

PDEOZE PowerContainer

Signal Base Station Energy Storage Solution



Overview

High-capacity energy storage solutions, specifically designed for communication base stations and weather stations, with strong weather resistance to ensure continuous operation of equipment in remote areas. Does a 5G base station use energy storage power supply?

In this article, we assumed that the 5G base station adopted the mode of combining grid power supply with energy storage power supply.

What is the inner goal of a 5G base station?

The inner goal included the sleep mechanism of the base station, and the optimization of the energy storage charging and discharging strategy, for minimizing the daily electricity expenditure of the 5G base station system.

How to optimize energy storage planning and operation in 5G base stations?

In the optimal configuration of energy storage in 5G base stations, long-term planning and short-term operation of the energy storage are interconnected. Therefore, a two-layer optimization model was established to optimize the comprehensive benefits of energy storage planning and operation.

What is the sleep mechanism of a base station?

The sleep mechanism of a base station refers to the intelligent shutdown of major power consumption devices, such as the AAU of the base station, when there is no load or the load is low, such that the energy consumption is greatly reduced.

What happens when a base station is in active state?

1) When the base station is in active state, its power loss P_{active} consists of transmitting power P_{tx} and inherent power P_{fix} . With an increase in the communication load of the base station, the corresponding transmitting power P_{tx} increases linearly.

Why should a 5G base station have a backup battery?

The backup battery of a 5G base station must ensure continuous power supply to it, in the case of a power failure. As the number of 5G base stations, and their power consumption increase significantly compared with that of 4G base stations, the demand for backup batteries increases simultaneously.

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