

Communication ground base station range





Overview

What VSWR should a ground station have?

The antenna standing wave ratio (VSWR or SWR) should not exceed 1.5 for the ground station or 2.0 for the airborne station. The airborne antenna should be one of the standard widely used vhf aircraft antennas. A gain antenna may be used at the ground station to increase communications range.

How high should a ground station antenna be?

The ground station antenna should be at least 15 feet above the ground—20 feet is better and 30 feet even better. If roof mounted, the antenna should be mounted near the highest point on the roof. Range figures stated here assume an antenna height of 20 feet above the ground, in gently rolling terrain with low hills.

Is a ground BS antenna suitable for the cmwave frequency range?

The cmWave frequency range, defined from 7 GHz to 15 GHz, potentially strikes a balance capacity and propagation losses, being a promising frequency range for 6G . The ground BS antenna design is clearly central to address-ing these technical challenges. To this end, this paper proposes novel ground BS antenna design for the cmWave range.

What is a ground BS antenna?

The paper introduces a ground BS antenna design for the 5.9-8.5 GHz band. The main contributions include wide-band, high-isolation antenna array concept for the ground BS antenna, along with an analysis of how the antenna array dimension affects the signal-to-noise-and-interference ratio and throughput in ATG systems.



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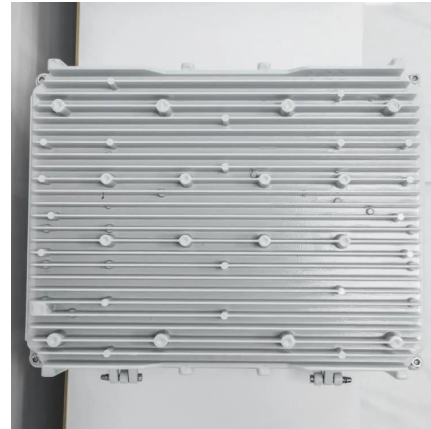


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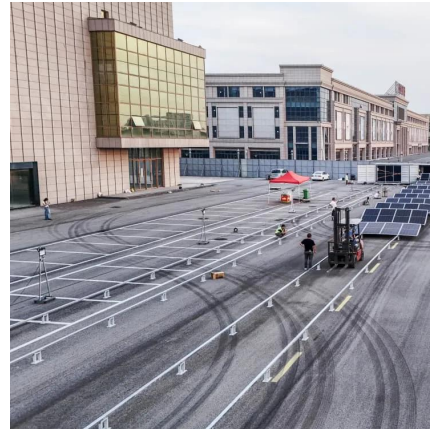
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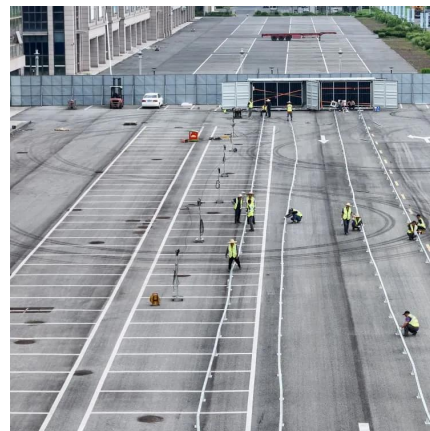


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