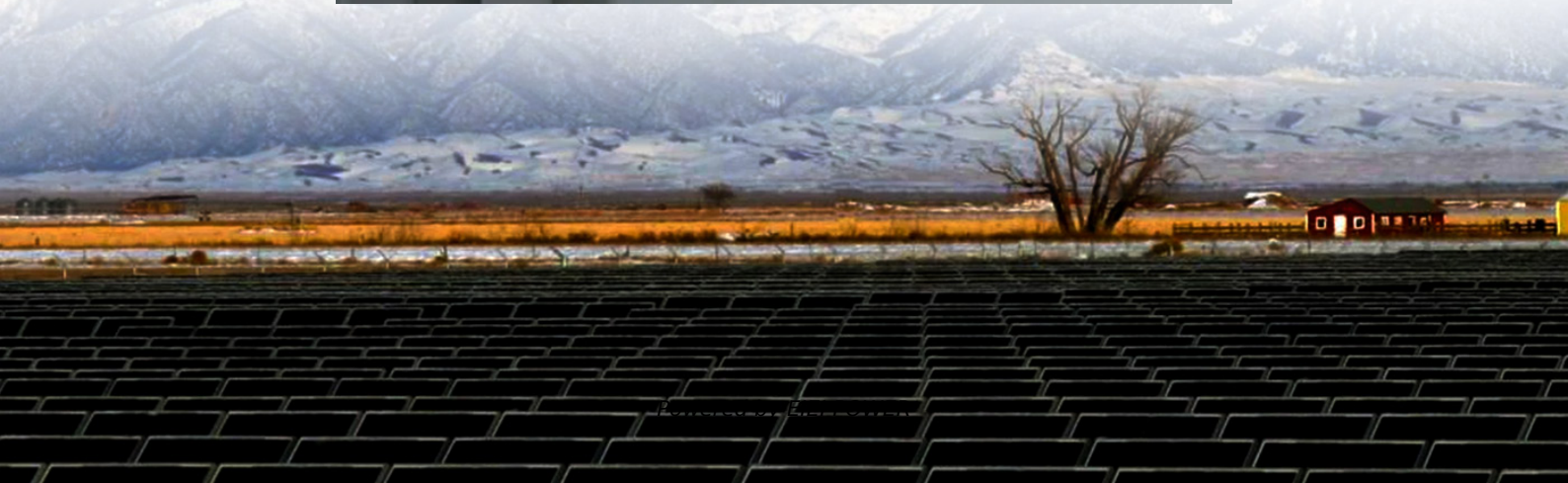
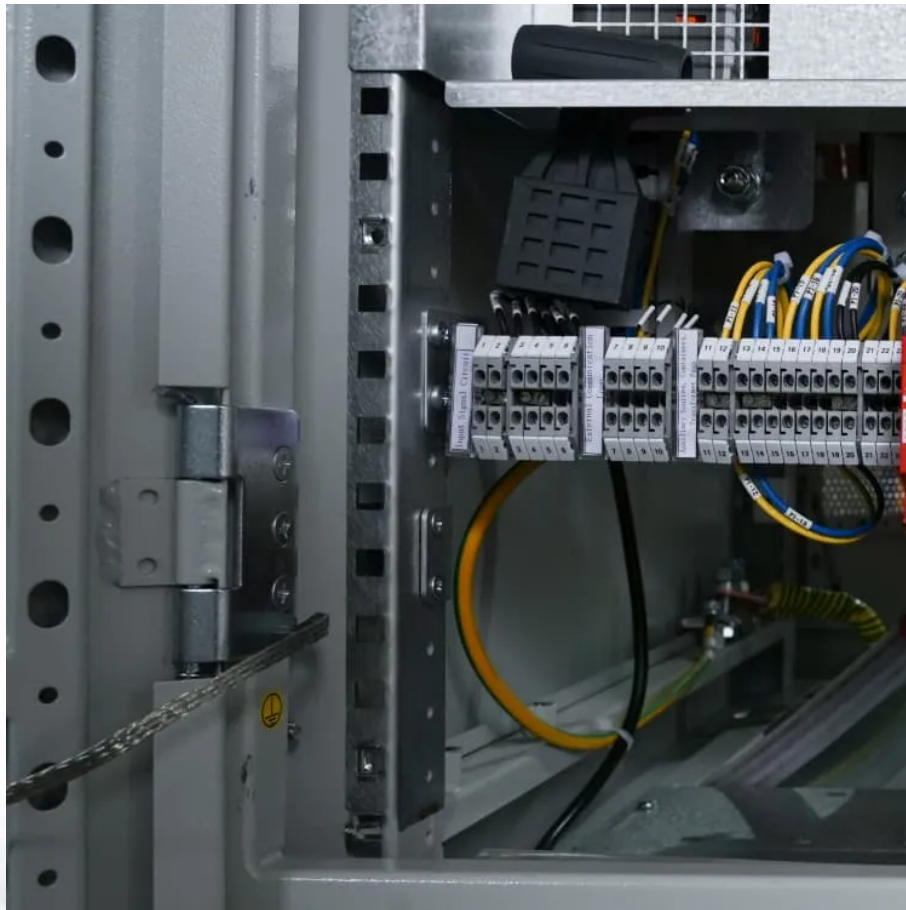


# **Three-dimensional communication 5g micro base station**





## Overview

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How to optimize base station deployment in 5G wireless networks?

In previous research on 5G wireless networks, the optimization of base station deployment primarily relied on human expertise, simulation software, and algorithmic optimization.

How can a 5G cellular network be developed?

The developed model can facilitate the rollout of 5G technology. Due to the high propagation loss and blockage-sensitive characteristics of millimeter waves (mmWaves), constructing fifth-generation (5G) cellular networks involves deploying ultra-dense base stations (BSs) to achieve satisfactory communication service coverage.

Should 5G base stations be tripled?

To cover the same area as traditional cellular networks (2G, 3G, and 4G), the number of 5G base stations (BSs) could be tripled (Wang et al., 2014). Furthermore, Ge, Tu, Mao, Wang, and Han, (2016) suggested that to achieve seamless coverage services, the density of 5G BSs would reach 40-50 BSs/km<sup>2</sup>.

How a macrocell in 5G network can be improved?

And macrocell in 5G networks may encounter sudden traffic due to dense users caused by sports or celebration activities. To resolve such temporal hotspot, additional network access point has become a new solution for it, and unmanned aerial vehicle equipped with base stations is taken as an effective solution for coverage and capacity improvement.



## Three-dimensional communication 5g micro base station

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### Three-dimensional aerial base station location for sudden ...

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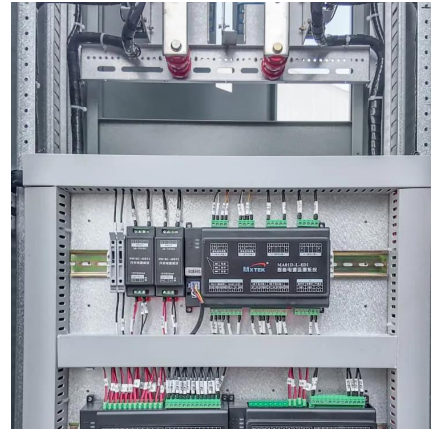
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In this article, for optimizing the three-dimensional (3D) deployment of aerial-BSs for 5G mmWave net-works, a classic deep reinforcement learning (DRL) net-work which named deep Q ...



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