

# **Communication principle between small base station and 4G module**





## Overview

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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.

Can a software-defined radio module be used as a base station?

This article presents the potential applications and scenarios for the implementation of a software-defined radio (SDR) module operating as a base station in 4G/5G networks. The paper presents test configurations of the srsRAN software environment in conjunction with various types of programmable radio modules.

Why are base stations an inevitability?

These types of objects are an inevitability since they serve the purpose of providing signal transfer for data and voice between mobile mobiles. The idea of base stations is anchored in their function to provide coverage, capacity, and connectivity, hence allowing for extending the working capabilities of mobile phones and other radio gear.

What is a GSM radio system?

It is a broad-area communications technology program that uses digital radio channeling to provide audio, information, and multimedia communication systems. Every GSM radio channel is 200 kHz broad and is further divided into frames of eight time slots. The GSM system consists of mobile stations, base stations, and interweaving switching systems.



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Implementation of a 4G/5G Base Station Using the srsRAN ...

Sep 1, 2023 · This article presents the potential applications and scenarios for the implementation of a software-defined radio (SDR) module operating as a base station in 4G/5G networks. The ...

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Modular Communications Transceiver for 4G/5G ...

Apr 1, 2023 · ABSTRACT This application report describes the methodology to construct modular 4G/5G distributed antenna systems (DAS) and base stations (BTS). It provides an example of ...

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Implementation of a 4G/5G Base Station ...

Sep 1, 2023 · This article presents the potential applications and scenarios for the implementation of a software-defined radio (SDR) module ...

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How 4G Base Station Works -- In One Simple Flow (2025)

Oct 28, 2025 · In today's connected world, 4G base stations are the backbone of mobile communication. They enable seamless voice calls, high-speed internet, and data transfer ...

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Understand the working principle of 4G ...

Dec 18, 2023 · The 4G module requires wireless communication with mobile base stations. When a user sends a request through an electronic device ...

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Communication Between Two 4G Modem: Principles, Ap

Apr 30, 2024 · This connection is facilitated by base stations within the 4G network, which act as relays to forward data between the two 4g modem. Once the connection is successfully ...

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Base station communication module principle and application

Mobile communication base station is a form of radio station, which refers to a radio transceiver station that transmits information between mobile phone terminals through a mobile ...

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Base Stations

Jul 23, 2025 · The present-day tele-space is incomplete without the base stations as these constitute an important part of the modern-day scheme ...

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Base Stations

Jul 23, 2025 · The present-day tele-space is incomplete without the base stations as these constitute an important part of the modern-day scheme of wireless communications. They are ...

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The communication base station architecture development of 2G 3G 4G ...

Jan 17, 2023 · This article summarizes the base station architectures of 2G, 3G, 4G and 5G



systems respectively.

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#### GSM in Wireless Communication

Jul 23, 2025 · BTS stands for Base Transceiver Station which facilitates wireless communication between user equipment and a network. Every ...

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#### GSM in Wireless Communication

Jul 23, 2025 · BTS stands for Base Transceiver Station which facilitates wireless communication between user equipment and a network. Every tower has BTS. BSC stands for Base Station ...

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#### Understand the working principle of 4G module and ...

Dec 18, 2023 · The 4G module requires wireless communication with mobile base stations. When a user sends a request through an electronic device (such as a smartphone, tablet, etc.), it ...

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