

SolarTech Power Solutions

Outdoor signal base station design solution



Overview

Why is base station site selection important?

Especially with the development and promotion of national 5G technology, the construction of 5G base stations is an important part of the future communication infrastructure. Therefore, base station site selection will become an important work of base station construction.

What are the specific solutions for a base station?

The specific solutions are as follows: (1) objective function: the base station needs to maximize the needs of the business volume, the base station must have a high standard after planning, and the cost of establishing the base station should be the lowest.

Why do we need a 5G base station?

In order to meet the development trend of the fast pace of 5G, improve users' 5G use experience, reduce insufficient signal coverage, and other problems, more base stations need to be established to cope with the high requirements of 5G on the network.

How to choose a base station?

The selection of base stations should comprehensively consider various indicators, such as sharing rate, planning accuracy rate, and planning depth. This is a multi-objective planning problem.

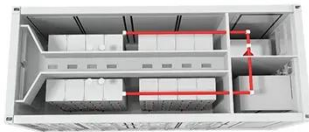
What are the constraints of a base station?

(2) Constraints: Euclidean distance between base stations, whether the base station covers the test point, whether the coverage reaches the standard, etc.
(3) Output: the specific planning point of the base station, the simulation diagram of the base station coverage test point.

What are decision variables in base station planning?

Decision variables: The coordinates x , y of the base station. Objective function: The base station planning goal is to achieve the signal enhancement effect, so the coverage rate and meet the business volume are the main factors to consider.

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Optimization of 5G base station deployment based on ...

To obtain base station deployment parameters that better reflect real-world conditions, this section introduces a series of constraints, mainly including the candidate locations for base stations, ...



Optimizing the ultra-dense 5G base stations in urban outdoor ...

Dec 1, 2020 · In this study, we couple geographic information system (GIS) and a heuristic algorithm to search for the optimal locations of each BS in a 5G network. The spatial modelling ...

A Coverage-Based Location Approach and Performance

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COMONENTS OR 5G BASE STATIONS AND ANTENNAS

base-station connects other wireless devices base-station architecture includes various equipment, such as a amplifier, which converts signals from RF antennas to (baseband unit in ...

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5W

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5G base station architecture, Part 1: Evolution

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Outdoor Macro Base Station Coverage Solution_ Guangzhou ...

Nov 19, 2021 · Based on the principle of meeting the actual usage needs of rural users with communication capacity, KICOM's 2T2R/4T4R integrated 4G/5G macro station coverage ...



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