

What is the range of 5G base stations

What are 5G NR base stations?

5G New Radio (NR) base stations, also known as gNBs, are classified into different types based on their deployment scenarios, frequency ranges, and technical requirements. Here's a detailed technical explanation of the various 5G NR base station types: 1. Classification by Frequency Range

What is 5G NR (New Radio)?

5G NR (New Radio) is a new radio access technology (RAT) developed by 3GPP for the 5G (fifth generation) mobile network. 3GPP specification for 5G NR defines the three classes for base station namely, Wide Area Base Station, Medium Range Base Station and Local Area Base Station.

What are the 3GPP specifications for 5G NR base stations?

The 3GPP specifications define several classes of 5G NR base stations: Frequency Range: Operates in FR1. Requirements: Conducted requirements at individual antenna connectors. Use Case: Suitable for macro and small cell deployments where the focus is on conducted measurements. Frequency Range: Operates in FR1.

What is a 5G network?

5G networks are cellular networks, in which the service area is divided into small geographical areas called cells. All 5G wireless devices in a cell communicate by radio waves with a cellular base station via fixed antennas, over frequencies assigned by the base station.

What is 5G NR BS?

5G NR (New Radio) is the latest wireless cellular standard, succeeding LTE/LTE-A. It adheres to 3GPP specifications from Release 15 onwards. In 5G NR, the Base Station (BS) is referred to as a gNB. These 5G NR BS operate in two frequency ranges: FR1 and FR2. (../assets/5G-NR-BS-Channel-Bandwidths.jpg).

Table 1: Frequency Ranges

What frequencies are used in 5G networks?

Low-band, mid-band, and high-band frequencies are the three primary frequency ranges used in 5G networks. Let's take a closer look at each of these frequency bands: 1. Low-band Frequencies: Low-band frequencies typically range between 600 MHz to 900 MHz. They offer excellent coverage and can propagate over long distances.

Summary Overview Performance Standards Deployment 5G devices Technology Concerns 5G networks are cellular networks, in which the service area is divided into small geographical areas called cells. All 5G wireless devices in a cell communicate by radio waves with a cellular base station via fixed antennas, over frequencies assigned by the base station. The base stations, termed nodes, are connected to switching centers in the telephone network and routers for Internet access by high-bandwidth optical fiber or wireless backhaul connections. As in other cellular networks

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