

# Single base station independent communication





## Overview

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Is a single-base-station positioning algorithm suitable for long and narrow indoor environments?

With the rapid advancement of indoor positioning technology, improving cost-effectiveness, positioning accuracy, and base station (BS) deployment efficiency in typical indoor scenarios remains a pressing challenge. This paper proposes a single-base-station positioning algorithm tailored for long and narrow indoor environments.

What is a tightly coupled positioning method based on a single base station?

proposed a tightly coupled positioning method based on a single base station (SBS) via UWB and an inertial navigation system (INS). The method calibrates UWB measurements and establishes an extended Kalman filter (EKF) model, which uses position prediction results to calculate the distance and angle between the tag and the UWB base station.

Can 5G signal base station be used for indoor positioning?

As commercial 5G systems rapidly expand, indoor positioning using 5G signals holds great potential for serving a large number of users. In this paper, an effective fingerprint solution is proposed for indoor positioning with 5G signal base station by exploring the multi-beam property.

Are UWB single/dual-base-station positioning algorithms suitable for long and narrow indoor environments?

In response to the challenges faced by UWB positioning methods in long and narrow indoor environments as well as conventional scenarios, this paper proposes UWB single/dual-base-station positioning algorithms tailored to these two typical indoor environments.



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### A positioning method based on map and single base station ...

Positioning based on wireless communication networks has great application potential. In this paper, we propose a positioning method for the 5G-Advanced (5GA) or 6G ...

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### Indoor Localization in Commercial 5G Environment with ...

Only one 5G base station (BS) is detectable in this scenario. A passive signal amplification antenna is installed behind the ceiling, resulting in non-line-of-sight (NLOS) trans ...

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Propagation ...

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### High-Precision Single Base Station Localization Assisted by Beamforming

With the development of the fifth generation (5G) wireless communication and the growing demand for high-precision indoor localization, the 5G signal based localization ...

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### UWB single/dual base station positioning algorithms for ...

With the rapid advancement of indoor positioning technology, improving cost-effectiveness, positioning accuracy, and base station (BS) deployment efficiency in typical ...

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### Research on single base station positioning based on ...

Recent research on Intelligent Reflecting Surface (IRS), a promising emerging technology, has shown significant potential in positioning and sensing. This paper provides an ...

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### **NLoS Localization with Single Base Station Based on Radio ...**

Accurate outdoor localization in Non-Line-of-Sight (NLoS) environments remains a critical challenge for wireless communication and sensing systems. Existing methods, ...

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### **telecom\_dataset**

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### [Single Base Station mmWave Radio Positioning, ...](#)

In contrast to communication, where a link can be established with a single base station (BS), a notable challenge in 5G mmWave positioning is the substantial infrastructure demand of ...

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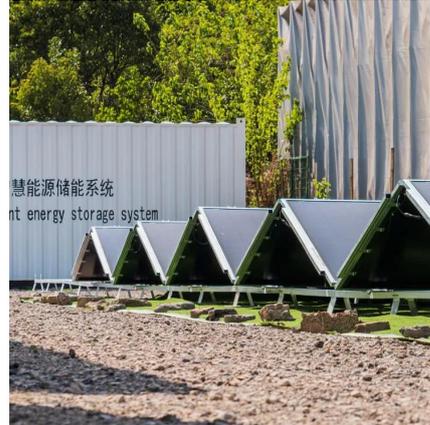


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