Exposes open standard interfaces enabling quick interoperability with standards-based peer vendor nodes.
- Easy Manageability – The 'signal in a box' solution reduces the complexity of the network layout and presents an easy to manage device with CLI/SNMP/GUI/Web.

aCore 10xx - For small deployments up to 5k subscribers

Standard Server, Dual Power Supply, 4 x 1 GB Interfaces, Redundancy support

aCore 20xx - For medium deployments of 6k-20k subscribers

Carrier Grade 2 Slots aTCA Chassis, NEBS-3 / ETSI Compliant, Long life support
Dual AC or DC power option, Redundancy support, 10 GB Interface

aCore 20xx - For large deployments of >20k

Carrier Grade aTCA Shelf (6 or 14 Slots), Data processing cards, N+1 Data processing card redundancy, One or two shelf manager, one or two switches, RTM for 1GbE, 10GbE and Telco clock support, NEBS-3 / ETSI compliant, Long life support, Two redundant DC power entry modules (PEM) - (-40V to -72V DC), Telco alarms (fuse failure, reverse voltage indicator, etc)
4 x hot-swappable fans, front to rear cooling, 10 GB Interface per blade

For full component features please visit www.airspan.com/acore/