

## SolarTech Power Solutions

# Why is the power supply of the communication base station



## Overview

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What are the components of a base station?

**Power Supply:** The power source provides the electrical energy to base station elements. It often features auxiliary power supply mechanisms that guarantee operation in case of lost or interrupted electricity, during blackouts. **Baseband Processor:** The baseband processor is responsible for the processing of the digital signals.

What is base station Power?

Base station power refers to the output power level of base stations, which is defined by specific maximum limits (24 dBm for Local Area base stations and 20 dBm for Home base stations) and includes tolerances for deviation from declared power levels, as well as specifications for total power control dynamic range. How useful is this definition?

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Can a 500W switch power supply be used for communication base stations?

Conferences > 2023 4th International Confer. In order to meet the high power and high stability requirements of communication base stations for power supply, this paper designs a dedicated 500W switch power supply for communication base stations.

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.

Why are base stations important in cellular communication?

Base stations are important in the cellular communication as it facilitate seamless communication between mobile devices and the network communication. The demand for efficient data transmission are increased as we are advancing towards new technologies such as 5G and other data intensive applications.

How do cellular base stations work?

Most transceivers in the cellular base stations are run by 48 VDC to charge the batteries and power the communication equipment. The air conditioning of the base station runs at 220 VAC. These base stations can be powered by two types of diesel generators.

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