

NBLoT eNodeB

User manual

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Document Version History

Version Number	Version Date	Revised By	Description
V1.0	01-10-2020	Vikas Dubey	eNodeB features
V1.1	16-02-2022	Vikas Dubey	New LEDs feature

1 About This Document

1.1. Introduction

Amantya developed NBLoT eNodeB or small base station. It can be used to provide NBLoT Network support for testing and developing NBLoT based platforms/applications.



1.2. Purpose and scope

This document will help in setup of NBLoT eNodeB.

1.3. Audience

Amantya assumes the readers of this document are:

- Product development team
- Test or Validation team

1.4. Abbreviation

Table 1: Definitions

Abbreviation	Expansion
3GPP	3 rd Generation Partnership Program
ANSI	American National Standards Institute

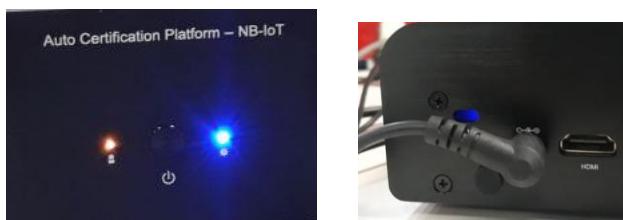
Abbreviation	Expansion
AT / MMI	Attention / Man-Machine-Interface
DRB	Dedicated Radio Bearer
DUT	Device Under Test
SYS	System
SRB	Signaling Radio Bearer
eNB /eNB	eNodeB
TTCN	Testing and Test Control Notation
UE	User Equipment

1.5. References

2 NBLoT eNodeB Connections

2.1 Power up

To power up the Board, connect power Adapter as shown below. There is a push button with power symbol. Push it to Power ON the eNodeB NBLoT board. On Power Up, Blue LED will continuously glow. To shutdown, long press the power button. Orange LED will blink to denote RF messages transfer.



2.2 Ethernet connection

There is Port for Ethernet connection on back of eNodeB NBLoT Board. The eNodeb has default static IP.



2.3 UI based login

UI based login is possible by connecting, monitor, key board and mouse.

1. Power Adapter connection is shown in Orange box.
2. Ethernet connection is shown in Green Box.
3. Monitor (over HDMI), Key board (over USB), Mouse (over USB) connection shown in Red box.
4. Login through monitor.



2.4 SSH Login

After Ethernet connection, user could access eNodeB Board through SSH.

2.5 Static IP assign

New static IP can be assigned to eNodeB to access over a network.

1. Login to eNodeB NBLoT Board through SSH using default IP.
2. Or Login using Normal desktop setup and given under section 3.

Update network files system with new IP address, gateway.

3 Warnings

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

1. To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.
2. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter this equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - ◆ Reorient or relocate the receiving antenna.
 - ◆ Increase the separation between the equipment and receiver.
 - ◆ Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
 - ◆ Consult the dealer or an experienced radio/TV technician for help.

4 Device Provision

4.1 Below bands can be configured in eNodeb

BANDs supported (1,2,3,4,5,7,8,10,12,13,17,20,28,40). Currently these bands are configured. Other bands could be added which are specified by 3GPP for NBIOT.

4.2 eNodeB start

The eNodeB starts with power up. It starts radiating on power up.

4.3 LEDs indication

There are four LEDs to indicate the status of eNodeb.

1. **Alarm LED:** Indicate condition which require special attention. The test execution should be stopped and logs from eNodeB should be checked for possible cause of alarm.
2. **Network status LED:** Indicate whether eNodeB is connected to external Network.
3. **Radiating status LED:** Indicate whether eNodeb is radiating or not.
4. **Power LED:** Indicate power is connected and eNodeB is powered-up.