



NETWORK IN A BOX

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## Overview

CALLP 5G s Network in a Box (NIB) is a comprehensive product that is readily available for LAB environment and PoC usage, which will also be ready for deployment in NEXT 4 MONTHS. This product is integrated into a single unit with all the hardware and software required to support 5G standalone (SA), 5G non-standalone(NSA) or 4G LTE operations. And is tailor made for both Military and non military application separately.

The NIB includes a 5G Core, gNodeB, 4G EPC (optional) and other network components in compliance with 3GPP standards to provide comprehensive support for voice, video , text and packet data services.

With the growth of packet data services to reduce latency, increased bandwidth and deliver high peak data rates, CALLP's NIB solution takes full advantage to meet these growing demands.

If a backhaul connection to the macro network is lost it provides high operational availability through continuous network coverage.

CALLP's 5G NIB is successfully implemented in the LAB environment and proved its capability.

**Email:**  
[snair@callp.co.in](mailto:snair@callp.co.in)

**Phone:**  
**+919048180690**

Portable 5G LAB

Portable 5G LAB enables end-to-end 5G testing on a single unified platform, helping OEMs, telecom operators and silicon providers to validate their current solutions, minimize field defects, establish vendor interoperability and improve the customer experience cycle. Also, It helps planning for innovation and scaling to stay at the forefront of emerging 5G enabling technologies and services.

RAN/Core Testing

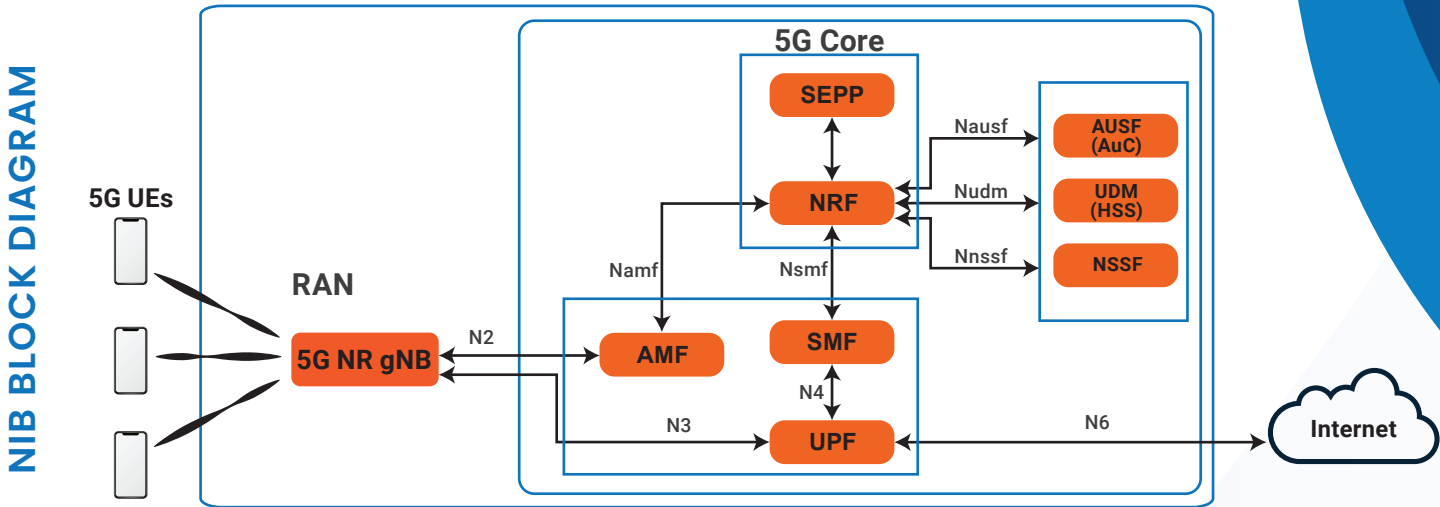
As 5G standards advances, innovations and powerful 5G architectures are being designed with an accelerated space. 5G Core (5GC) introduces innovations such as virtualization, service-based architecture (SBA) and network slicing. From the 5G core to the 5G Radio Access Network (RAN), a 5G network requires tight connectivity between all network resources. Testing the entire network and newly developed network elements/components is a critical and challenging task. NIB solution makes it possible in an effective way.

Interoperability Testing

Interoperability is important for any 5G solution aiming for commercialization and certification. Interoperability Testing ensures that all standards-based solutions, regardless of vendor, work together seamlessly to deliver a high-performance RAN solution. supports any Interoperability Testing, with RAN, entire or any particular element of Core Network.

Handover Testing

Handover test systems evaluate the performance of two or more connected RAN or EPC elements, to avoid interfering with themselves and other cells. And challenge is evaluation of the call continuity and QoS parameters in handover scenario. CALLP provides solution for this use case.



4G / 5G Portable NIB Solution



NIB Technical Specifications

Dimensions H × W × D	Hardware with dimensions: 26 cm × 19 cm × 28 cm
Weight	9 kg
CPU	Intel i7 family, 4 Cores, 2.8GHz Turbo 5.2 GHz, Intel i9, 10 Cores*, AVX512
Power Supply Voltage Input	100 – 240V AC, ~400W
Operating System	Ubuntu 20.04
GUI	NMS GUI with Dashboard
RF Range	500 MHz upto 6.0 GHz
RF Bandwidth	2x2 40MHz BW (USRP B210) 4x4 100MHz BW(USRP N310*)
RF Operation mode	FDD and TDD, SISO, and MIMO 2x2, 4x4*
Default Configuration – 5G SA (NSA*)	N78 Band and 106 PRB
Synchronization*	GPS
Max Tested Coverage Range (LoS)	30–40 Meters
Max No.of Users Supported	4
Antenna	VERT2450 Vertical Antenna (2.4–2.5 and 4.9–5.9 GHz) Dualband
Handset	5G Handset
Sim Card	1 Test Sim Card
Indication	LED Indications for AC Input Power, RF Rx and Tx
Additional Items	15" Monitor, Key Board and Mouse
Additional configuration *	Please contact CALLP team

\*Please contact CALLP team for this requirement

CALLP 5G