

5G base stations consume more power than 4G





Overview

Are 5G base stations causing more energy consumption?

However, Li says 5G base stations are carrying five times the traffic as when equipped with only 4G, pushing up power consumption. The carrier is seeking subsidies from the Chinese government to help with the increased energy usage.

Will MIMO increase the energy consumption of 5G base stations?

As a result, there are many more hardware components per base station. Björnson believes this will probably increase the total energy consumption of 5G base stations compared to 4G. But as massive MIMO technology develops, its energy efficiency may also improve over time.

Does China Mobile have a 5G base station?

China Mobile has tried using lower cost deployments of MIMO antennas, specifically 32T32R and sometimes 8T8R rather than 64T64R, according to MTN. However, Li says 5G base stations are carrying five times the traffic as when equipped with only 4G, pushing up power consumption.

How will 4G & 5G networks work?

In both 4G and future 5G networks, operators will probably run their base stations so they transmit at the maximum power allowed by their licenses, in order to maximize the coverage, according to Björnson.



5G base stations consume more power than 4G



[Power consumption based on 5G communication](#)

Oct 17, 2021 · At present, 5G mobile traffic base stations in energy consumption accounted for 60% ~ 80%, compared with 4G energy consumption increased three times. In the future, high ...

[Sustainable Connections: Exploring Energy Efficiency in ...](#)

Dec 24, 2024 · Xu et al. [19] measured six 5G base stations and three 5G phone models, showing that the power consumption of 5G escalates to 2-3 times that of 4G, which aligns with our ...



[5G 'inherently more energy consuming' than 4G](#)

Nov 11, 2021 · 5G is "inherently more energy-consuming" than 4G due to the stringent power requirements of Massive MIMO deployments, according to a paper from InterDigital and ABI ...

[5G base stations use a lot more energy than 4G base stations...](#)

Apr 3, 2020 · Warnings of more power consumption are coming from some Chinese operators that are leading the world in 5G deployments. In November 2019, China Mobile EVP Li ...



[Why does 5g base station consume so much power and how ...](#)

Apr 3, 2025 · Huawei and ZTE's 5G base stations have a 100% load power consumption of 3852.5W and 3674.85W, respectively, while ZTE's 4G base station has a power consumption ...

[What is the Power Consumption of a 5G Base Station?](#)

Nov 15, 2024 · Compared to its predecessor, 4G, the energy demand from 5G base stations has massively grown owing to new technical requirements needed to support higher data rates ...



Contact Us

For catalog requests, pricing, or partnerships, please visit:
<https://woodgoods.pl>



Scan QR Code for More Information



<https://woodgoods.pl>