

NTRIP Caster on CHC or iGage Receiver

Date: 8 October 2021

Thesis

The CHC and most iGage receivers have an internal NTRIP caster that can be used to send Base corrections to drone controllers or other devices.

Once you setup the caster, it will stay setup until a complete factory reset is performed. So, this is a once and done configuration.

These receivers have an NTRIP caster:

iG5, iG8, iG8a, iG9, iG9a i73, i80, i90, i83, i89, i93, iBASE

NOTE: the iGage iG10 has a different method which is described in this FAQ: [iG10 NTRIP Caster]

Setup

Connect to the receiver using the Wi-Fi interface

1. Connect to the receiver by Wi-Fi: Click on the network icon in tool tray (1), then expand the list of available connections (2):





2. Click on the device with GNSS-serial_number of your receiver.



3. Click on Connect.



If you are asked for a Wi-Fi password, try "12345678".

2



4. Open an incognito browser window and navigate to the address **192.168.1.1**:



The default 'Login Account' is 'admin' and the Password is 'password' (lower case). Click Login. 5. The receiver status screen will be displayed:

🛆 Not secure 🛛 192.168.1.1/pc/index.html?param1=HC_PRODUCT_MODEL_X7¶m2=true¶m3=true¶m4=false¶m5=true&par... 🖈 🗧 🔒 Incognito NOV SN:4021230 English V Quit Position × 🖬 Status Positio DOP Position Activity Latitude: 40°44'10.43109600" (North) PDOP: 1.114882 Google Map HDOP: 0.575742 Longitude: 111°51'33.64178400" (West) VDOP: 0.954717 Height: 1307.784 TDOP: 1.550433 Type: Single Satellite Used: 27Total Satellites Tracked: 30 Total GPS(8): 3,4,6,7,9,16,26,31 GPS(8): 3,4,6,7,9,16,26,31 Satellites GLONASS(3): 7,9,16 GLONASS(3): 7,9,16 X Receiver Configuration BDS(7): 14,23,24,25,32,33,41 BDS(7): 14,23,24,25,32,33,41 GALILEO(9): 7,10,12,19,21,27,29,30,33 GALILEO(9): 7,10,12,19,21,27,29,30,33 🔝 Data Recording SBAS(0): SBAS(3): 131,133,135 I/O Settings QZSS(0): QZSS(0): Retwork Setting **Receiver Clock** 88 Module Setting GPS Week: 2333 🔶 Firmware GPS Seconds: 512467 Cloud Service Setting



6. Click on I/O Settings:

 S 192.168.1.1/pc/index.html?p 	para X	+				- 0 X
$\leftarrow ightarrow extsf{C}$ $ ilde{ }$ Not secure	192.168	.1.1/pc/index.html?parar	m1=HC_PRODUC	CT_MODELX7¶m2=true¶m3=true¶m4=false¶m5	=true∥ 🤋	ta the Incognito to the test of test
CHCNA				SN:402	21230 💼) English 🗸 🛛 Quit
🗊 Status	I/O Set	tings ×				
		Туре	Description	Output	Connection St	Modify
X Receiver Configuration	1	RTK Client	165.239.144.5:21		Unconnected	Connect Disconnecting
🖽 Data Recording	2	TCP/UDP_Client1/NTRIP	192.168.3.18:990		Unconnected	Connect Disconnecting
🔅 I/O Settings	3	TCP/UDP_Client2/NTRIP	192.168.3.18:990		Unconnected	Connect Disconnecting
► I/O Settings	4	TCP/UDP_Client3/NTRIP	192.168.3.18:990		Unconnected	Connect Disconnecting
	5	TCP/UDP_Client4/NTRIP	192.168.3.18:990		Unconnected	Connect Disconnecting
	6	TCP/UDP_Client5/NTRIP	192.168.3.18:990		Unconnected	Connect Disconnecting
	7	TCP/UDP_Client6/NTRIP	192.168.3.18:990		Unconnected	Connect Disconnecting
	8	TCP Server/NTRIP Caster	9901	GPGGA:1Hz,GPGST:1Hz,	Closed	Connect Disconnecting
	9	TCP Server/NTRIP Caster	9902		Opened	Connect Disconnecting
	10	TCP Server/NTRIP Caster	9903	Differential Data:RTCM3.2	Opened	Connect Disconnecting
Network Setting	11	TCP Server/NTRIP Caster	9904		Closed	Connect Disconnecting
98 Module Setting	12	Serial Port	115200			Settings
Firmware	13	Bluetooth	GNSS-4021230	GPGGA:5s,		Settings
	14	Radio	461.025000MHz	RTK:Auto,		Settings

Connect Disconnecting

7. Click on the **Connect** button for the first **TCP Server...** line, usually line 8:

8 TCP Server/NTRIP Caster 9901

01 GPGGA:1Hz,GPGST:1Hz,

8. The TCP Server/NTRIP Caster dialog is shown:

-	_			_
Auto connect:	~	Connection Protocol:	NTRIP	
User Name:	user	Password:		
Port:	2101] Mount Point:	RTCM32	
Differential Data:	RTCM3.2	Raw Data:	OFF 🗸	
HCPPP Data:	OFF 🗸			
GPGGA:	1Hz 🗸	GPGSV:	OFF 🗸	
GPRMC:	OFF 🗸	GPZDA:	OFF 🗸	
GPGST:	1Hz 🗸	GPVTG:	OFF V	
GPGSA:	OFF V	GPPOS:	OFF 🗸	
Retransmit:	RTK V OFF V			
	R	Confirm 🛞 Back		

Configure:

Auto connection	Checked (TRUE)
Connection Protocol	NTRIP
User Name	user
Password	user
Port	2101
Mount Point	RTCM32
Differential Data:	RTCM3.2

Click on Confirm.



9. The port will now display as 'opened':

8 TCP Server/NTRIP Caster 2101 GPGGA:1Hz,GPGST:1Hz,Differential Data:RTCM3.2 Opened Connect Disconnecting

Configuration is complete and will remain available/active until you change it or do a factory reset on the receiver.

Configure the Receiver as a Base

Setup the head as a Base using Carlson SurvCE/SurvPC, X-PAD, Field Genius, LandStar or via the Web interface directly (shown below).

To configure from the web interface

Login to the receiver as shown above.

Click on Receiver Configuration, then Reference Station Settings:

	S 192.168.1.1/pc/index.html?para							- 0 X		
	$\leftarrow ightarrow extsf{C}$ $ extsf{D}$ Not secure	192.168.1.1/pc/index.html?param1=H	HC_PRODUCT_M	IODEL_X7¶m2	=true¶m3=true¶r	n4=false¶m5=true&	par 🛠 🔒 Incog	nito 🚦		
	CHCNAV					SN:4021230	💼 English 🗸	Quit		
	🗊 Status	Reference Station Settings ×								
	💦 Satellites									
	🔀 Receiver Configuration	Reference Station Mode:	Manual Base	~						
	 Description 	Base Station Name:	4021230]					
	 Antenna Configuration 	Base Station ID:	4021230]					
	Reference Station Settings	Reference Latitude:	0 ° 0	0.00000000	* <u>N</u> os					
	 Receiver Reset 	Reference Longitude:	0 ° 0	0.00000000	* () E () W					
	 Language 	Reference Height:	0.0000]					
	 User Management 		() Use Curre	nt Position	ave					
	HCPPP Settings									
	📰 Data Recording	Sample for Average Positioning Constraint:	🔵 Single Solı	tion Coordinates) Fixed Solution Coordinate	s				
	I/O Settings	Sampling Amount:	300	0%						
	察 Network Setting									
	88 Module Setting		• Start	(II) Stop						
-	📚 Firmware									
-	Cloud Service Setting									
Set Reference Station Mode = Manual Base. Click on ^{O Use Current Position} :										
	Reference Station Mode	Manual Base	~							
	Base Station Name	4021230								
	Base Station ID	4021230								
	Reference Latitude	40 ° 44 ′ 10	.43111322	" <u></u> N OS						
	Reference Longitude	: 111 ° 51 ′ 33	.64179131	_ ○E						
	Reference Height	1307.7841								

The receiver's autonomous position will be loaded, click **Save** to start Base operation at the entered coordinate.



Configuration

I like to use the *LaFebure NTRIP Client* to test the connection. This is the configuration for the receiver setup above:

NTRIP Settings		×					
Connection Type							
Protocol:	NTRIP v1.0 ~						
NTRIP Caster Set	lings						
Address:	192.168.1.1						
Port:	2101						
Username:	user						
Password:	user						
Your Location Some streams need to know your location so that correction data can be created for you. If the selected stream requires this, I want to							
Use position data from the Serial Port \checkmark							
	OK Cance						

Click OK.

Change the NTRIP Stream to Download Source Table

NTRIP Stream: Download Source Table	5	Connect	
NTRIP Status: Disconnected			

Then click Connect.

Drop the NTRIP Stream:



and select RTCM32.

Click Connect:



Correction data will begin streaming. Congratulations, any device that connects to the head will have access to the correction stream.