



MODERNIZATION SOLAR

# Radio wave frequencies used by 5G base stations





## Overview

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What frequencies are used in 5G?

5th generation wireless systems, or 5G, may use existing 4G or newly specified 5G Frequency Bands to operate. Technologies include: Millimeter wave bands (26, 28, 38, and 60 GHz) are 5G Massive MIMO, "Low-band 5G" and "Mid-band 5G" use frequencies from 600 MHz to 6 GHz, especially 3.5-4.2 GHz.

What are 5G mmWave frequencies?

The 5G mmWave frequencies are part of the radio frequency (RF) region within the overall electromagnetic spectrum. A wide range of applications, such as radio broadcast, TV broadcast, radio links, satellite communication etc., make use of frequency bands within the RF region as depicted in Figure 1.

What are 5G bands?

5G bands refer to specific ranges of radio frequencies used to transmit cellular signals for 5G networks. Unlike 4G, which primarily operates below 2.5 GHz, 5G uses three main categories: low-band (below 1 GHz), mid-band (1-6 GHz), and high-band (above 24 GHz, also called millimeter wave).

Does 5G require a high frequency spectrum?

In order to support higher bandwidth, 5G requires a high-frequency range of sub-6 GHz and millimeter waves. What are the radio frequency bands used in the 5G communication system?

Why does 5G require a high-frequency spectrum?

Conventional GSM and LTE networks use a frequency range below 4 GHz. It has limitations due to bandwidth.



## Radio wave frequencies used by 5G base stations



### [5G Radio Frequency Bands, Spectrum & More](#)

The primary technologies include: Millimeter wave bands (26, 28, 38, and 60 GHz) are 5G and offer performance as high as 20 gigabits per second; Massive MIMO (Multiple Input Multiple ...

## 5G Frequency Ranges

3GPP has specified two frequency ranges for 5G: sub-7 GHz bands and mmWave bands.

Information on both ranges and the differences between them is presented here.



### [Understanding 5G Bands: A Guide to ...](#)

Feb 11, 2025 · 5G bands refer to specific ranges of radio frequencies used to transmit cellular signals for 5G networks. Unlike 4G, which primarily ...

### [What are the 5G frequencies "mmWave" and "SUB6"? A ...](#)

Jun 9, 2025 · To achieve 5G communications, radio waves with frequencies suited to their characteristics are used. The frequency bands primarily used by 5G each have different ...



## [5G mmWave - Unlocking the Full Potential of 5G](#)

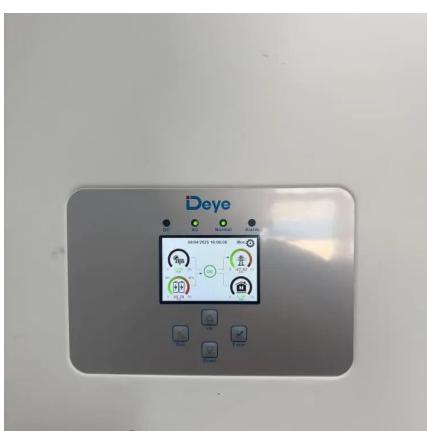
Apr 11, 2022 · 5G mmWave - Unlocking the Full Potential of 5G 5G mmWave - Unlocking the Full Potential of 5G 5G in the 3.5GHz band allows for higher capacity than previous ...



## **5g radio frequencies**

Dec 7, 2023 · 4. High-Band (mmWave)

Frequencies: High-band frequencies, also known as millimeter-wave (mmWave), operate above 24 GHz. mmWave provides extremely high data ...



## [5G Radio Frequency Bands, Spectrum & More ...](#)

The primary technologies include: Millimeter wave bands (26, 28, 38, and 60 GHz) are 5G and offer performance as high as 20 gigabits per second; ...



## What are 5G frequency bands

Low Band 5G Spectrum  
Mid Band 5G Spectrum  
High Band 5G Spectrum  
A usable frequency spectrum below 1GHz is known as Low Band in 5G. Low-frequency spectrum provides more comprehensive coverage and can penetrate obstacles better. Service providers are familiar with these bands since the introduction of 2G networks, and they are commonly used globally. See more on rfpage CableFree



## **5G Frequency Bands & Spectrum Allocations**

71 rows · 5th generation wireless systems, or 5G, may use existing 4G or ...



## 5G Frequency Bands & Spectrum Allocations

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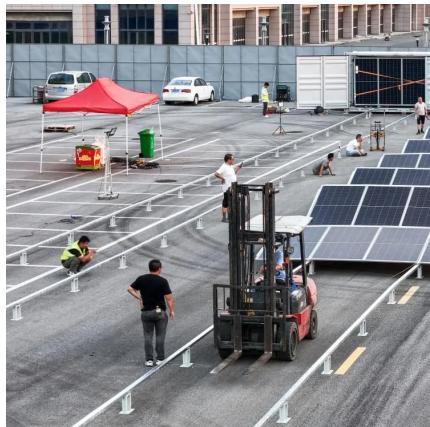


## 5G mmWave Guide A Resource for Operators

Apr 24, 2023 · 5G mmWave (pronounced as millimetre-wave) refers to the higher range of radio frequencies supported by 5G (beyond 4G frequencies). This is termed 5G FR2 (Frequency ...

## What are 5G frequency bands

Jul 1, 2025 · What are 5G frequency bands of each counties and regions, find frequency allocation for 5G network across the globe, sub-6



GHz spectrum and millimeter waves.

## [Understanding 5G Bands: A Guide to Frequency Ranges and ...](#)

Feb 11, 2025 · 5G bands refer to specific ranges of radio frequencies used to transmit cellular signals for 5G networks. Unlike 4G, which primarily operates below 2.5 GHz, 5G uses three

...



## [5G equipment, safety standards and performance](#)

1 day ago · Radio waves are used for communication in 5G. Like in previous mobile networks, 5G devices communicate with base stations by transmitting and receiving radio waves, or radio ...



## **5G Frequency Ranges**

3GPP has specified two frequency ranges for 5G: sub-7 GHz bands and mmWave bands. Information on both ranges and the differences between ...



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