

# 5g base station power saving company







### **Overview**

Can network energy saving technologies mitigate 5G energy consumption?

This technical report explores how network energy saving technologies that have emerged since the 4G era, such as carrier shutdown, channel shutdown, symbol shutdown etc., can be leveraged to mitigate 5G energy consumption.

Is a 5G energy saving solution enough?

It also analyses how enhanced technologies like deep sleep, symbol aggregation shutdown etc., have been developing in the 5G era. This report aims to detail these fundamentals. However, it is far away from being enough, a revolutionized energy saving solution should be taken into consideration.

Does 5G use more energy than 4G?

While 5G enables a new level of end-user experience, new devices and use cases often demand high network usage. Therefore, a typical 5G base station tends to consume more energy than those of 4G. As 5G networks scale and total power consumption increases, operators are searching for more advanced solutions to manage energy efficiency.

What is the energy-saving technology of base stations?

This technical report focuses on energy-saving technology of base stations. Some energy saving technologies since 4G era will be explained in details, while artificial intelligence and big data technology will be introduced in response to the requirement of an intelligent and self-adaptive energy saving solution.

How can a base station save energy?

There are two main methods of base station energy saving, including hardware and software.

Why do 5G networks use stand-by mode more often than 4G networks?



On the other hand, in 5G networks, the transmit module can be switched to stand-by mode more frequently than in 4G networks because 5G does not transmit any CRSs. Since there are more opportunities to turn off power in 5G networks, this feature is an effective energy saving source for 5G.



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<u>Evaluation of the power-saving effect of 5G base station based on Al</u>

The research shows that the method proposed in this paper has a certain energy-saving effect, can meet the energy efficiency requirements of 5G ultra dense base station, and ...

5G Base Station Deployments; Open-RAN Competition & HUGE 5G BS Power

According to Taiwan based market research firm TrendForce, the big three China and European telecom equipment manufacturers captured more than 85% market share in the ...



Optimal energy-saving operation strategy of 5G base station with

To further explore the energy-saving potential of 5 G base stations, this paper proposes an energy-saving operation model for 5 G base stations that incorporates communication caching ...

# **ZTE and China Unicom Develop Energy Saving Solutions for 5G Base Stations**

ZTE Corporation, in partnership with the Liaoning branch of China Unicom, has conducted a trial on the 5G wireless network in Dalian, China, piloting





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