

How to determine the base station site coordinates





Overview

What methods are used to determine base station coordinates?

The following recognized methods, listed in descending order of accuracy, are used to determine base station coordinates: Published or precisely-determined coordinates. Coordinates computed from published or precisely-determined grid coordinates.

How accurate are base station coordinates?

The coordinates you enter should be as accurate as possible. Every 10 m of error in a base station coordinate can introduce a scale error on every measured baseline of up to 1 ppm. The following recognized methods, listed in descending order of accuracy, are used to determine base station coordinates: Published or precisely-determined coordinates.

How do I determine the geodetic reference position of my base station?

There are three ways of determining the geodetic reference position of your base station: Setting up the base station antenna above a known reference point, such as a geodetic control point or survey marker, offers a convenient method for acquiring a reliable reference position for the base receiver.

How do I find the location of a base station?

The location of your base station will coincide with the Geodetic point's location. You can retrieve the geographic coordinates information from the geodetic point's description. Ensure to incorporate altitude information by adding the height difference between your Antenna Reference Point (ARP) and the marker.

How to get a high accuracy base station position?

Any error in the base station position will directly translate into rover position errors, therefore the base station position accuracy is very important. To acquire a high precise location of your base station, PPK is one of the most



popular methods. We use a TOP168 RTK base station in this document.

How to calculate a base station if there is no reference point?

If there is no reference point or RTK network in your region, don't worry, you can calculate the position of the base station by using an online Precise Point Positioning (PPP) service. Popular services include CSRS-PPP service, OPUS and APPS.



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[User Guidelines for Single Base Real Time GNSS Positioning](#)

The coordinates of the point of interest at the rover position are then obtained by adding the vector (as a difference in Cartesian coordinates) to the station coordinates of the base ...

[How to set up a base station - Chapter 4: Determining](#)

This is the fourth of a series of articles dealing with how to correctly set up a base station. This article explains a number of different methods that can be used to determine the reference ...



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