



TLC Solutions Inc.  
USER FIRST TECHNOLOGY

TLC SOLUTIONS, INC.  
PRODUCTS & SERVICES

WIRELESS NETWORKS

SYSTEMS INTEGRATION

PRODUCT DEVELOPMENT

CUSTOM FABRICATION

OTHER PRODUCTS  
AVAILABLE

- 5G NETWORKS
- LTE NETWORK
- GSM NETWORK
- UMTS NETWORK
- EVDO NETWORK
- CDMA NETWORK
- MULTI-STANDARD CORE NETWORK
- CHATTERBOX CELLULAR TRAFFIC GENERATORS



## LTE (4G) ENODEB NETWORK

Field Deployable  
Suitcase Enclosure



- Supports any FDD or TDD LTE band
- Swappable Filter Boxes available
- Long Range: Up to 15km
- Easy-to-use, simple management GUI
- Customizable form factors including Desktop, Suitcase or Rack Mount versions available
- Multiple Power Amplifier options—wideband or fixed

TLC Solutions' LTE eNodeB is the smallest, fully-specified eNodeB solution on the market today and is available in a number of different form factors and with a variety of options.

It is ideal for supporting remote, rural, tactical, public safety, and homeland security applications.

The TLC LTE eNodeB is software defined and supports the choice of any of the LTE FDD and TDD Bands. Frequency can be changed **in the field** with a GUI command and swapping of a field-replaceable filter.

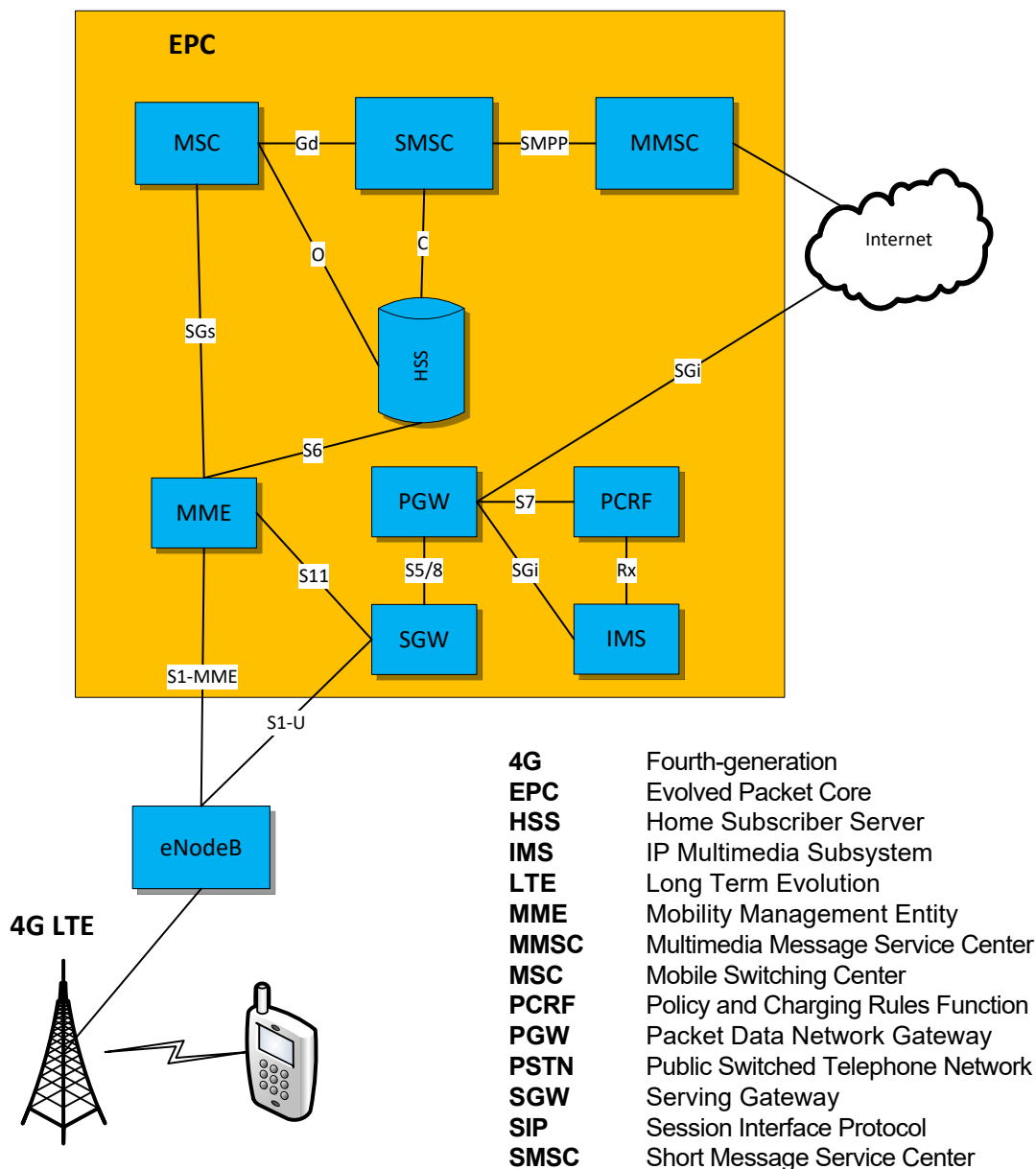
Desktop Lab System



## EVOLVED PACKET CORE (EPC)

The EPC provides aggregation of multiple eNodeB's (base stations) and routing to public data networks. It is composed of four network elements: the Serving Gateway (SGW), the Packet Data Network Gateway (PGW), the MME and the HSS. It can be embedded with the eNodeB or provided on a stand-alone server.

The SMS, MMS, and IMS services shown below are available as options.



## 4G LTE FDD CELLULAR FREQUENCY BANDS

LTE Band	Uplink MHz	Downlink MHz	LTE Band	Uplink MHz	Downlink MHz
Band 1	1920-1980	2110-2170	Band 22	3410-3490	3510-3590
Band 2	1850-1910	1930-1990	Band 23	2000-2020	2180-2200
Band 3	1710-1785	1805-1880	Band 24	1626-1660	1525-1559
Band 4	1710-1755	2110-2155	Band 25	1850-1915	1930-1995
Band 5	824-849	869-894	Band 26	814-849	859-894
Band 6	830-840	875-885	Band 27	807-824	852-869
Band 7	2500-2570	2620-2690	Band 28	703-748	758-803
Band 8	880-915	925-960	Band 29	N/A	717-728
Band 9	1749-1784	1844-1879	Band 30	2305-2315	2350-2360
Band 10	1710-1770	2110-2170	Band 32	N/A	1452-1496
Band 11	1427-1447	1475-1495	Band 65	1920-2010	2110-2200
Band 12	699-716	729-746	Band 66	1710-1780	2110-2200
Band 13	777-787	746-756	Band 67	N/A	738-758
Band 14	788-798	758-768	Band 68	698-728	753-783
Band 15	1900-1920	2600-2620	Band 69	N/A	2570-2620
Band 16	2010-2025	2585-2600	Band 70	1695-1710	1995-2020
Band 17	704-716	734-746	Band 71	663-698	617-652
Band 18	815-830	860-875	Band 74	1427-1470	1475-1518
Band 19	830-845	875-890	Band 75	N/A	1432-1517
Band 20	832-862	791-821	Band 76	N/A	1427-1432
Band 21	1447-1462	1495-1510	Band 85	698-716	728-746

Custom bands available upon request

## 4G LTE TDD CELLULAR FREQUENCY BANDS

LTE Band	Frequency Range
Band 33	1900-1920
Band 34	2010-2025
Band 35	1850-1910
Band 36	1930-1990
Band 37	1910-1930
Band 38	2570-2620
Band 39	1880-1920
Band 40	2300-2400
Band 41	2496-2690
Band 42	3400-3600
Band 43	3600-3800
Band 44	703-803
Band 45	1447-1467
Band 48	3550-3700
Band 49	3550-3700
Band 50	1432-1517
Band 51	1427-1432
Band 52	3300-3400
Band 53	2483-2495
Custom bands available upon request	

## ABOUT TLC SOLUTIONS, INC.

TLC Solutions is the leader in providing secure wireless network solutions designed specifically for portability, ease-of-use and tactical communications applications across a variety of standards including 2G, 3G, 4G, 5G, CDMA, and Radio technologies.

As a small business with expertise in systems integration, RF and network engineering, hardware and software development, and custom fabrication, TLC has been producing cutting-edge communications solutions and providing outstanding support to its Government and DoD customers since its inception in 2003.

For more information on any of our products or services please visit us on the Web at:  
[www.toplevelcom.com](http://www.toplevelcom.com)



3RU Rackmount Chassis

Backed by TLC Solutions' world-class integration and support services, the TLC LTE eNodeB is self-contained and can be ruggedized to survive some of the harshest weather conditions.

## SYSTEM SPECIFICATIONS

### 4G LTE eNodeB:

- Up to 64 Simultaneous users
- 45 Mbps UL
- 150 Mbps DL
- 3GPP Rel. 9/10/11 compliant
- Any FDD or TDD LTE operating band
- Up to 15 km

### Output Power Options:

- Various options available up to 20W

### Input Power

- 110-240 VAC 50/60 Hz
- 10V-48VDC (Optional)

### Temperature

- Operating -5° C to +45° C
- Storage -40° C to +85° C

### Humidity

- Operating 0% to 95% Non-condensing

### Dimensions

- Depends on configuration

### Weight

- Depends on configuration

### Network Interface Options

- 1 Gbps Ethernet



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