

Khartoum Communications 5G Indoor Base Station





Overview

A prototype is fabricated to test the feasibility of the proposed indoor BS, 16-element MIMO antenna array, as illustrated in Fig. 5.

Are commercial 5G signals suitable for indoor positioning?

Abstract: With the widespread deployment of the fifth-generation (5G) network indoors, commercial 5G signals are highly attractive in the field of indoor positioning because of their ubiquity.

What is a 5G base station?

It consists of antennas, transceivers, and digital processing units that transmit and receive radio signals between user devices and the network. 5G base stations operate on various frequency bands, including sub-6 GHz and mmWave, to deliver ultra-low latency, high data throughput, and enhanced capacity.

Can a 16 element indoor base station cover 5G?

In this paper, a wideband 16- element indoor base station (BS) antenna array that can cover 3.3–6.0 GHz is proposed for 5G applications. A π -shaped monopole antenna is designed to cover the Lower band (LTE bands 42/43–N77–N78), the intermediate band (N79), and the higher band (LTE 46).

Can 5G be used indoors?

However, when it comes to indoor positioning using commercial 5G signals, there are persistent challenges. One particular challenge arises from the fact that in numerous indoor scenarios, there is only one base station (called gNB) heard from the receiver.



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