
Communication 5g base station timed shutdown

What is 5G base station?

1. Introduction 5G base station (BS), as an important electrical load, has been growing rapidly in the number and density to cope with the exponential growth of mobile data traffic. It is predicted that by 2025, there will be about 13.1 million BSs in the world, and the BS energy consumption will reach 200 billion kWh.

What is 5G BS power consumption?

The 5G BS power consumption mainly comes from the active antenna unit (AAU) and the base band unit (BBU), which respectively constitute BS dynamic and static power consumption. The AAU power consumption changes positively with the fluctuation of communication traffic, while the BBU power consumption remains basically unchanged.

How does mobile data traffic affect the energy consumption of 5G base stations?

The explosive growth of mobile data traffic has resulted in a significant increase in the energy consumption of 5G base stations (BSs).

What is the ITU-T Technical Report on 5G base station?

This document contains Version 1.0 of the ITU-T Technical Report on "Smart Energy Saving of 5G Base Station: Based on AI and other emerging technologies to forecast and optimize the management of 5G wireless network energy consumption" approved at the ITU-T Study Group 5 meeting held online, 20th May, 2021. 3.1.

The proliferation of User Equipment (UE) drives this energy demand, urging 5G deployments to seek more energy-efficient methodologies. In this work, we propose ...

Abstract--The energy consumption of the fifth generation (5G) of mobile networks is one of the major concerns of the telecom industry. However, there is not currently an ...

Technical Report ITU-T Smart Energy Saving of 5G Base Station: Based on AI and other emerging technologies to forecast and optimize the management of 5G wireless network ...

However, there is still a need to understand the power consumption behavior of state-of-the-art base station architectures, such as multi-carrier active antenna units (AAUs), ...

With the development of 5G networks, the scale of 5G base stations is rapidly expanding, and the energy consumption of equipment is increasing rapidly. This paper ...

Abstract--To achieve the expected 1000x data rates under the exponential growth of traffic demand, a large number of base stations (BS) or access points (AP) will be deployed ...

This paper discusses the site optimization technology of mobile communication network, especially in the aspects of enhancing coverage and optimizing base station layout. ...

A 5G base station is a complex system that integrates advanced RF technology, digital signal processing, and network ...

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The move comes as the country charted its vision for industrial growth during a two-day work conference of the Ministry of Industry and Information Technology. With 4.19 ...

Recently, 5G communication base stations have steadily evolved into a key developing load in the distribution network. During the operation process, scientific dispatching ...

Download scientific diagram | Three dimensions of shutdown capabilities. from publication: Energy Saving Technologies and Best Practices for 5G Radio Access Network | This article identifies ...

The rapid development of 5G technology leads to increasing energy consumption in base stations (BSs). For the vision of green and sustainable communications, we propose a ...

With the rapid development of 5G communication technology, global telecom operators are actively advancing 5G network construction. As a core component supporting ...

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