

Xcore (LTE EPC Network Emulator)

Test solution for all the phase of LTE eNodeB and Small cell development and roll out

Xcore emulate LTE evolved packet core network on a sing PC to provide all the testing phase of LTE eNodeB and Small Cell development and roll out. It supports key functions of Mobility Management Entity (MME), Serving Gateway (SGW), PDN Gateway (PGW), Home Subscriber Server (HSS), and Policy and Charging Rules Function (PCRF).

Xcore can be used to

- Simulate MME, SGW, PGW, HSS, and PCRF
- Develop, test, and demonstrate eNB and HeNB without a real network connection

Xcore is suitable for

- LTE small cell manufacturers
- LTE operators

Available tests with Xcore

- E2E or throughput test: FTP, IPERF (UDP, TCP), and ping
- QoS test
- Handover test
- All application tests with application servers

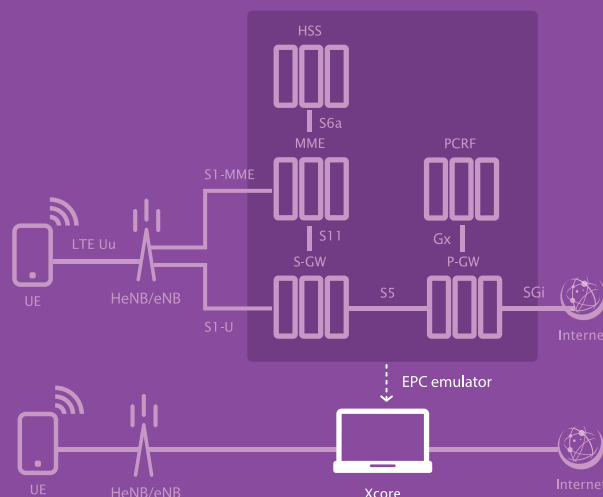
Features

- Emulating key functions of 3GPP Evolved Packet Core network (EPC)
 - Support up to 128 UEs
 - Support up to 8eNBs or HeNBs
 - Support up to downlink 100Mbps and uplink 20Mbps with 20MHz bandwidth
- Release9/10 LTE standard spec compliant
- Configuration
 - System parameters of address of UEs, eNBs or HeNBs, and Xcore
 - Protocol parameters of PLMN, PDN, and QoS
 - USIM information database
- Display
 - Call flow
 - Real time signaling message data
 - Data throughput measured at the Xcore (per eNB, HeNB, UE, and EPC)
- Provide logging data for whole test duration (for example, a week)
- Graphic user interface

Benefits

- Easy to use and configure
- Economical, powerful, and intuitive to develop with high returns on investment
- Extensive real time data logging and capture with visualized analysis

Xcore System Configuration



Implemented items on Xcore related to S1 interface

| Item | |
|------|--------------------------------------|
| S1AP | E-RAB Management |
| | Context Management |
| | Handover |
| | Paging |
| | NAS Transport Management |
| | UE Capability Information Indication |
| | Trace & Location Reporting |
| GTP | User Data Transcient |
| SCTP | S1AP Signaling Data Transcient |

Implemented items on Xcore related to Uu interface

| Item | |
|-----------------|---|
| EMM | Authentication |
| | Security Mode |
| | Identification/EMM Information |
| | Attach/Detach |
| | Tracking Area Update |
| | Service Request/Paging |
| ESM | Default EPS Bearer Context Activation |
| | Dedicated EPS Bearer Context Activation |
| | EPS Bearer Context Modification |
| | EPS Bearer Context Deactivation |
| | PDN Connectivity/PDN Disconnect |
| ESM Information | |

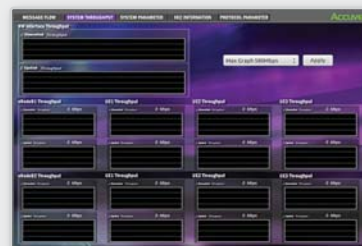
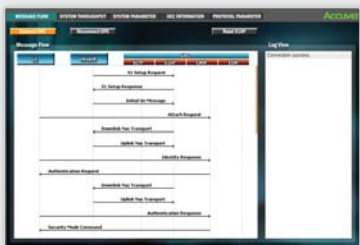
Xcore (LTE EPC Network Emulator)

Implemented EPC Protocol standard of Emulator

| Classification | Standard | Contents |
|----------------|----------------|---|
| lu interface | 3GPP TS 29.281 | • General Packet Radio System (GPRS) Tunneling Protocol User Plan (GTPv1-U) |
| | 3GPP TS 36.413 | • Evolved Universal Terrestrial Radio Access (E-UTRA); S1 Application Protocol (S1AP) |
| | IETF RFC 4960 | • Network Working Group, Stream Control Transmission Protocol |
| S1 Interface | 3GPP TS 29.273 | • Evolved Packet System (EPS); 3GPP EPS AAA interface |
| | 3GPP TS 24.301 | • Non-Access-Stratum (NAS) protocol for Evolved Packet System (EPS); Stage 3 |
| | 3GPP TS 24.008 | • Mobile radio interface Layer 3 specification; Core network protocol; Stage 3 |

System Requirement

| Item | Minimum Requirements | Recommended Requirements |
|------------------|--|--|
| CPU | Intel i5 2.6GHz or higher processor | Intel i7 2.2GHz |
| Monitor | 1024 * 768 or above | 1600 * 900 |
| RAM | 4GB or above | 8GB or above |
| Hard Drive | 40GB or larger hard disk for collecting data | 80GB or larger hard disk for collecting data |
| Operating System | Ubuntu 12.04 (32bits) | Ubuntu 12.04 (32bits) |



Regional offices

Hong Kong (Head Office)

Accuver APAC
Tel: +852 2210 7004
Fax: +852 2210 7017

Enquiries:
sales.apac@accuver.com
support.apac@accuver.com

United Kingdom

Accuver England
Tel: +44 (0)1895 876125
Fax: +44(0)1895 876338

Enquiries:
sales.emea@accuver.com
support.emea@accuver.com
http://support2.accuver-emea.com

Poland

Accuver Poland
Tel: +48 22 3702518

Enquiries:
sales.emea@accuver.com
support.emea@accuver.com
http://support2.accuver-emea.com

Japan

Accuver Japan
Tel: +81-3-6430-2580
Fax: +81-3-6430-2589

Enquiries:
sales@accuver.jp
support_aj_1@accuver.com
http://www.accuver.jp/support_login.html

Korea

Innowireless Co Ltd
Tel: +82 31 788 1700
Fax: +82 31 705 0712

Enquiries:
sales@accuver.com

USA

Accuver Americas
Tel: +1 469 241 6100
Fax: +1 469 241 6199

Enquiries:
sales.usa@accuver.com
support.usa@accuver.com
http://help.usa.accuver.com/helpdesk