

Lemko 4G LTE/5G – X5™ ODC™

Lemko Corporation's X5™ is a High Power Portable Smart On-Demand Cellular (ODC™) System based on the 4G LTE/5G solution that takes advantage of Lemko's patented Distributed Mobile Architecture (DMA™).

The X5™, High Power Portable ODC, highlights Lemko's unique approach that virtualizes the EPC and IMS core at each eNodeB. This places the mobility anchor at the wireless mobile broadband network's edge, eliminating the need for data to traverse to a centralized core via tunneling. The self-enclosed unit includes the virtualized EPC and eNodeB and is ideally suited for outdoor light pole or power line pole deployments.

A single X5™ ODC provides an island of – voice (VoLTE), SMS, high speed data, and video call – coverage. Multiple X5™ Smart ODCs form a scalable Mesh Network for larger coverage area or higher capacity – make everything on the pole even inter poles connections.

The X5™ provides up to 40 watts of power and 2 x 20 MHz bandwidth in the 4G/LTE or 5G spectrum for extended coverage and data speeds yet is compact enough to be deployed.



Key Benefits:

- X5™ is the most portable and mobile 4G/LTE or 5G solution available operating at speeds up to 120 KM/Hour
- Embedded LTE-over-Satellite that eliminates latency issues and enables higher-throughput
- Enablement of LTE mobility anchors at the wireless mobile broadband network's edge
- OPEX elimination of the need for data to traverse to a centralized core via tunneling
- High RF Power transmitters (up to 80 watts) extends range to 14 Km
- Support Carrier Aggregation (CA) bandwidth capability delivers the fastest 4GLTE or even 5G data speeds
- Compact design and rugged enclosure is perfect for UAV and UAS deployments
- Broad operating temperature and humidity ranges plus IP65 (Waterproof/Dustproof) ratings allowing for deployment in the harshest of environments

Software Specifications

- Cellular radio eNodeB
- MME, SGW, PGW, EPS
- Full cellular IMS core (VoLTE)
- DMA™ equipped
- 4GLTE/5G over Satellite
- HSS subscriber database, and authentication
- SMS
- High speed data – up to 350 Mbps
- Video calls
- 4G 3GPP compliant LTE air interface
- In-Band mesh networking
- Extended range

Product Specifications

PERFORMANCE INDICES

Working Frequency

4GLTE/5G Band 28 or Available in all Commercial Frequencies

Working Bandwidth

2 x 5MHz, 2 x 10MHz, 2 x 15MHz, & 2 x 20MHz

Capacity

Single Unit: 150Mbps DL / 50Mbps UL @ 20M

Up to 256 active users;

14Km radius coverage (depends on RF Environment)

Full ODC functions with In-band backhaul

Single 1G BaseT Ethernet Connection

Security Call Supported

Mobility

≤ 120 Km/h

Output Power (TOC)

80W (2 x 40W)

Receiver Sensitivity

-105dBm

Synchronization Mode

GPS, IEEE1588

PHYSICAL INDICES

Weight (DC)

< 28.6lb or < 13Kg

POWER INDICES

Power Supply

-48V DC or 110/220 VAC Adapter

Dimension (HxWxD)

17 x 10.8 x 8.5 (in)

432 x 240 x 190 (mm)

POWER CONSUMPTION

Power Dissipation

180W@100% RF load LTE

ENVIRONMENT INDICES

Ground

≤5 Ω Earth resistance can be less than 10Ω in lightning-less area with less than 20 lightning storms a year

Storage

Indoor pack depositing
Temperature: -45°C to +70°C
Relative Humidity: 5% to 98%

National/International Standard

ETSI EN 301 489-01,
ETSI EN 301 489-23
ETSI EN 300 386-V1.3.2
(CISPR22) Class B 1999/5/EC (R&TTE)

Temperature

-40°C to +55°C

Relative Humidity

5% to 100%

Waterproof/Dustproof

IP65

Heat Dissipation

Natural Cooling

RELIABILITY INDICES

MTTR

1hour

Availability

99.999714%

Downtime Duration

<1.481min/year

EMC INDICES

MTBF

≥ 350000 hours

