

A-Core Container

4G5G base station communication principle



Overview

What is a 5G base station?

As the world continues its transition into the era of 5G, the demand for faster and more reliable wireless communication is skyrocketing. Central to this transformation are 5G base stations, the backbone of the next-generation network. These base stations are pivotal in delivering the high-speed, low-latency connectivity that 5G promises.

How 5G antennas work?

This is how 5G antennas work. The bullhorn is 5G Beamforming, and opera singers moving their heads is dynamic Beamforming that tracks the user as they move away from the center of a 5G antenna panel. How 5G can serve Multiple Users We have just explained how 5G works with a single user exchanging data with the base station.

How does a 4G antenna work?

The sound is quiet now. This is how a 4G antenna radiates on the horizontal plane. Most of the RF signal is delivered dead center in front of an antenna panel, then gradually becomes lower until it reaches its lowest point when you are lined up with the antenna. Now picture yourself and the opera levitating 30 meters above ground.

How does a 4G antenna radiate on a horizontal plane?

When you reach the end of the semi-circle, you are in line with the opera singers, but still 30 meters away. The sound is quiet now. This is how a 4G antenna radiates on the horizontal plane.

What is a communication base station?

In the vast telecommunications network, communication base stations play a frontline role. Positioned closest to end users, they serve as gateways for processing customer requests and managing data flow. In the words of

"Interesting Communication Engineering Drawings," these stations act like “business trackers,” always vigilant to:.

What is a 5G Brain Center?

Often referred to as the brain center, this includes: Baseband Unit (BBU): Handles baseband signal processing. Remote Radio Unit (RRU): Converts signals to radio frequencies for transmission. Active Antenna Unit (AAU): Integrates RRU and antenna for 5G-era efficiency. 2. Power Supply System

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