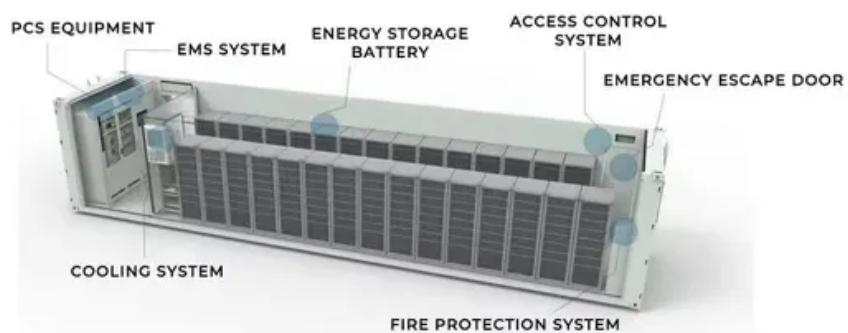


EQACC SOLAR

**Base station uses Yerevan
folding containers with ultra-
high efficiency**



Overview

What is densely deployed base station (BS) network?

Abstract—Densely deployed base station (BS) network is one of the important technologies for 5G and beyond mobile communication system, which improves the system throughput by deploying a large number of BSs in the service area.

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.

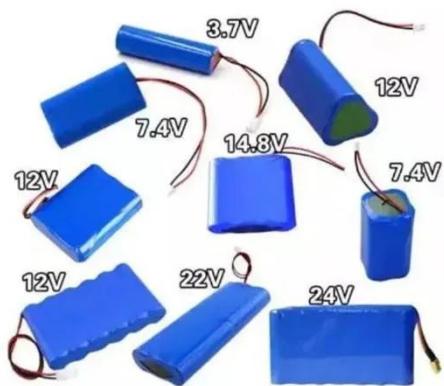
How can a base station save energy?

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

What are the standardized energy-saving metrics for a base station?

(1) Energy-saving reward: after choosing a shallower sleep strategy for a base station, the system may save more energy if a deeper sleep mode can be chosen, and in this paper, the standardized energy-saving metrics are defined as (18) $R_{ie} = E_{SM} = 0$ $E_{SM} = i$ $E_{SM} = 0$ $E_{SM} = 3$

Base station uses Yerevan folding containers with ultra-high efficiency



Base Station Energy Efficiency: Key Strategies ...

Modern base station equipment is designed with energy-saving technologies such as high-efficiency power amplifiers, low-loss ...

Base station power control strategy in ultra-dense networks ...

To incorporate practical factors in base station sleep, [11] studied the system energy consumption and grade of service under three base station sleep schemes and proposed an ...



Final draft of deliverable D.WG3-02-Smart Energy Saving ...

Change Log 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 ...

Energy-efficiency schemes for base stations in 5G ...

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 ...



Joint Traffic Prediction and Base Station Sleeping for ...

Index Terms--Base station sleeping, long short-term memory, traffic prediction. I. INTRODUCTION Densely deployed base station (BS) network is a promising architecture in ...

Energy-saving control strategy for ultra-dense network base stations

Aiming at the problem of mobile data traffic surge in 5G networks, this paper proposes an effective solution combining massive multiple-input multiple-output techniques ...



Base Station Energy Efficiency: Key Strategies for Sustainable ...

Modern base station equipment is designed with energy-saving technologies such as high-efficiency power amplifiers, low-loss cables, and

intelligent control systems.



A Discussion on Ultra-High Efficiency and Ultra-High ...

Abstract--This paper discusses the challenges in achieving ultra-high efficiency, defined here as higher than 99% efficiency, as well as high power density of more than ...



Sustainable Resource Allocation and Base ...

This paper proposes two models for enhancing QoS through efficient and sustainable resource allocation and optimization of base ...

A Super Base Station Architecture for Future Ultra-Dense ...

To meet the explosive growth of mobile data traffic, ultra-dense networks have emerged to enhance spatial and spectral efficiency. Densely deployed small cell

architecture ...



Sustainable Resource Allocation and Base Station ...

This paper proposes two models for enhancing QoS through efficient and sustainable resource allocation and optimization of base stations. The first model, a Hybrid ...

High Altitude Platform Stations: the New Network ...

To this end, the integration of aerial BSs into terrestrial networks could play an essential role by providing supplementary capacity and ofloading portions of mobile traffic to ...



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