

Base station power supply current requirements





Overview

How much power does a base station have?

Maximum base station power is limited to 38 dBm output power for Medium-Range base stations, 24 dBm output power for Local Area base stations, and to 20 dBm for Home base stations. This power is defined per antenna and carrier, except for home base stations, where the power over all antennas (up to four) is counted.

What is the maximum base station Power?

Maximum base station power is limited to 24 dBm output power for Local Area base stations and to 20 dBm for Home base stations, counting the power over all antennas (up to four). There is no maximum base station power defined for Wide Area base stations.

What are RF requirements for a base station?

In the base station specifications, there is one set of RF requirements that is generic, applicable to what is called “general purpose” base stations. This is the original set of UTRA requirements developed in 3GPP release 99. It has no restrictions on base station output power and can be used for any deployment scenario.

How many transceivers does a base station have?

It consist of three part elements: one or more transceivers, several antenna mounted on a tower or building, power system, and air conditioning equipment. A base station can have between 1 and 16 transceivers, depending on geography and the demand for service of an area.



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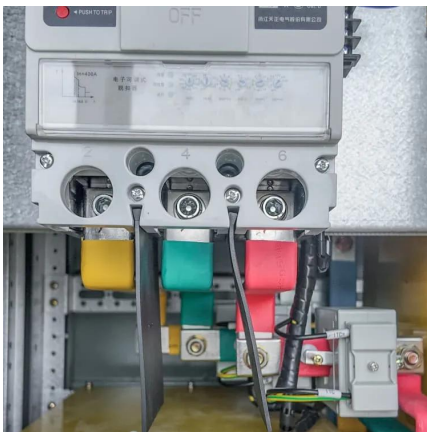
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May 25, 2025 · Building better power supplies for 5G base stations Authored by: Alessandro Pevere, and Francesco Di Domenico, both at Infineon Technologies



Selecting the Right Supplies for Powering 5G Base Stations

As a result, a variety of state-of-the-art power supplies are required to power 5G base station components. Modern FPGAs and processors are built using advanced nanometer processes ...



Power Base Station

The transmitter characteristics define RF requirements for the wanted signal transmitted from the UE and base station, but also for the unavoidable unwanted emissions outside the transmitted ...



Communications System Power Supply Designs

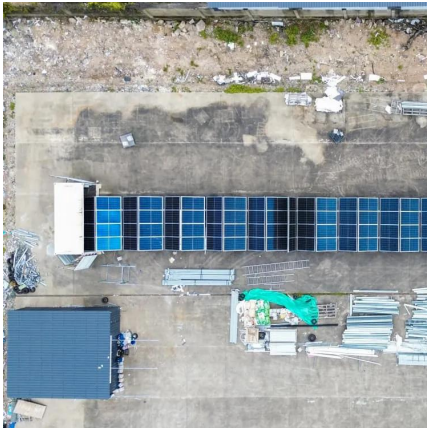
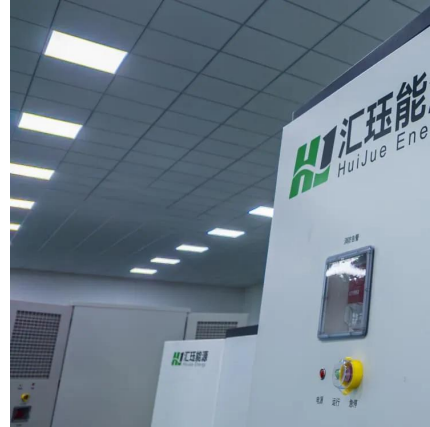
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