

5G signal base station power consumption is 4G





Overview

How much power does a 5G station use?

The power consumption of a single 5G station is 2.5 to 3.5 times higher than that of a single 4G station. The main factor behind this increase in 5G power consumption is the high power usage of the active antenna unit (AAU). Under a full workload, a single station uses nearly 3700W.

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.

Is 5G more energy efficient than 4G?

Although the absolute value of the power consumption of 5G base stations is increasing, their energy efficiency ratio is much lower than that of 4G stations. In other words, with the same power consumption, the network capacity of 5G will be as dozens of times larger than 4G, so the power consumption per bit is sharply reduced.

Which network consumes the most power in 5G?

Also, NextGalliance published a report with the below figure clearly illustrates that the RAN consumes the most power. Although RAN power consumption is reduced in 5G, it is still over 50% of the total 5G network infrastructure consumption. Another trend worth noting is the rise in data center power consumption in 5G.

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



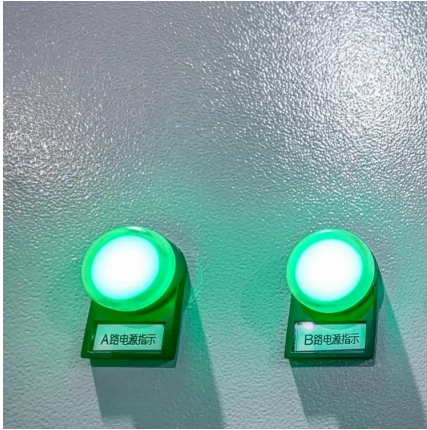
when equipped with only 4G, pushing up power consumption.

Why does a ran consume more power than a 4G network?

Despite improvements in energy efficiency, the RAN continues to consume more power than any other part of the network. This is due largely to new technology like mmWave transceivers and MIMO antennas, all of which require more power. Power Consumption of 4G and 5G Networks How can 5G reduce power consumption Vs. 4G



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[Energy Consumption of 5G, Wireless Systems and the Digital ...](#)

- Huawei (2020) 5G Power: Creating a green grid that slashes costs, emissions & energy use ABI Report "Despite 5G consuming less power than 4G per unit of traffic, the overall energy ...

[Dynamic Power Management for 5G Small Cell Base Station](#)

5G networks with small cell base stations are attracting significant attention, and their power consumption is a matter of significant concern. As the increase of the expectation, concern for ...



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