

Kongres Container

Power consumption of 5G base stations abroad



Overview

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.

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.

Does 5G New Radio save energy?

Emerging use cases and devices demand higher capacity from today's mobile networks, leading to increasingly dense network deployments. In this post, we explore the energy saving features of 5G New Radio and how this enables operators to build denser networks, meet performance demands and maintain low 5G energy consumption.

Does 5G configuration affect base station capacity?

In this study, we mainly focused on the commercial 5G non-standalone networks, 2 and the configurations (transmit and receive antennas, spectrum frequency and bandwidth) defined in this part has a decisive impact on base station capacity (see Eq.1).

What is the role of 5G in the UK?

The simulation results show that 700 MHz and 26 GHz will play an important role in 5G deployment in the UK, which allow base stations to meet short-term and long-term data traffic demands respectively.

Why does 5G use so much power?

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. This necessitates a number of updates to existing networks, such as more powerful supplies and increased performance output from supporting facilities.

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