

How many base station signals are needed for 5g communication





Overview

How will 5G base stations and devices work?

To address the demands of increased performance, 5G base stations and devices will use many antennas. Arrays of up to hundreds of small antennas at the base station will make it possible to focus the transmission of radio waves to maximize the signals that the connected devices receive. This is called beamforming or massive MIMO.

How many antennas does 5G have?

In the 5G millimeter wave era, antennas are getting smaller and smaller, and the number is increasing in pairs. Nowadays, most 4G mobile phones are 2×2 , 5G is at least 4×4 , and the base station antennas have as many as 128 or 256 antennas. The Internet of Things also requires antennas.

How many antennas does a 4G mobile phone need?

Nowadays, most 4G mobile phones are 2×2 , 5G is at least 4×4 , and the base station antennas have as many as 128 or 256 antennas. The Internet of Things also requires antennas. As introduced above, the required antennas will change to a certain extent according to the characteristics of 5G.

How can a 5G base station be optimized?

This article proposes an optimization approach for the deployment of 5G base stations. Initially, a continuous wave (CW) test is conducted in the planned area to acquire drive test data. These data, along with the least squares method, are utilized to calibrate the signal propagation model.



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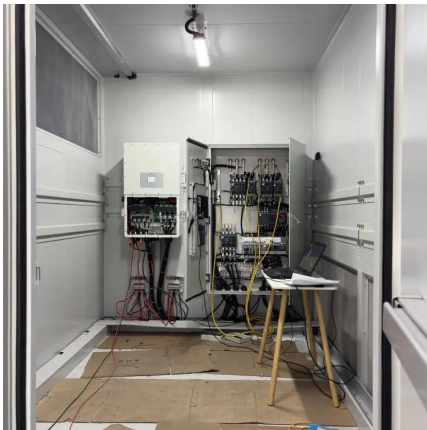
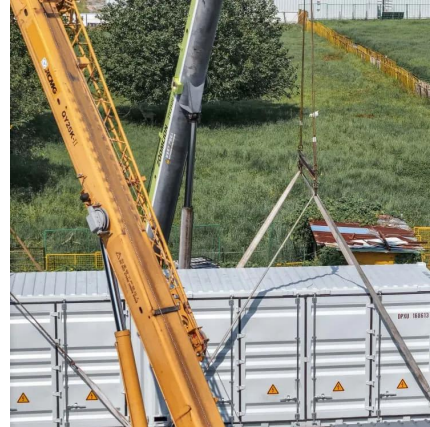
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