

Seastar 3610 - NTRIP Configuration

Doc. ref.: 31150100_C1

BACKGROUND

Fugro's network control centres (NCC) receive information from numerous reference stations and calculate GNSS corrections data. Correction data is uploaded to geostationary communication satellites, which broadcast data to end users.

The same correction broadcast is sent to an NTRIP server which broadcasts the data over Internet through several data streams called mountpoints. The mountpoint options are all the standard geostationary satellites, and in addition there is a separate mountpoint for low bandwidth and high cost communication lines (e.g. Iridium). This mountpoint only contains Fugro's world-wide high accuracy orbit & clock correction service and therefore is only about 120bps compared to all other mountpoint that is approximately 600bps or 1200bps.

For more background information on NTRIP please read separate NTRIP Background and Information document.

BEFORE YOU START

You CANNOT complete the procedure unless you can meet the following six requirements:

1. Confirm that the serial number is above 1160000 (if not, you will need to return it to the supplier for hardware upgrade).
2. Ensure the latest version of the 3610's internal firmware is installed (you can identify which version is currently installed by viewing the about menu). The latest available firmware is identified (and available for download) at <https://fsp.support/seastar>.
3. Ensure that you have a username and password for your NTRIP account. You can get this from your contact person or by email from seastarservice@fugro.com.
4. Confirm that the 3610 has an IP address that is within the gateway IP range for the local network. If you need to change the demodulator's IP address and gateway you can do this under the Port Cfg menu and TCP/IP submenu.
5. Confirm that the internet connection you plan to use can access the NTRIP caster (connect a computer to the network outlet you wish to use and enter http://NTRIP_SERVER_IP:2101/ in your browser's address bar). IP address of NTRIP server is available by contacting Technical Support. If you don't receive the mountpoint list, ask your local network administrator to confirm that port 2101 is open for the demodulator's IP address.
6. Confirm that the demodulator is subscribed, and that the subscription is correct. You will find the subscription type and expiry date under the About menu. If you don't have subscription contact Fugro Technical Support.

CONFIGURATION

Follow the step-by-step instructions below:

Start by pressing **ESC** until you reach the **Home screen** showing signal strength, satellite tracking and subscription

Important Appearance of this screen can vary according to the installed firmware version.



Press **DOWN** until you get to the **Set Pos/Ch** menu. Select it by pressing **ENTER**.

Press **DOWN** until to get to the **NTRIP** menu. Select it by pressing **ENTER**.



Option allows you to change the way you use NTRIP. Change the state by using **UP** and **DOWN**. Options are:

AUTO: NTRIP is backup to the geostationary satellite link

OFF: NTRIP is completely deactivated

ON: NTRIP is the **ONLY** correction source for the demodulator

Save with **ENTER** if changed



Navigate to **NTRIP address** by pressing **DOWN** followed by **ENTER**.

In this field you should insert the NTRIP server IP address.

Important Fugro NTRIP Server IP address is subject for change. Please contact Fugro technical support for latest information.

To change IP use **UP** and **DOWN** to change each individual number, and use **LEFT** and **RIGHT** to change the position of the cursor.

Save by pressing **ENTER**.



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Navigate down to **NTRIP port** by pressing **DOWN** followed by **ENTER**. Set it to 2101 by pressing **UP** or **DOWN** to change each individual number and use **LEFT** and **RIGHT** to move the cursor.

Save by pressing **ENTER**.



Navigate to **NTRIP mountpoint** by pressing **DOWN** followed by **ENTER**.

Insert the mountpoint you want NTRIP to get corrections from. To change the mountpoint use **UP** and **DOWN** to change character and use **LEFT** and **RIGHT** to move the cursor.

Save by pressing **ENTER**.



Important Available mountpoints are same as broadcasted over geostationary satellites in addition to one mountpoint for low bandwidth internet named G2. Do not use mount point with WR- prefix.

Navigate down to **NTRIP username** by pressing **DOWN** followed by **ENTER**.

Insert your allocated username. Select each individual character with **UP** and **DOWN** and change the cursor position with the **LEFT** and **RIGHT**.

Save by pressing **ENTER**.



Navigate down to **NTRIP password** by pressing **DOWN** followed by **ENTER**.

Insert your allocated password. Select each individual character with **UP** and **DOWN** and change the cursor position with the **LEFT** and **RIGHT**.

Important Username and password are found on your NTRIP registration form. Both username and password are case sensitive.

Save by pressing **ENTER**.



Reboot (restart) the demodulator by holding down **ESC** and **ENTER** at the same time. When the device has rebooted NTRIP will be enabled.

VERIFICATION

The following procedure can be used to verify that NTRIP is successfully configured:

The best way to test if NTRIP is working is to disconnect the antenna cable and see if the demodulator switches over to NTRIP.

The **Home** screen should appear as shown to the right.

GPS/GNSS receivers normally have a function to allow the user to check the age of correction.



Monitor age of correction, error estimates and position quality while disconnecting the antenna cable from the Seastar 3610 to confirm that the receiver does not lose corrections for longer than a few minutes.

It is obviously important that positioning accuracy is unaffected if the demodulator is set to automatically fall back to NTRIP in the event of loss of satellite link.

TROUBLESHOOTING

If you do lose position accuracy on verification and see that you are not receiving NTRIP corrections, you should double-check that you have entered the account credentials correctly; this is a common mistake (remember that both the username and password are case sensitive).

Note that each NTRIP user account supports a single IP login; check that you have disabled your user account on any other devices that may have been using it.

Finally, double check that you have correctly performed each of the steps in the Before You Start section.

ADDITIONAL INFORMATION

For additional information and resource, you can visit <https://fsp.support/seastar> or contact Fugro Technical Support (seastarservice@fugro.com).