

EQACC SOLAR

UwbOutdoor distance between wind power base stations



Overview

What is the optimal deployment location for a UWB base-station?

The optimal deployment of base-station location is to optimize the deployment location of four base stations in the tetrahedral coverage area determined by the maximum coverage area of the UWB base-station.

What is the transmission distance of a UWB base station?

The transmission distance of the UWB base-station used in the actual measurement is 20m, and the inherent error is 0.5-0.7m. Based on this, the largest regular tetrahedron area that can be covered by four base stations of 15m*15m*3m is selected for simulation and positioning experiments of a single group of base stations.

Does the layout of UWB base stations affect positioning accuracy?

The simulation results show that the layout of UWB base stations has a greater impact on the positioning accuracy, and the more averaged the distribution of distances from the area to be located to each base station, the higher the positioning accuracy.

Can UWB Positioning System be used in practical deployment?

Both the location and number of UWB positioning base stations are optimized from a theoretical point of view, and good results are obtained through simulation and experimental verification. Therefore, the paper provides a new reference for the practical deployment application of UWB positioning system.

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AN OPTIMAL DEPLOYMENT METHOD OF UWB POSITIONING BASE ...

Aiming at the prominent problem of high deployment cost of UWB (Ultra Wideband) positioning system and the waste of resources caused by repeated coverage of ...

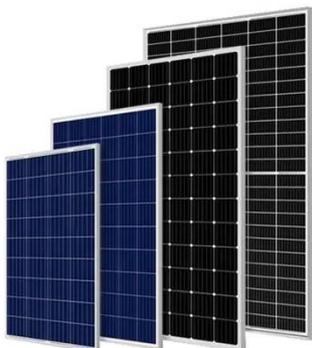
AN OPTIMAL DEPLOYMENT METHOD OF UWB ...

The distance between the four base stations and the tags were tested multiple times and the average value was taken as the longest transmission distance of the UWB ...



An Indoor UWB 3D Positioning Method for Coplanar Base ...

As an indispensable type of information, location data are used in various industries. Ultrawideband (UWB) technology has been used for indoor location estimation due ...



Research on 3D Positioning Technology of UWB Single ...

TOA positioning requires ranging based on the one-way propagation time of the signal at the base station and the node to be measured. In order to achieve accurate ...



Communication base station wind power distance ...

Combined with the electrical safety distance limit of communication equipment and iron tower, the influence of the installation location and quantity of the base station on the

Research on indoor positioning system algorithm based on ...

The main base station connects the data terminal, sends the ranging request signal and receives the ranging response signal, and obtains the distance value between each the ...



AN OPTIMAL DEPLOYMENT METHOD OF ...

Aiming at the prominent problem of high deployment cost of UWB (Ultra Wideband) positioning system and the waste of resources ...



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

The algorithm calculates the distance between the base station and the tag using TOA and incorporates the C-Taylor algorithm to address the limitations of the Chan and Taylor ...



An Indoor UWB 3D Positioning Method for Coplanar Base Stations ...

As an indispensable type of information, location data are used in various industries. Ultrawideband (UWB) technology has been used for indoor location estimation due ...



ENSURING AN ADEQUATE SEPARATION DISTANCE ...

This paper summarises the work that has been undertaken by the UK Onshore Pipeline Operators' Association (UKOPA)

to specify an appropriate separation distance ...

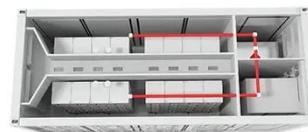


Is setback distance the best criteria for siting wind turbines ...

Perhaps the most important basis for comparison between different distance scenarios is actual environmental impacts. For example, if a hypothetical regulation increases ...

UWB Positioning Analysis and Algorithm Research

The setup scene hardware consists of 4 base stations and 10 tags. When the base station is laid, it is necessary that the 10 mobile tags are within the effective range of the signal ...



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