

# Base station communication equipment heat dissipation principle

Does a 5G base station have heat dissipation?

Currently, the majority of research concerning heat dissipation in 5G base stations is primarily focusing on passive cooling methods. Today, there is a clear gap in the literature in terms of research investigations that tend to quantify the temperature performances in 5G electronic devices.

What is a composite cooling unit for communication base station?

In order to solve the outstanding problems of communication base station, a composite cooling unit of heat pipe and vapor compression air conditioner for communication base station was developed.

What is the energy saving rate of communication base station cooling system?

In the outdoor daily temperature range of 24-28 °C, 28-32 °C, 32-36 °C, 36-40 °C, the energy saving rate of the unit is 67.3 %, 65.2 %, 39.6 %, 6.9 %, respectively, which reduces the energy consumption of the communication base station cooling system to different degrees. Fig. 11. Average power and energy saving rates for different temperature ranges.

Can air distribution improve the temperature control effect of communication equipment?

The air distribution in the cabinet can be further optimized to improve the temperature control effect of communication equipment and reduce the energy consumption of cooling system. This study has certain reference value for temperature control of communication equipment and energy saving of base station cooling system.

## 1. Introduction

What is the temperature of a mobile communication base station?

(1) is 38.5 °C, which is lower than 40 °C, and meets the temperature control requirements of GB/T 51216 2017 "Technical Standard for Energy Conservation in Mobile Communication Base Station Engineering".

Can separated heat pipe system be used in data center heat dissipation?

Tao Ding et al (Ding et al., 2016). studied the application of separated heat pipe system in heat dissipation of data center, and tested the operating performance and free cooling service time of the system in summer, winter and cross season.

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