LXN 6000 LTE INFRASTRUCTURE

DEPLOYABLE LTE SOLUTION FOR FAST CONNECTIVITY WHERE AND WHEN YOU NEED IT

The LXN 6000 is a robust, deployable, private LTE broadband communications platform. It allows you to quickly and easily create a mobile or semi-permanent broadband network or augment a fixed LTE network based on your use case.

With the LXN 6000, you'll have the coverage and capacity you need to manage special events, replace networks downed by man-made or natural disasters or provide communications in remote areas.

TWO CONFIGURATIONS. ONE GOAL.

Mix and match from two high-power configurations, the System on Wheels (SOW) and the Cell on Wheels (COW), for rapid broadband connectivity. Both the SOW and COW have up to 15 km range and are easy to deploy and use in the field.

To create a wider network, multiple COWs can be connected to a SOW.

	SYSTEM ON WHEELS (SOW)	CELL ON WHEELS (COW)
CONFIGURATIONS	Provides a complete LTE network on wheels for up to 2000 devices. The solution includes the EPC, base station and optional applications.	Connects to a macro LTE network or SOW to provide additional coverage and capacity or for use in remote areas. It includes a base station.
EQUIPMENT	Base station, evolved packet core, applications, connection capabilities for backhaul, antenna and ancillaries.	Base station, connection capabilities for backhaul, antenna and ancillaries.
BACKHAUL REQUIREMENTS	Fiber/Ethernet Microwave Satellite	

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KEY FEATURES

FAST DEPLOYMENT AND ACCESS
Set up and go live quickly and easily with rapid access to mobile broadband data connectivity. Optional applications such as real-time voice, video and chat enable you to fully support your mission-critical operations.

WIDE COVERAGE AND HIGH CAPACITY
With up to 15 km range with the default eNodeB license (or further with a spectrum license), our high-performance base stations provide capacity for remote locales, areas suffering a network outage and/or existing networks in need of extra capacity.

EASY MONITORING AND MANAGEMENT
An operation and maintenance function on the LXN 6000 provides subscriber provisioning, local alarm monitoring, and performance monitoring capabilities.

VERSATILE DEPLOYMENT MODELS
The LXN 6000 can be deployed in a truck, trailer, container or transit case for a variety of situations: augmenting existing fixed LTE infrastructure, providing semi-permanent LTE coverage in remote places and / or providing a nomadic LTE network that you take with you.

STANDARDS BASED
The LXN 6000 is a scalable solution that utilizes standards-based technology for interoperability with equipment from multiple vendors.

SAFE AND SECURE
Stay protected from man-in-the-middle attacks and eavesdropping with a secure IPSec connection between the Base Station and the Core.
The LXN 6000 is 3GPP and NIST 800-187 compliant for OTA security. In addition to control messages and user data encryption it supports strong (EEA2) encryption and (EIA2) integrity protection.

EXPAND YOUR NETWORK AS YOU NEED WITH A FLEXIBLE MODULAR SOLUTION

Deploy the LXN 6000 in a truck, trailer, container or transit case based on your need. Operate the LXN 6000 as a standalone SOW or connect COWs to the SOW for extra coverage. It is also possible to backhaul the LXN 6000 system to a macro network. Additional SOWs and COWs can be added to a fixed LTE network to increase coverage and capacity.

VERSATILE DEPLOYMENT MODELS
The ability to build out your broadband network with SOWs and COWs to match your broadband needs, coupled with the portable nature and the flexible deployment options of the solution, provides for three main deployment use cases that work across a variety of industry verticals: semi-permanent, nomadic and augment a fixed LTE network. All enable a free flow of real-time information for enhanced operations.
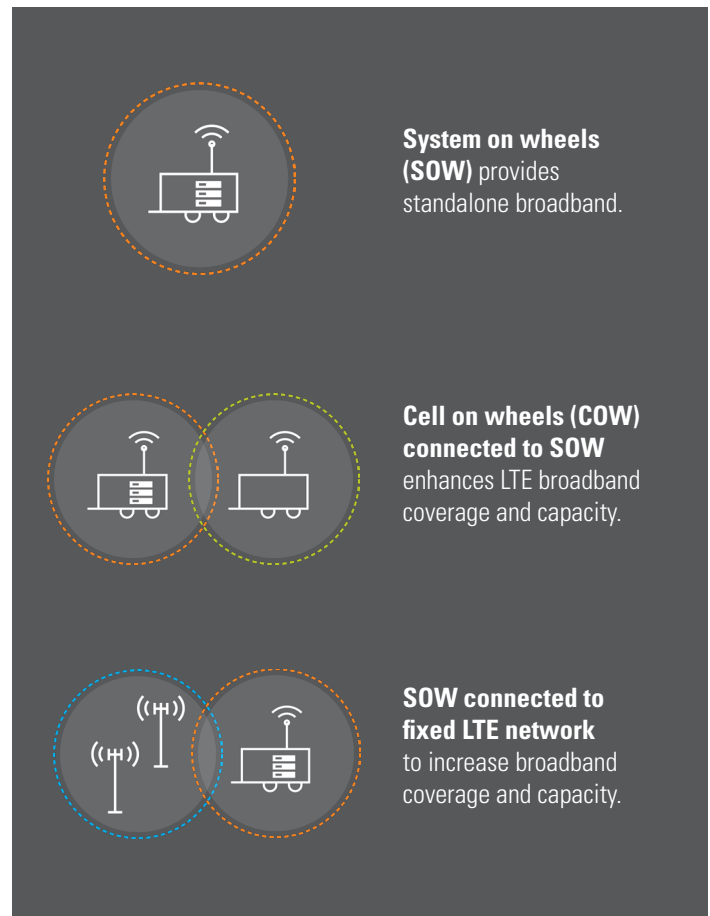
SEMI-PERMANENT NETWORK
Ideal for creating coverage in remote areas with no broadband connectivity, this self-contained semi-permanent LTE network is relatively static and provides broadband connectivity without the costs of installing fixed infrastructure.

NOMADIC NETWORK
Quickly create coverage in remote areas with no connectivity or establish secure bubbles around teams or vehicles or quickly set up coverage during a network outage with the nomadic mode. Fast and easy to set up, deploy, tear down and move to a new location - the nomadic mode is ideal for situations requiring broadband connectivity in a variety of different places for a relatively short period of time.

AUGMENT A FIXED LTE NETWORK
Temporarily augment the coverage and capacity of an existing fixed LTE network that is suffering disruption in specific locations. Connecting a SOW or multiple SOWs to the fixed network using transmission backhaul enables users to access their data and applications.

System on wheels (SOW) provides standalone broadband.

Cell on wheels (COW) connected to SOW enhances LTE broadband coverage and capacity.

SOW connected to fixed LTE network to increase broadband coverage and capacity.

SOLVING BROADBAND ISSUES: LXN 6000 IN ACTION

PROBLEM: No broadband connectivity in a remote area
SOLUTION: Semi-Permanent

An oil and gas company is drilling in a rural location where there is no broadband. Low latency, and high throughput coverage is essential for efficient control of equipment, accurate data readings from IoT sensors, effective data sharing and voice communications. The solution is a LXN 6000 semi-permanent LTE network to provide cost effective broadband communications.

PROBLEM: Need for private broadband coverage to support military operations
SOLUTION: Nomadic

In a conflict, military teams are moving across zones where there is little or no broadband coverage. Temporary land bases and training areas require capabilities for white-boarding, location awareness of personnel, video streaming and data sharing. The solution is an ad-hoc LXN 6000 nomadic network that can be set up quickly then dismantled and moved to another location as the mission objective changes. The LXN 6000 SOWs and COWs can be installed in military vehicles or towed in trailers.

PROBLEM: Poor broadband coverage on highly mobile projects
SOLUTION: Nomadic

A mining company exploring remote open pit and underground mines is finding it difficult to get the low latency, high bandwidth broadband it needs to coordinate operations. Controlling autonomous vehicles and monitoring equipment as work moves across multiple sites is a particular problem. The solution is a temporary LXN 6000 broadband network that moves with the teams utilizing a SOW and multiple COWs when and where required.

PROBLEM: Limited broadband connectivity under extreme conditions
SOLUTION: Augment a fixed LTE network

Special events place extreme demands on systems when too many devices are trying to access the network at one time. First responders at a large event need extra coverage and capacity to effectively monitor the event. The solution is to augment the fixed LTE network with a LXN 6000 SOW, and optional COWs based on the coverage and capacity requirements, to provide first responders with access to the voice, video and data they need.

PROBLEM: Connectivity compromised by damaged infrastructure
SOLUTION: Augment a fixed LTE network

During a search and rescue mission following a natural disaster, response teams are having to cover a wide area. With coverage compromised by the remote terrain and damaged base stations, terrestrial fixed broadband is unable to support reliable communications. The solution is to augment coverage, where the fixed LTE broadband has been damaged, with additional base stations through LXN 6000 COWs that backhaul to the fixed LTE network.

SPECIFICATIONS

4G LTE

Release 3GPP Release 13

EVOLVED PACKET CORE

CPU	2 x 2.5GHz/12-core/30MB/120W
RAM	128GB
Storage	1TB SSD
Networking	2 x 4 x 1 GbE embedded
Power and Cooling	Hot Plug Power, High Performance Fans
Dimensions	Height: 1.7" (4.32cm) Width: 17.11" (43.47cm) Length: 27.5" (69.85cm)
Weight	27 lbs (12.25 kg)
Form Factor	1U
Throughput	500 Mbps
Maximum eNodeB supported	50
Maximum Users	2000

ENODEB

One eNodeB per band	• Flexible channel sizes from 5 to 20 MHz • 2x2 MIMO support (Optional) • 4 way receive diversity (Optional) • Remote Electrical Tilt (RET) support • Standard range of 15 km with license extention beyond 15 km
Power	• Output power - Up to 80 Watts • Supports -48VDC power supplies • Battery backup options available
Network	• Gigabit Ethernet transport network interface • Full IP connectivity • Tightly integrated network and site management system

OPTIONAL LTE DEVICES

LEX L11 Mission-Critical LTE Device
This rugged and easy to operate LTE device has a dedicated push to talk button, loud and clear audio, intuitive operation, and long battery life.

In-Vehicle LTE routers
Access and share information using a variety of devices such as laptops, tablets and cameras over your LTE mobile broadband network via in-vehicle routers.

OPTIONAL APPLICATIONS

WAVE Broadband Push-To-Talk
WAVE enables PTT communications using broadband devices so that critical information flows rapidly and securely between teams. It also enables users on your LTE and LMR networks to connect and collaborate.

Team Collaboration Application
This in-field interactive collaboration and real-time information-sharing tool, makes it easy to share intelligence in real-time for faster responses.

You can also connect additional servers to the LXN 6000 to host your own broadband applications.

LXN 6000 COMPLIMENTS LMR COMMUNICATIONS

Where you have both LMR and LTE networks covering the same area - the LTE network can take the strain of the high bandwidth and low latency applications such as sensor data and streaming video transfer, freeing your narrowband LMR network for mission-critical voice.

Using our optional WAVE application enhances team collaboration with instantaneous PTT communication between your LMR and LTE users, making it possible to reach more team members over a wider service area.

LTE BROADBAND WHERE AND WHEN YOU NEED IT WITH LXN 6000

Never be without the broadband you need to get the job done safer, smarter and faster. The flexible LXN 6000 LTE infrastructure solution ensures teams have the broadband they require for special events, man-made or natural disasters, military missions, remote area operations and more. With easy setup and use, stay connected whatever the situation.

To learn more about our LTE Broadband Solutions, visit motorolasolutions.com/LTE

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