

Title: Outdoor dual-band intelligent base station design

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What is a dual-band dual-polarized antenna with isolation enhancement?

In this paper, a dual-band dual-polarized antenna with isolation enhancement is designed. The proposed antenna operates in the frequency range of 3.4-3.6 GHz and 4.8-5 GHz, where the center frequency of the high band (HB) is 1.4 times that of the low band (LB).

Can a dual-band dual polarized antenna cover a low band?

Therefore, this paper proposed a dual-band dual-polarized antenna for small base station applications that can cover the low band (3G/4G bands) and high band (5G NR band n78) at the same time. The main objective is to reduce the cost and space of future base station antenna that incorporates both bands of interest.

What is a base station antenna?

The base station antenna is a critical element in a communication system. A desirable base station antenna requires wide impedance bandwidth, stable radiation patterns, good isolation, and high cross-polarization discrimination (XPD) over the entire operating band.

What is a composite decoupling structure for dual-band dual-polarized base station array?

A composite decoupling structure is proposed to ameliorate the mutual couplings for dual-band dual-polarized base station array. The structure consists of dual-band decouple surface combined with staggered dielectric surface and several meandered line resonators embedded on the ground.

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A novel dual-polarized base station antenna for 5G applications is proposed in this paper. The antenna consists of a parallel plate waveguide and a dipole antenna, which are fed ...

In this paper, a novel population-based computational intelligence optimization method is proposed for broadband base station antenna design.

In this paper, a dual-band dual-polarized antenna with isolation enhancement is designed. The proposed antenna operates in the frequency range of 3.4-3.6 GHz and 4.8-5 ...

Here, we propose a large-scale 2-bit millimeter-wave programmable metasurface to build an integrated smart

base station framework for 6G communications. The meta-array is ...

The Baicells Nova246 is a high-power LTE TDD base station designed for outdoor deployments in the 3.5 GHz CBRS Band 48. With support for dual carriers and 2x20W output power, the ...

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This manuscript proposes a dual-band dual-polarized 64-element phased array antenna (PAA) with suppressed higher order modes (HoMs).

Abstract - In this manuscript, a dual-band and dual-polarized coupled patch array antenna operating at 2.45 GHz and 5.8 GHz for outdoor Wi-Fi applications is pro-posed.

A novel dual-band antenna architecture tailored for full duplex systems is presented alongside the design of two shielding structures and their performance are evaluated in electromagnetic ...

In this article, we provide an overview of IS-integrated BSs for wireless networks, including their motivations, practical architectures, and main design issues.

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