

SolarTech Power Solutions

Mobile LTE base station communication principle



Overview

How does LTE mobile work?

LTE Mobile communicates with just one base station and one cell at a time and there are following two main functions supported by eNB: The eNB sends and receives radio transmissions to all the mobiles using the analogue and digital signal processing functions of the LTE air interface.

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.

What is a Base Transceiver Station (BTS)?

A Base Transceiver Station (BTS) is a piece of equipment that facilitates wireless communication between a mobile device and a network. Essentially, it acts as a bridge by transmitting and receiving radio signals. Understanding the technical components of a BTS can demystify how mobile communication works.

What is a mobile equipment for LTE?

The internal architecture of the user equipment for LTE is identical to the one used by UMTS and GSM which is actually a Mobile Equipment (ME). The mobile equipment comprised of the following important modules: Mobile Termination (MT) : This handles all the communication functions. Terminal Equipment (TE) : This terminates the data streams.

What are the components of LTE network architecture?

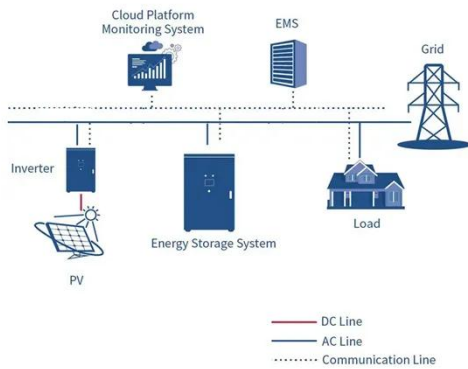
The high-level network architecture of LTE is comprised of following three main components: The User Equipment (UE). The Evolved UMTS Terrestrial

Radio Access Network (E-UTRAN). The Evolved Packet Core (EPC).

What are the components of a base transceiver station?

Base Transceiver Stations consist of several components working in harmony. This section explores the major components of BTS, focusing on their functions and importance. Antennas and towers are fundamental to the operation of a BTS. Antennas are responsible for transmitting and receiving radio signals.

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Base Station System Structure

Jan 28, 2011 · 2 Base Station Background The intent of this section is to explore the role of base stations in communications systems, and to develop a reference model that can be used to ...

Mobile Communication Network Base Station Deployment ...

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huawei base station

Dec 23, 2023 · A base station, also known as an eNodeB (for 4G LTE) or gNodeB (for 5G NR) in Huawei's terminology, is a piece of equipment that facilitates wireless communication between ...

International Journal of Soft Computing and Engineering ...

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LTE Network Architecture

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Energy-Efficient Base Stations , part of Green Communications

Aug 29, 2022 · With the explosion of mobile Internet applications and the subsequent exponential increase of wireless data traffic, the energy consumption of cellular networks has rapidly ...



Principle and Feature of

Mobile Phone Signaling Data



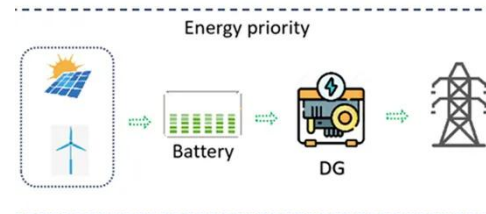
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