# 5g base station energy communication

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 to evaluate a 5G energy-optimised network?

To properly examine an energy-optimised network,it is very crucial to select the most suitable EE metricfor 5G networks. EE is the ratio of transmitted bits for every joule of energy expended. Therefore,while measuring it,different perspectives need to be considered such as from the network or user's point of view.

How do satellites contribute to 5G connectivity?

By serving as connection points between cellular base stations on the ground,satellites establish a global communications network that can make a significant contribution to a fast roll-out of globally available 5G connectivity.

What is 5G & why is it important?

5G is giving the convergence of terrestrial and satellite-based networks a major boost. Under the keyword "Non-Terrestrial Networks (NTN)",satellites are being consistently integrated into the mobile communications standard for the first time,subsequently paving the way for a global and dense communication network in the future 6G generation.

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 increasein the energy consumption of 5G base stations (BSs).

In today"s 5G era, the energy efficiency (EE) of cellular base stations is crucial for sustainable communication. Recognizing this, Mobile Network Operators are actively prioritizing EE for ...

With the advent of the 5G era, mobile users have higher requirements for network performance, and the expansion of network coverage has become an inevitable trend. Deploying micro base ...

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 ...

Web: https://edukacja-aktywna.pl