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Communication base station EMS engineering parameters

Overview

What is the operating environment of a base station antenna?

The operating environment of base station antennas is classified as remote, stationary, outdoor, uncontrolled and not weather-protected. The electromagnetic environment includes close proximity to intentionally radiating devices and installation on structures prone to lightning strikes.

Is there a standard for a base station antenna?

The BSA’s influence on coverage, capacity, and QoS is extensive, and yet there exists no comprehensive, global, standard focusing on the base station antenna. The purpose of this whitepaper is to address this gap. In particular, the following topics will be covered in various degrees of detail:.

Why do we need additional base stations?

Hence, additional base stations (BSs) may be needed to satisfy the new demand. This case addresses the application of dynamic permanent demand for service such as establishing a new residential area over several time periods where new demand clusters are created in each time period as the residential area expands.

How to optimize the location of BSS in wireless communication networks?

Some studies optimize the location of BSs in wireless communication networks through exact solution approaches such as mixed integer linear programs (MILP) and algorithmic approaches , , .

Is there a Base Transceiver Station BTS?

Irrespective of the network in use, there is a section that is yet to have an alternative which is the base transceiver station BTS of the cellular. In this article, broadband and high gain antennas are designed for bandwidth from 1.7 to 2.5 GHz which covers GSM 1800, 3G, 4G, and Wi-Fi applications.

What is a BSA beam parameter?

This beam parameter indicates the sector coverage provided by a BSA. BSAs are typically referred to by their nominal azimuth beamwidth, for example, a 65° BSA. Nominal requirements are usually but not limited to, 90° or 65° for 3 sector cell sites, and 45° or 33° for 6 sector sites.

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