

## SolarTech Power Solutions

# Weight of backup power supply for communication base station



## Overview

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Which battery is best for telecom base station backup power?

Among various battery technologies, Lithium Iron Phosphate (LiFePO<sub>4</sub>) batteries stand out as the ideal choice for telecom base station backup power due to their high safety, long lifespan, and excellent thermal stability.

Why is backup power important in a 5G base station?

With the rapid expansion of 5G networks and the continuous upgrade of global communication infrastructure, the reliability and stability of telecom base stations have become critical. As the core nodes of communication networks, the performance of a base station's backup power system directly impacts network continuity and service quality.

What makes a telecom battery pack compatible with a base station?

**Compatibility and Installation** Voltage Compatibility: 48V is the standard voltage for telecom base stations, so the battery pack's output voltage must align with base station equipment requirements. **Modular Design:** A modular structure simplifies installation, maintenance, and scalability.

How do you protect a telecom base station?

Backup power systems in telecom base stations often operate for extended periods, making thermal management critical. Key suggestions include:  
**Cooling System:** Install fans or heat sinks inside the battery pack to ensure efficient heat dissipation.

How many LiFePO<sub>4</sub> cells are in a 48V 100Ah battery pack?

1. **Battery Pack Structure Design** Cell Selection: A 48V 100Ah battery pack is typically composed of 15 or 16 LiFePO<sub>4</sub> cells (each with a nominal voltage of 3.2V) connected in series. The cell capacity, such as 100Ah, can be achieved through direct parallel connection or modular design.

What is a battery management system (BMS)?

**Battery Management System (BMS)** The Battery Management System (BMS) is the core component of a LiFePO<sub>4</sub> battery pack, responsible for monitoring and protecting the battery's operational status. A well-designed BMS should include: **Voltage Monitoring:** Real-time monitoring of each cell's voltage to prevent overcharging or over-discharging.

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