

ComNav Technology

User Guide

CDC+ Software V1.2

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Technical Assistance

If you have any question and can't find the answer in this manual, please contact SinoGNSS technical support through email: support@comnavtech.com or Skype: *comnav.support*. Your feedback about this Guide will help us to improve it with future revisions. Please email your comments to: support@comnavtech.com

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1. Introduction

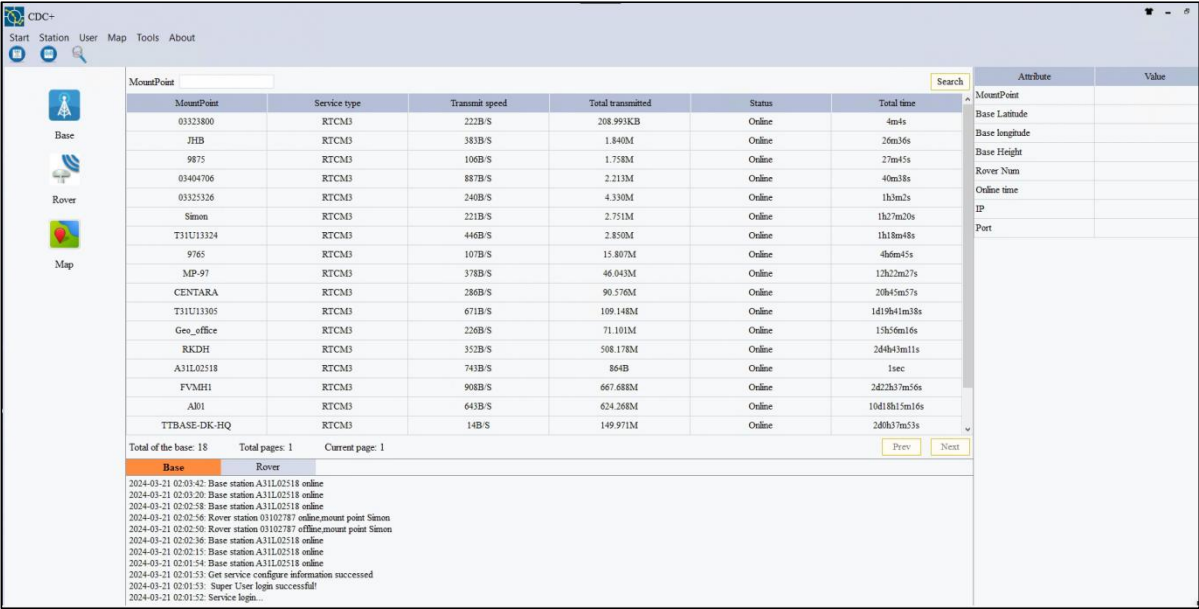
This Quick Guide consists of software installation, setting up and functionalities of CDC+ software, which will help you get started with it easily. We highly recommend you to read this guide before your applications.

1.1 Overview

The CDC+ software is a multi-base station differential data network forwarding software, transferring SRTK corrections(single station). It a real time NTRIP server designed for supporting community GNSS base station as well as the ComNav RTK or other brand RTK in “rover” or “base” mode. Basically CDC+ is a NTRIP Caster where NTRIP Servers are dynamically connected and where NTRIP Clients can be connected with. It is usually installed in a server PC with a static IP address. With this software, system supervisors can control all receivers at the stations, for instance:

- Multi-user real-time transmission of differential data through Ntrip protocol;
- Real-time map display of on-line device location information.

1.2 Software Interface



The screenshot shows the CDC+ software interface. On the left is a sidebar with icons for Base, Rover, and Map. The main area displays a table of MountPoint data. The table has columns: MountPoint, Service type, Transmit speed, Total transmitted, Status, and Total time. Below the table, there are tabs for 'Base' and 'Rover', and a log area showing system messages.

MountPoint	Service type	Transmit speed	Total transmitted	Status	Total time
01323800	RTCM3	222B/S	208.993KB	Online	4m4s
JHB	RTCM3	383B/S	1.840M	Online	26m36s
9875	RTCM3	106B/S	1.758M	Online	27m45s
01404706	RTCM3	887B/S	2.213M	Online	40m38s
03325326	RTCM3	240B/S	4.330M	Online	1h3m2s
Simon	RTCM3	221B/S	2.751M	Online	1h27m20s
T31U13324	RTCM3	446B/S	2.850M	Online	1h18m48s
9765	RTCM3	107B/S	15.807M	Online	46m45s
MP-97	RTCM3	378B/S	46.043M	Online	12h27m27s
CENTARA	RTCM3	286B/S	90.576M	Online	20h45m57s
T31U13305	RTCM3	671B/S	109.148M	Online	1d19h41m38s
Geo_office	RTCM3	226B/S	71.101M	Online	15h56m16s
RKDH	RTCM3	352B/S	508.178M	Online	2d4h43m11s
A31L02518	RTCM3	743B/S	864B	Online	1sec
FVMBH	RTCM3	908B/S	667.688M	Online	2d12h37m56s
AI01	RTCM3	643B/S	624.268M	Online	10d18h15m16s
TTBASE-DK-HQ	RTCM3	14B/S	149.971M	Online	2d6h37m53s

Total of the base: 18 Total pages: 1 Current page: 1

Base Rover

2024-03-21 02:03:42: Base station A31L02518 online
2024-03-21 02:03:20: Base station A31L02518 online
2024-03-21 02:02:58: Base station A31L02518 online
2024-03-21 02:02:56: Rover station 03102787 online, mount point Simon
2024-03-21 02:02:50: Rover station 03102787 offline, mount point Simon
2024-03-21 02:02:36: Base station A31L02518 online
2024-03-21 02:02:15: Base station A31L02518 online
2024-03-21 02:01:54: Base station A31L02518 online
2024-03-21 02:01:53: Get service configure information succeeded
2024-03-21 02:01:53: Super User login successful!
2024-03-21 02:01:52: Service login.

The main page of software contains four sections: menu bar, view area, navigation area and a message box. The detailed functions will be demonstrated in following chapters.

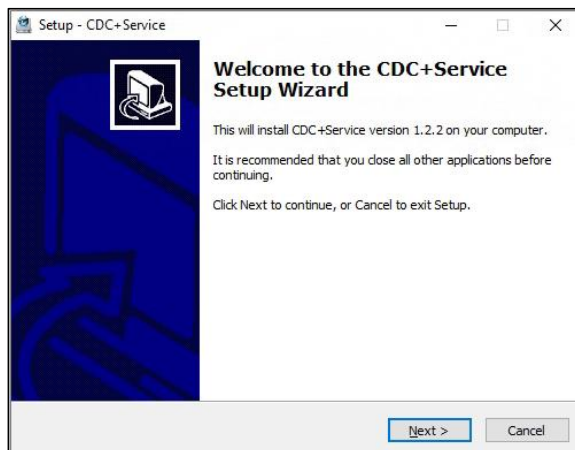
- Menu bar: Displaying of the online reference stations, online rover and map.
- View area: displays information that you select in the navigation area.

- Message box: shows all messages related to the system operation, including base stations online/offline, users log in/log out and system configuration status .
- The Navigation area: click on the corresponding icons to check stations, user and map.

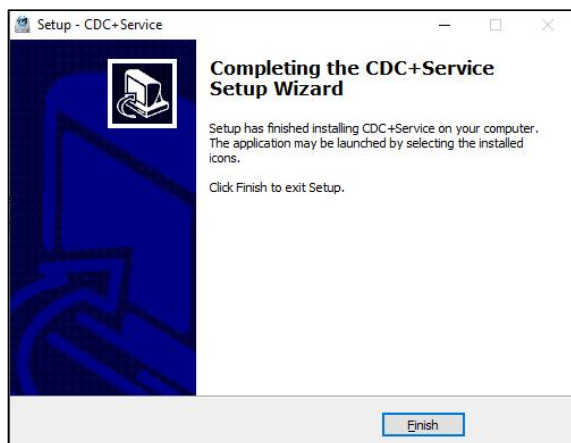
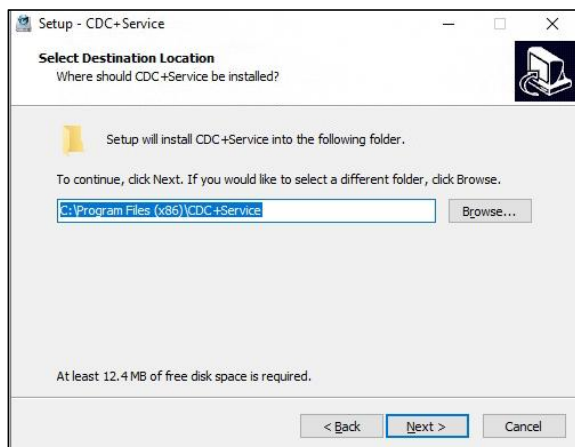
2 Installation

2.1 CDC+ Service 1.2.2 setup

First run the CDC+Service1.2.2-setup.exe to install the Service application.

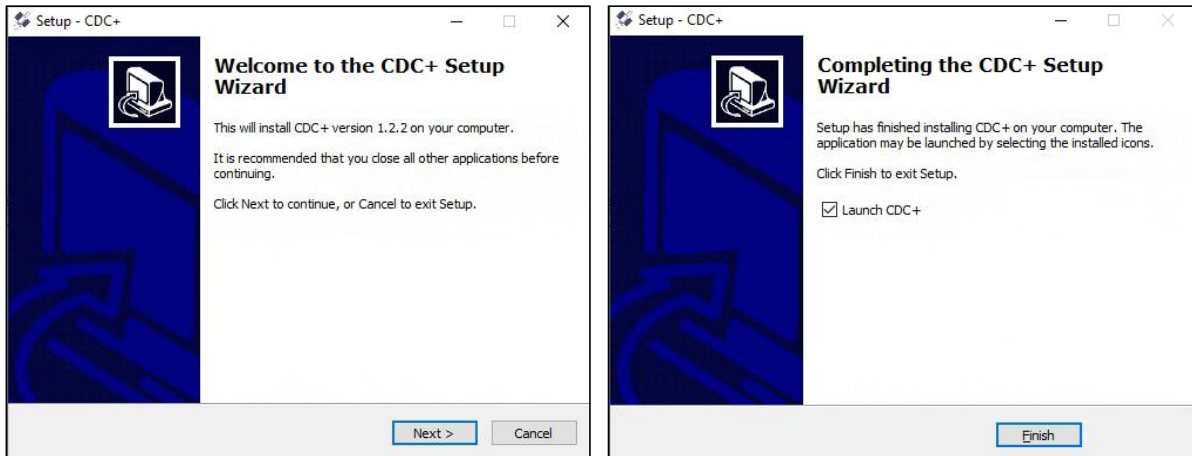


Follow the steps until you finish the setup



2.2 CDC+ 1.2.2 setup

Install the client software, run CDC+1.2.2-setup.exe.

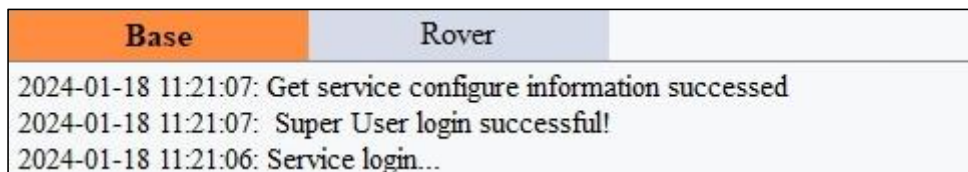


Warning: If you have installed CDC+ before on your PC, pls uninstall the CDC+ Service and CDC+ program before installing the 1.2.2 version.

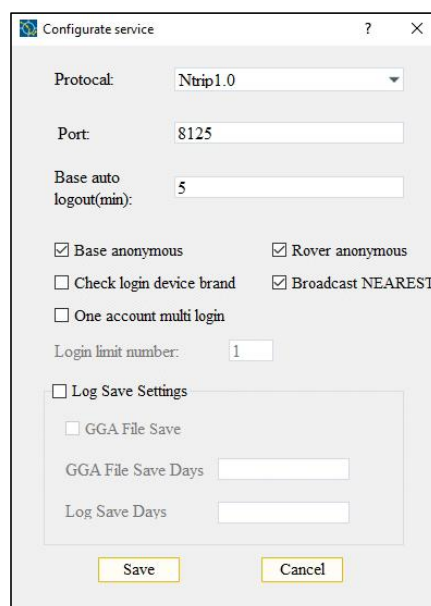
2 Quick start for anonymous mode

2.1 Login

After you install the CDC+, the CDC+ will run and login automatically, you can view the message box about the login status. Go to Start->Login, you can manually to login the service.



2.2 Configure service



- The port is for data transfer from Base to Rover, it must be mapped if you want the base and rover access your server. If you install the CDC+ on a PC, when you map the IP and port, the IP is same as this PC, and port is 8125 by default. You also can change the port to which port already mapped.
- Base auto logout: It means the Base will offline if the Server didn't got any data within the time.
- Base anonymous and Rover anonymous: When you check them, your server is no limit to any user to upload base corrections and receive data.
- Check login device brand: When you check this option, only ComNav devices can connect to CDC+.
- Broadcast NEAREST: When you check this option, CDC+ will broadcast the NEAREST base station. When the rover (can automatically upload GGA), can select NEAREST in the mount point list to use the base station closest to it.
- One account multi login: This option is not checked by default, that is, one account can only be used by one user. Users can check on this option to set the login limit number, so that one account can be used by multiple users.
- Log Save Settings: CDC+ stores the running log file automatically, you can check this option and set the number of days for software running logs and rover GGA data to be stored, then the previous logs and GGA data will be cleaned regularly.

2.3 Start Data transfer

After the configuration of the software, you can try setup Base transfer data to this Server. The following setup is an example of M300 pro receiver.

● M300 pro setup:

You need to choose NtripV1.0 version, enter the CasterAddress and port of CDC+, username, password and mountpoint. Besides, you need to choose the differential data type and frequency.

● Base View:

After you setup in the base station, you can check Base interface of CDC+ software, it will be online if everything is setup correctly. Here you can view differential data type, transmit speed, total transmitted, status and total online time of each station. Click one station in the list, you can view its detail information on the right of the interface, such as base coordinate, number of online users using this base station, online time, IP and port of the base station.

● Mountpoint Search:

You can enter the base name in the MountPoint and click Search to view the specific station, and clear all contents in MountPoint, and then click Search to cancel the query for a specific base station to display all base stations in the list.

MountPoint	Service type	Transmit speed	Total transmitted	Status	Total time
MP-97	RTCM3	14B/S	39.950KB	Online	39sec
M300pro	RTCM3	284B/S	1.277KB	Online	1sec
DAMAC	RTCM3	107B/S	687.780KB	Online	12m54s
N31L05003	RTCM3	46B/S	1.716M	Online	27m32s
N31L05514	RTCM3	12B/S	2.296M	Online	36m42s
Guyana	RTCM3	921B/S	2.825M	Online	49m38s
03323800	RTCM3	48B/S	2.923M	Online	53m46s
JHB	RTCM3	428B/S	5.261M	Online	1h16m18s
9875	RTCM3	57B/S	4.949M	Online	1h17m27s
03325326	RTCM3	274B/S	7.785M	Online	1h52m44s

Total of the base: 22 Total pages: 2 Current page: 1 Prev Next

● Rover View:

Click Rover to check the rovers online. In the list, you can check username, mountpoint, receive speed, total received, online time, solution status, number of satellites in use,

differential delay and distance from base. Select one rover in the list, you can check other information on the right of the interface, such as base coordinate and rover coordinate.

● Rover Search:

You are also able to query a specific rover or mountpoint by enter the rover name or mountpoint to search.

MountPoint	User name	MountPoint	Base	Receive Speed	Total Received	Online time	Total time	States	Number of satellites in use
M11L00014_87976428		N31L05003	N31L05003	804B/S	5.196KB	2024-03-21 02:48:53	5sec	Fixed Solution	38
M11L02100_89203488		N31L05003	N31L05003	804B/S	144.471KB	2024-03-21 02:46:43	2m15s	Floating Solution	18
M11L02427_89194830		N31L05003	N31L05003	804B/S	153.186KB	2024-03-21 02:46:35	2m23s	Fixed Solution	18
N51L02222_89176757		9765	9765	18B/S	173.855KB	2024-03-21 02:46:18	2m40s	Fixed Solution	33
	foreight	CENTARA	CENTARA	300B/S	399.083KB	2024-03-21 02:43:44	5m14s	Floating Solution	10
	Damac	DAMAC	DAMAC	300B/S	349.382KB	2024-03-21 02:42:37	6m21s	Fixed Solution	37
M11L02715_87865101		N31L05514	N31L05514	776B/S	600.611KB	2024-03-21 02:39:33	9m25s	Fixed Solution	40
	03102787	Simon	Simon	300B/S	406.856KB	2024-03-21 02:36:31	12m27s	Single Point Solution	6
	03325742_06483373	03323800	03323800	600B/S	2.227M	2024-03-21 02:08:19	40m39s	Fixed Solution	36
	03325743_86564535	03323800	03323800	600B/S	2.309M	2024-03-21 02:06:45	42m13s	Fixed Solution	35

Total of the rover: 21 Total pages: 2 Current page: 1

Base Rover

2024-03-21 02:48:53: Rover station M11L00014_87976428 online, mount point N31L05003
2024-03-21 02:48:46: Rover station M11L00014_87976428 offline, mount point N31L05003

● Stop Base/Rover:

Select one base in the list, right click, and stop this base, then it will be offline for 5 seconds and disappear from the list, then be online again. For Rover, it is same.

MountPoint	Service type	Transmit speed	Total transmitted	Status	Total time
T31U13324	RTCM3	466B/S	633.994KB	Online	16m20s
03325326	RTIC	233B/S	671.073KB	Online	7m50s
03324563	RTIC	7B/S	1.244M	Online	23m12s
9875	RTIC	82B/S	2.543M	Online	40m6s
9765	RTIC	83B/S	3.909M	Online	1h2m16s
03323800	RTCM3	283B/S	3.757M	Online	1h11m0s
JHB	RTCM3	622B/S	4.816M	Online	1h14m40s
Simon	RTCM3	204B/S	2.644M	Online	1h26m58s
RKDH	RTCM3	42B/S	30.189M	Online	1h24m4s
CENTARA	RTCM3	0B/S	34.486M	Online	8h10m30s
T31U08641	RTCM3	267B/S	36.928M	Online	14h11m6s
T31U13305	RTCM3	251B/S	48.324M	Online	19h27m5s
MP-97	RTCM3	314B/S	90.873M	Online	22h33m1s
Guyana	RTCM3	25B/S	80.727M	Online	1d0h27m56s
Geo_office	RTCM3	18B/S	69.042M	Online	15h33m18s
A31L02518	RTCM3	740B/S	6.413KB	Online	2sec
FVMEH1	RTCM3	725B/S	898.801M	Online	3d23h5m56s

Total of the base: 20 Total pages: 2 Current page: 1

Base Rover

● Delete base station:

Select one base in the list, right click, and delete this base, then it will be offline for 5 seconds and disappear from the list, then be online again.

● Add to blacklist:

Select one base in the list, right click, you are allowed to add it to blacklist, then it will be not online until you add it to whitelist again.

● Browse Rover:

Select one base in the list, right click, you can click Browse Rover to check the online users who are using this base station in the real time.

3 Function introduction

3.1 Logout

Go to Start->Logout, you can logout the service, in the message box, you will get the message “admin logout successful”. After the service is logged out, the service is not able to use until you login the service again.

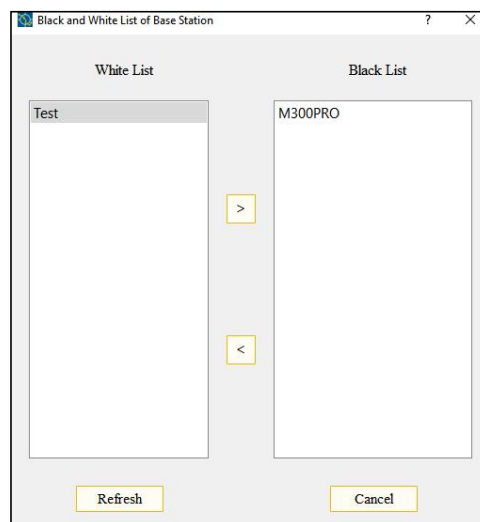
3.2 Restart Service

Go to Start->Restart Service, you can restart the whole service, during the restarting, the bases and rovers will be offline until the service restarts successfully. You can refer to the message box to check the service restarting status.

```
2024-03-22 10:59:29: Get service configure information succeeded
2024-03-22 10:59:29: Super User login successful!
2024-03-22 10:59:28: Disconnect from the service and try to log in...
2024-03-22 10:59:23: Restart the service...
```

3.3 Black and White List

Go to Station->Black and White List, you can manage the stations, the stations in the Blacklist are not able to transmit the corrections to your CDC+ server.



3.4 Stop base/Stop rover

Go to Station->Stop base/Stop rover, you can stop all base stations/rovers online in the list, they will be offline for 5 seconds then be online again.

3.5 User register

Go to User->Register, you can register base accounts and rover accounts. The registration method supports expired date and valid days, the expired accounts will not be able to go online unless renewed.

Register user info

User type:

Base user

User name:

Password:

Contact Person:

Phone:

Email:

Skype:

Organization:

☒ Expire Date

Expire Date

3/22/2025

☐ Activation period

Activation period(Days)

Register

Exit

Register user info

User type:

Rover user

User name:

Password:

Contact Person:

Phone:

Email:

Skype:

Organization:

☒ Expire Date

Expire Date

3/22/2025

☐ Activation period

Activation period(Days)

Register

Exit

Note: This section is based on the discussion of users using base stations and rovers to log in CDC+ in a non-anonymous manner.

3.6 Search User

Go to User->Search, you can check the base accounts and rover account you have registered.

User type: Base user	Account:									Search
User name	Password	Registration time	Name	Phone	Email	Skype	Organization	Expire Date		
AA	AA	2024/03/20 10:29:09						1/1/2025 00:00:00		

The user type supports Base user, rover user, administrator, you can select base and click Search icon to view the registered base accounts. For rover user and administrator, it is the same method to search.

When you search base or rover in the list, you can enter the name in the Account and click Search to query the specific user. Currently, Fuzzy query is not supported, that is, query by keyword, so the whole name of the user needs to be entered.

3.7 Modify/Delete User

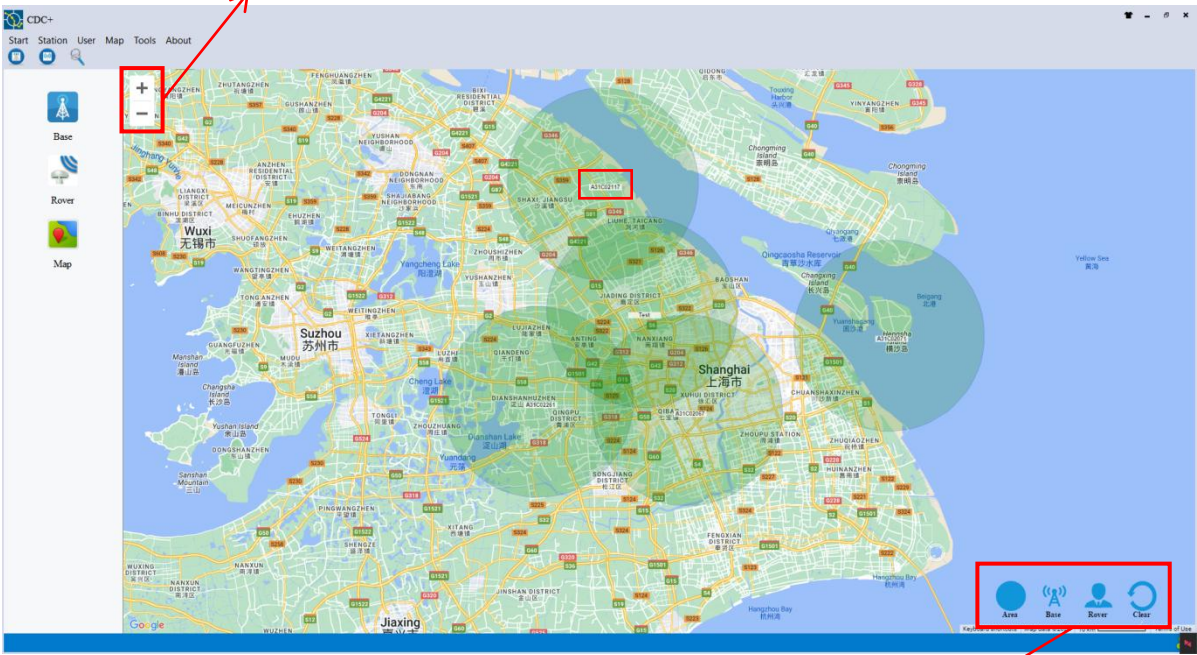
Go to ->Modify User/Delete user, select one base or rover in the list to modify the

information or delete it from the list.

3.8 Map display

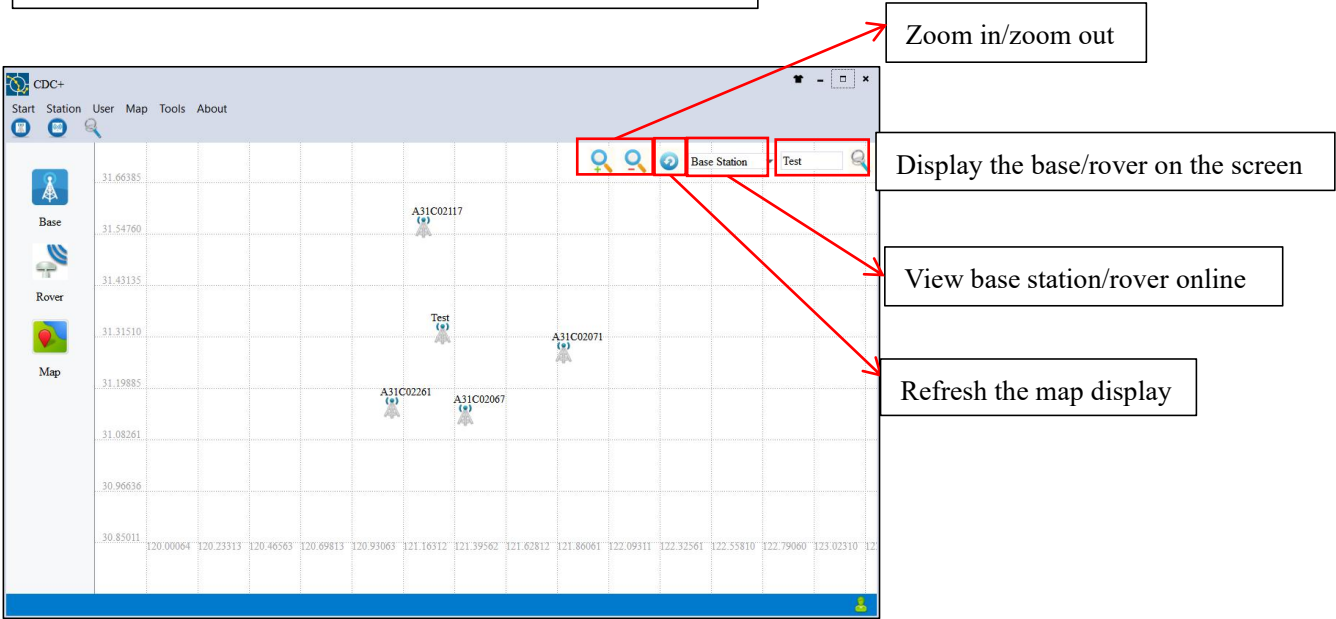
CDC+ software supports Baidu map, Google map and Station map, users can view any map as request.

Zoom in/Zoom out, you can also scroll the mouse to zoom in and zoom out



Google map

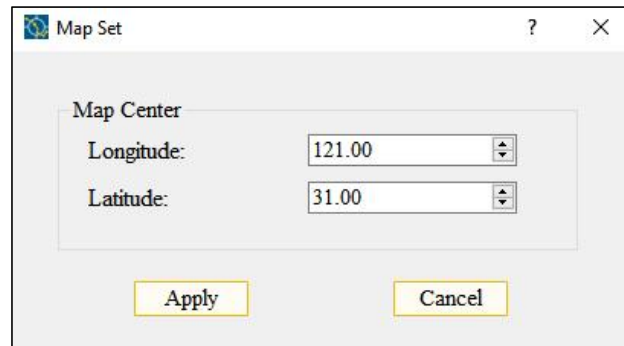
Area: Display/hide base station coverage area on the map;
Base: Display/hide the base icon on the map;
Rover: Display/hide the icon of the rover online on the map;
Clear: Refresh the map display.



Station Map

3.9 Map Settings

Go to Map->Map set, you can set the latitude and longitude of the center position of the map display, every time you view the map, this location will be displayed as the center of the map.



4.0 Language

Go to Tools->Language, you can change the language of CDC+, currently it supports Chinese and English.

4.1 Register

Go to About-> Register, you can enter the registration code if you have bought from sales. After the registration is completed, you need to restart the service.

Note: If the software is not registered, you have a total of 5 free accounts available, including base stations and rovers.

