

Solar unmanned base station





Overview

Can unmanned aerial vehicle-mounted base station be used for 6G wireless networks?

Scientific Reports 15, Article number: 15882 (2025) Cite this article Thanks to its flexibility and cost-effectiveness, an unmanned aerial vehicle-mounted base station (UAV-BS) is a promising technology for the upcoming 6G wireless networks.

What is a UAV base station?

In the aforementioned situations, UAV base stations (UAV-BSs for short), with their notable agility , , rapid deployment capabilities, and line-of-sight (LoS) connectivity, are suitable to offer viable solutions to previously mentioned challenges , , , .

Can UAVs be used as Aerial Base stations?

By equipping UAVs with communication units to function as aerial base stations, wireless connections can be established with ground users to improve the quality of service (QoS for short), thereby compensating for the limitations of terrestrial communication systems in terms of flexibility and coverage range.

Can t-UAVs be used as Aerial Base stations?

Hence, T-UAVs sacrifice their mobility and flexibility to maintain long-lasting flight, unlike untethered UAVs (U-UAVs) that can not fly for more than 30 mins. To exploit the best of each type of UAV, the deployment of both T-UAVs and U-UAVs as aerial base stations is investigated.



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