

# Shared 5G base station for communication





## Overview

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Which GHz band should be used to build a 5G base station?

communication systems. The Sub-6 GHz band, which is to meet the demand. Utilizing millimeter wave spectrum to build 5G base stations is an inevitable trend . However, distance of millimeter wave signals is very short.

What is the future development trend of 5G base station antennas?

To address this issue, integrating antennas in the millimeter wave and Sub-6 GHz frequency bands is the future development trend of 5G base station antennas . In this paper, a novel embedded dual band shared-aperture base station antenna has been proposed, with the lower band covering 3.3-3.7 GHz and the higher band operating at 26 GHz.

Is sub-6 GHz enough for 5G base stations?

The Sub-6 GHz band, which is commonly used in 5G base stations, is no longer sufficient to meet the demand. Utilizing millimeter wave spectrum to build 5G base stations is an inevitable trend .

What is 5G network sharing?

Through 5G Network Sharing, operators make annual savings and are reducing greenhouse gas emissions by millions of tons per year. Network sharing is also providing users with ubiquitous connectivity and high-quality services.



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Ambitious 5G base station plan for 2025

Dec 28, 2024 · Technicians from China Mobile check a 5G base station in Tongling, Anhui province. [Photo by Guo Shining/For China Daily] China aims to build over 4.5 million 5G base ...

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(PDF) A Novel Sub-6 GHz and Millimeter Wave Shared-Aperture 5G Base

PDF , On Aug 15, 2023, Wei Huang and others published A Novel Sub-6 GHz and Millimeter Wave Shared-Aperture 5G Base Station Antenna , Find, read and cite all the research you ...

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A 3D-FSS-Based and Front-Feeding Shared-Aperture Base Station ...

Sep 29, 2025 · This paper presents a novel compact low-profile dual-polarization base station antenna (or unit cell) designed for 5G mobile communications, which does not require ...

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Kyocera Develops AI-Powered 5G Virtualized Base Station ...

Feb 18, 2025 · Kyocera's innovation allows multiple telecommunications operators to share a single base station (CU/DU or O-RU) to process communication data. This functionality ...

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Network Sharing Evolution

Mar 18, 2025 · With INS, the communication between the Shared NG-RAN and the participating parties' core network happens via a number of inter-network interfaces that are independent of ...

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Mobile Communication Network Base Station Deployment Under 5G

Apr 13, 2025 · This paper discusses the site optimization technology of mobile communication network, especially in the aspects of enhancing coverage and optimizing base station layout. ...

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China Telecom and China Unicom Jointly Roll Out 990,000 Shared 5G

Dec 13, 2022 · According to official resources at China Telecom, China Telecom and China Unicom have jointly rolled out about 990,000 shared 5G base stations, realizing continuous ...

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Modeling 5G shared base station planning problem using an ...

Nov 1, 2024 · Communication networks using 5G are revolutionizing the way people live and produce now on a scale that has never been seen before [1]. 5G is characterized by new ...

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A Novel Sub-6 GHz and Millimeter Wave Shared ...

Jul 25, 2025 · Index Terms--base station antenna, 5G antenna, shared-aperture, dual-band antenna. I. INTRODUCTION The development of the 5G era poses enormous challenges to ...

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## Research on 5G Base Station Shared Power Tower Technology

5G base station shared power tower technology involves mounting telecommunications equipment, such as small cells, antennas, and radio units, on existing electricity transmission ...

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