

Base station support for 3D communication





Overview

Does ground base station support IoT?

For terrestrial networks, ground base station (GBS) can support IoT in collecting data from IDs. However, terrestrial systems have not yet covered most remote areas due to sparse human activity in these areas. In addition, this network structure is inflexible, only deployed in fixed locations, and can be destroyed by natural disasters.

What are practical use cases for aerial base stations?

Practical use cases for aerial base stations UAVs are highly desirable in today's communication systems due to their agility and mobility, low-cost of implementation and ability to move to higher altitudes to provide LoS communications , .

Can unmanned aerial vehicles be a base station for IoT?

Recently, unmanned aerial vehicles (UAVs) have been reported a lot as aerial base stations (BSs) to assist wireless communication in Internet of Things (IoT). However, most results for UAV deployment require uniform access requirements and obstacle-free environment.

What are uncrewed aerial vehicle-mounted base stations?

Uncrewed aerial vehicle-mounted base stations (UAV-BSs) or widely known as drone base stations, have recently gained increasing attention as a solution to provide Internet connectivity to mobile and fixed users. They can be deployed to support terrestrial BSs during an occasional crowded event, or in the case of a terrestrial BS failure.



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A tutorial on AI-powered 3D deployment of drone base stations...

Aug 1, 2022 · The literature has several high quality surveys that analyze UAV-assisted communication networks from various standpoints. For instance, Zhang et al. in [24] present a ...

3D Deployment of Unmanned Aerial Vehicle-Base Station ...

Aug 17, 2021 · Unmanned aerial vehicles (UAVs), also named as drones, have become a modern model to provide a quick wireless communication infrastructure. They have been used when ...

3D deployment of UAV-mounted base stations for

Request PDF , On Nov 1, 2023, Xiaolin Ai and others published 3D deployment of UAV-mounted base stations for heterogeneous access requirements , Find, read and cite all the research ...

3D Placement of UAV-Base Station Assisting Terrestrial ...

Jul 2, 2025 · Abstract This paper considers the problem of deploying Unmanned Aerial Vehicle as flying base stations (UAV-BS) to support terrestrial communications networks, where the ...

Aerial Base Station Location Assisting Terrestrial Systems in 3D

Jul 27, 2025 · The rapid increase in the number of Internet-connected devices has posed a significant challenge to traditional network systems. One potential solution is deployment ...

3-D Deployment of UAV-BSs for Effective Communication ...

May 10, 2024 · In the field of unmanned aerial vehicles (UAVs), their potential as aerial base stations for post-disaster communication recovery or providing communication coverage in ...

Integrating UAV-Enabled Base Stations in 3D Networks: QoS ...

Apr 30, 2024 · Figure 1: Illustration of diverse UAV-based 3D network configurations for B5G and 6G wireless communication. Low-altitude DBSs facilitate dense network deployments in urban ...

3D Deployment of Multiple UAV-Mounted Base Stations for UAV Communications

Jan 5, 2021 · Recently, unmanned aerial vehicles (UAVs) have attracted lots of attention because of their high mobility and low cost. This article investigates a communication system assisted ...

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3D deployment of UAV-mounted base stations for



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