

# Outdoor Micro Base Station Energy Method





## Overview

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Can micro base stations improve network coverage?

Conferences > 2019 IEEE SmartWorld, Ubiquit. 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 stations (BSs) is regarded as one of feasible approaches to enhance network coverage.

What is micro base station (micbs)?

With the rapid development of wireless services and the improvement of coverage requirements, lots of micro base stations (MicBS) have been added to conventional Macro base station (MacBS) network. Heterogeneous deployment is one of the main features in future cellular network [ 1, 2 ].

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)  $R_{ie} = E_{SM=0} - E_{SM=i}$ ,  $E_{SM=0} - E_{SM=3}$ .

How much power does a base station need?

The recommended power levels of single carrier transmission for based stations are above 10W. The typical power level of outdoor base station is about 43dBm (20W). However it depends on the coverage range and carrier frequency.



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Nov 14, 2022 · Through the joint dispatching of distributed clean energy generation, micro gas turbine, energy storage system and 5G base ...

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Nov 25, 2024 · Abstract. In order to solve high energy consumption caused by massive micro base stations deployed in multi-cells, a joint beamforming and power allocation optimization ...



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Aug 1, 2025 · The authors in the paper [23] investigated that under the constraints of mobile network operators' user QoS demands and base station power budgets, an energy-efficient ...



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## pimrc2010\_final

Apr 8, 2022 · In this paper we study various homogeneous and heterogeneous deployment strategies incorporating micro base stations with focus on energy efficiency represented by ...



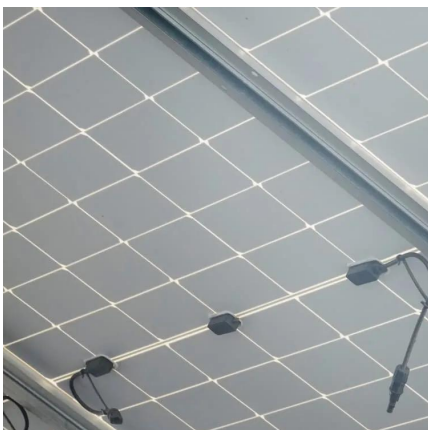
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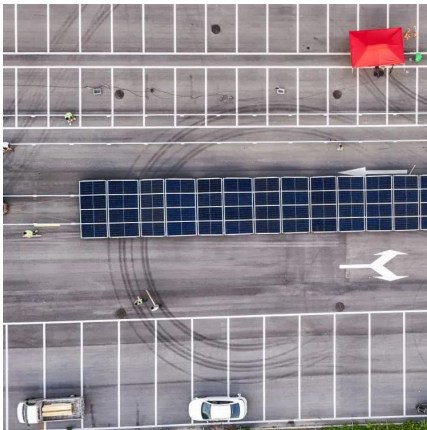
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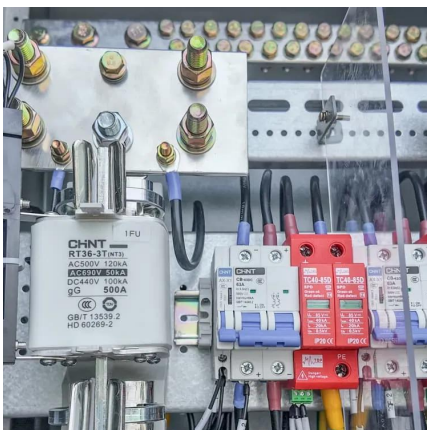


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