

Zenith35 DynDNS setup example

This document is an example on how to create and test a free DynDNS account and use it with GeoMax Zenith35 GNSS receiver.

Necessary equipment:

- Zenith35 receiver
- SIM card enabled to work with DynDNS

1 What is the benefits of DynDNS

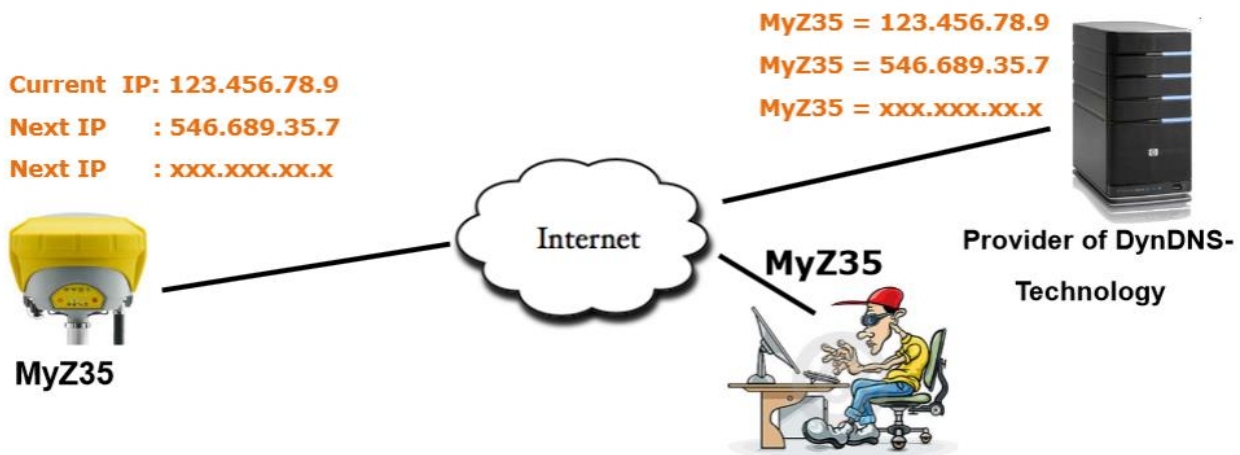
The implemented DynDNS technology provides the following use-cases:

- Web manager can be remotely accessed enabling
 - To remotely monitor the status of the unit
 - To remotely reconfigure the unit
 - To remotely download raw data
 - To remotely access the unit and provide 1st level support
- Multiple GSM rover connection:
 - Up to 10 rover can connect by GPRS
 - DynDNS account need to be setup on base only



2 How does DynDNS work?

The problem of GPRS base-rover connection is that the IP address of the base changes each time I start the base.



DynDNS-technology will assign a “static” hostname to the specific Zenith35 receiver, so it can be found anytime easily, although its current IP address is not known. This technology allows you to access the Zenith35 from any location via internet.

3 DynDNS account creation

In this paragraph we create a DynDNS account. There are different DynDNS services available. For testing purposes we recommend to use the NO-IP service that is offering a free account. The only limitation of the free account is that you need to confirm it for free each month.

Open the website www.noip.com and create a free account entering an email, user name and password.

Also choose an hostname: this hostname will be the hostname used from Zenith35 for the connection.

noip Managed DNS Services

Create Your No-IP Account

Email Confirm Email

Username Password

Hostname .ddns.net

Create my hostname later

Usernames must be 6-15 characters long and only contain a-z,0-9, -, and _

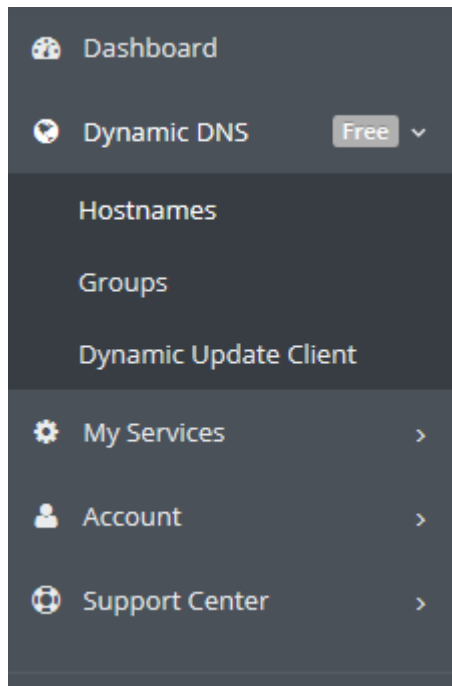
Minimum of 6 characters.

Password Strength

Choose a hostname for your account. You can change your hostname or add more later.

For example I have created the free account with hostname `geomaxalb.ddns.net`
This means the rover will connect to this hostname.

After the username is created you can login in NOIP website and check the created hostname from the dashboard.



Here we can see our hostnames

Manage Hostnames				Search...
Hostname	IP / Target	Type	Status	
geomaxalb.ddns.net	91.80.13.174	A	✓	Modify ✕

[Add Hostname](#)

4 Zenith35 base configuration

Connect by Web Interface to Zenith35 and open settings page.
Configure the *working mode* as RTK base and *RTK data source* as GSM/GPRS.



Status Info **Settings** Formatting Updates Data Management

Sensor Settings ▾ Satellite Settings ▾

Working Mode Static RTK Rover RTK Base

RTK Data Source UHF GSM/GPRS External

As method select P2P and enter the APN for your SIM card.

Method

APN

APN User

APN Password

Dynamic DNS Enable Disable

Select to enable the dynamic DNS.

Then enter the NOIP settings like in the image below. In particular enter the same hostname, user name and password that you used in NOIP website.

Dynamic DNS Enable Disable

Service Provider

Host Name

User Name

Password

Port

Number of simultaneous users

Save Settings

Click on save settings.

Now DynDNS has been configured, so it means that each time you start the receiver, the DynDNS synchronize the IP address of the SIM card (which changes each time) with the hostname.


For example I start the Zenith35 receiver and in GSM status I read this IP address:

GSM Status:

- Network Provider: vodafone IT
- Signal Strength: 008%
- Local IP address: 2.45.69.58
- RTK Connection Type: P2P
- IP Address/Port: /80

After few seconds the DynDNS service update the IP address so it synchronize the IP with te hostname

Manage Hostnames

Hostname	IP / Target
geomaxalb.ddns.net	 2.45.69.58

5 Remote access

Now that the DynDNS has been configured we can access remotely the web interface. To access remotely the web interface just open an internet browser and open the web page with the hostname. In this example I have to open the website:

<http://geomaxalb.ddns.net>

This allow to access the web interface from everywhere

6 Rover configuration

For the multiple rover connection, on the base side open Status Info and click on START to start the base.

The configuration from the rover side is very easy.

When configuring the network on the rover, don't select NTRIP but select P2P. Enter the hostname of the base (in this example geomaxalb.ddns.net) and the IP address I used before.

After a successful connection to the Zenith35 base receiver, the rover should receive RTK correction data.