
Outdoor dual-band intelligent base station design

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

Privacy Policy 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 polarized base station antenna be used for LTE 5G?

Qi et al. (2022) designed an ultra-wideband dual-polarized base station antenna for LTE/5G bands. By adding a bow-like parasitic patch, the antenna finally obtains a wide band of 50.4% (2.24-3.75 GHz) and realizes high isolation by using a $\lambda/4$ -microstrip line.

What is a dual band antenna?

The proposed dual-band antenna consists of a low band (LB) and a high band (HB) antenna elements. The HB element is coaxially located under the radiator of the LB element, minimizing the overall size. The proposed LB element consists a two-layer-FSS based radiator (FSS-radiator) and two pairs of differential feeding probes.

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-band antenna architecture tailored for full duplex systems is presented alongside the design of two shielding structures and their performance are ...

In particular, integrating passive intelligent surface (IS) into the base station (BS) is a novel solution to enhance the wireless network throughput and coverage both cost ...

In order to meet the communication requirements of multi-band base station antennas, an ultra-wideband dual-polarized 5G base station antenna integrating n77/n78/n79 ...

the dual-frequency dual-polarized patch array antenna for outdoor Wi-Fi base stations. High isolation and low cross polarization are obtained in the operating frequency band.

The dual-layer ADS design successfully resolves the contradiction between decoupling performance and matching. The ground plane of the 5-element array is then ...

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A dual-band dual-polarized shared-aperture antenna array is then developed to demonstrate the concept and design. The experimental result validates the stable radiation ...

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

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