

SolarTech Power Solutions

The role of base station energy management system and optical cross-connect box

50KW modular power converter



Flexible Configuration

- Modular Design, Expanding as Required
- Small&Light, Wall Mounted
- Installed in Parallel for Expansion



Powerful Function

- Support PV+ESS
- Grid Support, Equipped with SVG Technology
- On-Grid and Off-Grid Operation



Reliable Protection

- Outdoor IP65 Design
- Sufficient Protection Functions Equipped

Overview

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) $R_i^e = E_{SM}^0 - E_{SM}^i = i E_{SM}^0 - E_{SM}^3$.

What is base station dormancy?

In response to the problem of high network energy consumption caused by the dense deployment of SBS, the base station dormancy technique is seen as an effective solution, as it does not require changes to the current network architecture and is relatively simple to implement. This technique was first proposed in the IEEE 802.11b protocol .

How does distributed execution affect base station control?

In the distributed execution phase, each actor network makes decisions independently based only on its own network and observations, and although each actor executes independently, the whole system is able to obtain a better base station control strategy because their strategies are based on the results of global optimization. Fig. 2.

What is threshold-based base station sleep strategy?

Threshold-based base station sleep strategy is a common base station management method in wireless communication networks, which adjusts the operating state of the base station to save energy and improve resource utilization by dynamically setting appropriate thresholds.

What is adaptive base station sleep strategy?

Adaptive base station sleep strategy Adaptive base station sleep strategy is a strategy that dynamically adjusts the sleep and wake-up states of the base station based on real-time network conditions, user demands, and traffic

modes.

Does a base station sleep affect quality of service (QoS)?

While base station sleeping and antenna switching techniques can be effective in saving energy, they can have an impact on the Quality of Service (QoS) of users. While the base station is sleeping, the User Equipment (UE) must wait for the base station to recover or find another available base station.

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