# 5G Network Testbed Examples

## Tool Reference

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**A 5G Testbed System Example**

In this example, we present the system diagrams of the 5G testbed implemented in the FDA Wireless Lab at the White Oak campus, Silver Spring, MD. The details of system parameters can be found in the TRUST paper, which serves as an example of designing and configuring the 5G device evaluation platform in a lab environment.
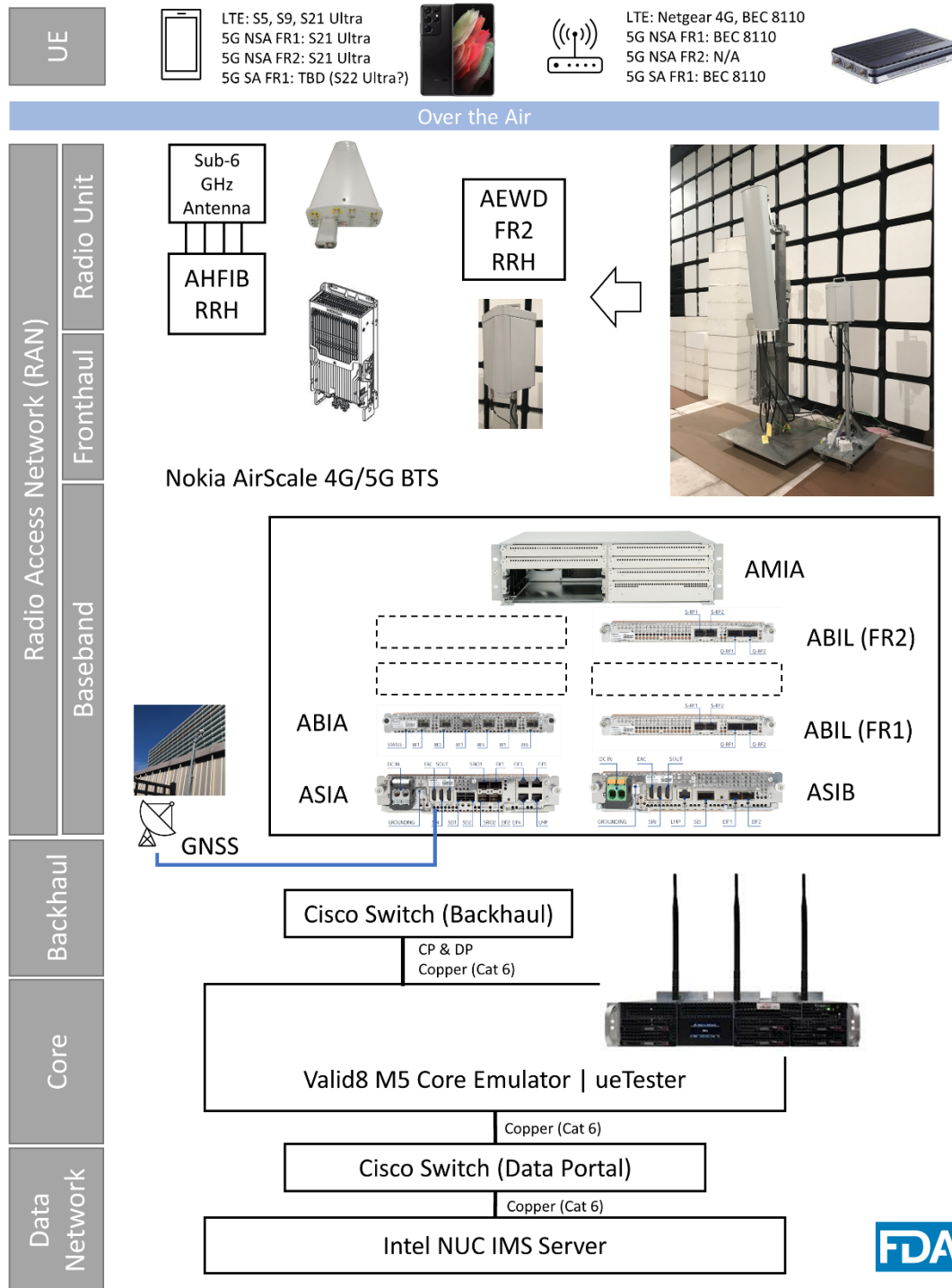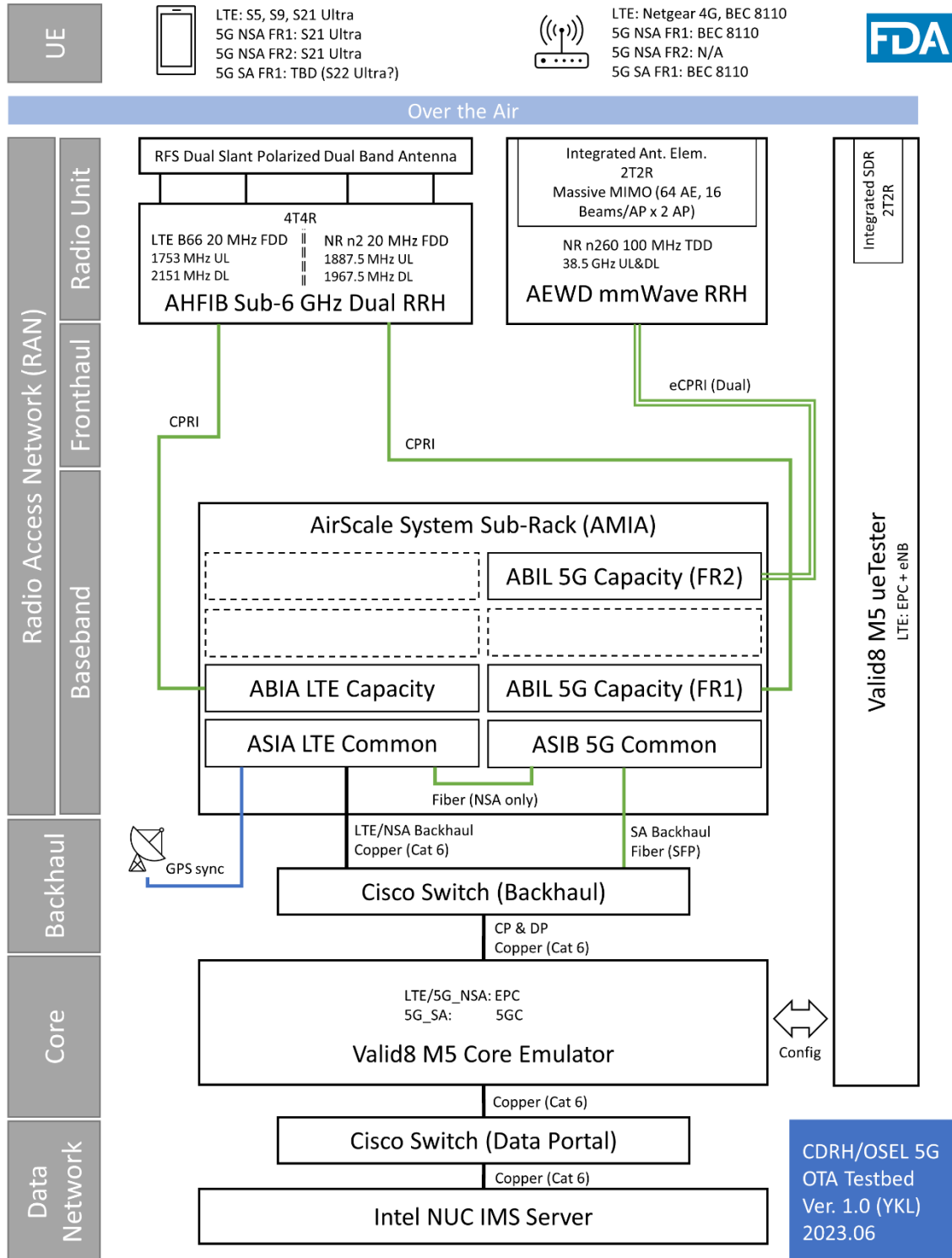


Figure 1. FDA 5G Testbed System Diagram

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Figure 2. FDA 5G Testbed System Diagram with Link Configurations

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**An Example of Integrating a Medical Device under Test into the 5G Testbed**

A 5G-enabled medical device usually contains the user-end node(s) and the remote application server(s). In the device tests, the functional nodes at both ends of the end-to-end 5G link are recommended to be deployed.

In this example as shown in Fig. 5, we demonstrate a possible way of connecting these nodes to the tested end-to-end 5G links. Specifically, the two types of MXR client nodes, i.e., the headset and the computer-based MXR client, are considered in this example where they use 5G smartphones as the gateways to carry the data over 5G; the server-side applications including the real-time virtual session updates and the medical data inquiries are deployed on a test computer that operates as a data network (DN) node per the TRUST network architecture. The end-to-end traffic flows in the network can be monitored and captured at the individual nodes either by in-app measurement tools or by the third-party network test access point (TAP) equipment.
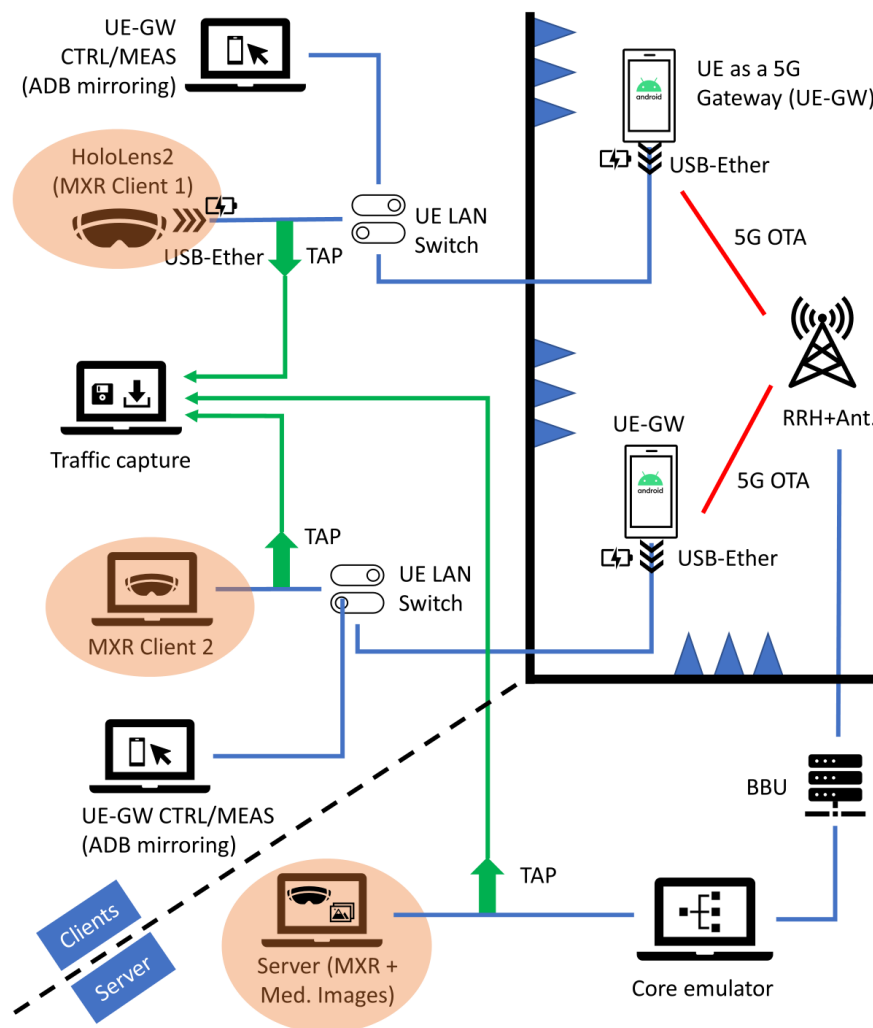


Figure 3. An example of integrating MXR device components (user nodes and the server node) in the 5G testbed.