STONEX SC400A

CORS RECEIVER

User Manual

October 2021 – Ver. 1 – Firmware 2.12-210827-STX – Rev.2

www.stonex.it

Contents

Statement

Please read carefully:

The final interpretation of this user manual belongs to STONEX.

Thank you very much for your purchase. For directions on how to use the product, please be sure to read the user manual.

This user manual is only for your receiver. If your receiver does not match the case in user manual, the actual situation of the receiver shall prevail.

Information in this document is subject to change without notice; STONEX reserves the right to change or improve its products and to make changes in the content without obligation to notify any person or organization of such changes or improvements. If you have any questions, please contact customer service center, or contact our authorized dealers.

Customer safety is important. Please carefully read the notes and instructions in User Manual. To avoid unexpected damage, you should only use original supplied parts. If you do not use the system with the correct procedure or connect incompatible accessories, cause the equipment damage, and may even endanger other person and your safety. In this regard, the company does not assume any responsibility.

1. Product Overview

SC400A is a multipurpose CORS receiver for engineering, monitoring and other applications. The product is suitable for project applications such as vehicle monitoring, engineering inspection and automated data collection.

This chapter provides basic information to help you get familiar with your CORS receiver.

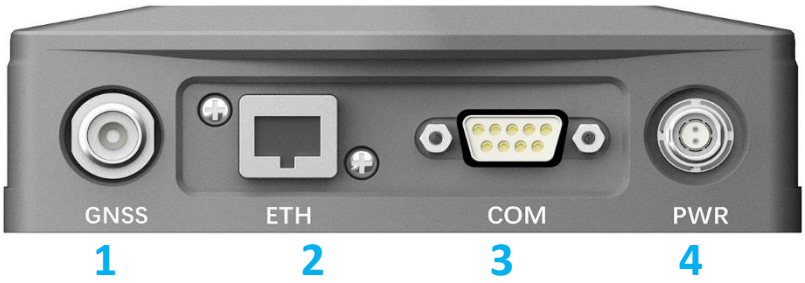
Key Features:

- Small and compact
- GPS/Galileo/GLONASS/BeiDou/QZSS/IRNSS*
- Atlas L-band corrections
- Interference Mitigation Technology
- Easy configuration from Web UI and remote server.
- Adapt to power supply requirements in various environments
- NTRIP Caster/Server/Client
- IP67

1.1 Top view

	Item	Led Color	Description
	Power indicator	Green	On: Power supplied Off: Power off
	Datalink indicator	Green	Always on: Float solution / fixed solution Flash each 1s: Single solution Off: Invalid solution
	Storage indicator	Green	Flash: Recording data
	Satellite indicator	Green	Flash: satellites visible

1.2 Front view



Num.	Item	Description
1	GNSS	TNC, external GNSS slave antenna connector
2	ETH	Wired Ethernet port
3	COM	DB9 serial port
4	PWR	8 to 36 VDC external power input

1.3 Bottom view

2. Technical Specification

2.1 GNSS

Board: Hemisphere Phantom 20

Channels：800

Satellite signals tracked

Satellite	Signals
GPS	L1 C/A, L1C, L1P, L2C, L2P, L5
GLONASS	L1, L2, L3
BeiDou	B1, B2, B3, ACEBOC
Galileo	E1, ALTBOC, E5a, E5b, E6
QZSS	L1 C/A, L1C, L2C, L5, LEX
IRNSS	L5*
SBAS	L1, L5

Update Rate: 10Hz Standard, 20Hz Optional

Position Accuracy

Positioning mode	Horizontal	Vertical
Static	3 mm + 0.1 ppm RMS	3.5 mm + 0.4 ppm RMS
RTK	8 mm + 1 ppm RMS	15 mm + 1 ppm RMS

Initialization time: < 10 s

Initialization reliability: > 99.9%

2.2 Physical specification

Weight: 435 g

Dimensions: 131 mm x 97 mm x 37 mm

2.3 Environmental

Operating Temp	-30°C to 65°C (-22°F to 149°F)
Storage Temp	-45°C to 80°C (-49°F to 176°F)
Humidity	100% non-condensing
Dust and Water Protection	IP67
Drop	Designed to endure to a 2 m drop on concrete floor with no damage

2.4 Electrical

Supply voltage	8 to 36 VDC external power input

2.5 Connection Ports

I/O Connectors	Power port, Lemo connector 1 Serial port, DB9 Ethernet port, RJ45 100/1000 Mbps GNSS antenna, TNC female
Bluetooth	5.0 + EDR
Wi-Fi	802.11 b/g/n/ac

2.6 Data Recording

Internal Memory	32G Multi storage sessions
Data types	Binary, RINEX, BINEX
Data rates	2S, 5S, 10S, 15S, 30S, 60S, 1Hz, 2Hz, 5Hz, 10Hz, 20Hz (Optional)

2.7 Data Streaming

Number of streams	1 NTRIP server streams,1 NTRIP Client streams,5 Socket (TCP / UDP) streams
Streaming ports	Wi-Fi, Ethernet, COM
Navigation outputs	GGA, GSA, GSV, ZDA, RMC, VTG, GST, GLL, HDT, FVI, HPR, KSXT, ATTSTAT, RTKSTAT, VCT, RD1, GGA2, BIN3, BIN5, BIN209
Reference outputs	RTCM 2.x-3.x, CMR, CMR+, RINEX, BINEX

2.8 User Interface and system configuration

LEDs	Power, satellite, datalink, storage
Operating system	Linux

2.9 Networking Services

NTRIP	Client/Server/Caster
Remote Management	Remote config by STONEX Software
FTP server	For data download
Email alerts	For low storage and other warning messages
NTP server	Support
Others	DDNS, VPN, SNMPD, Firewall

3. Operation

3.1 Power ON/OFF

SC400A will turn on automatically after connecting the 2-pin power cable and receiving power.

After switching on, the indicators will show the status of the device. For example, the power indicator will turn green.

SC400A shuts down if not connected to power.

3.2 Connect External accessories

To work the SC400A needs to connect to the external antenna, you can connect the external antenna to the GNSS port.

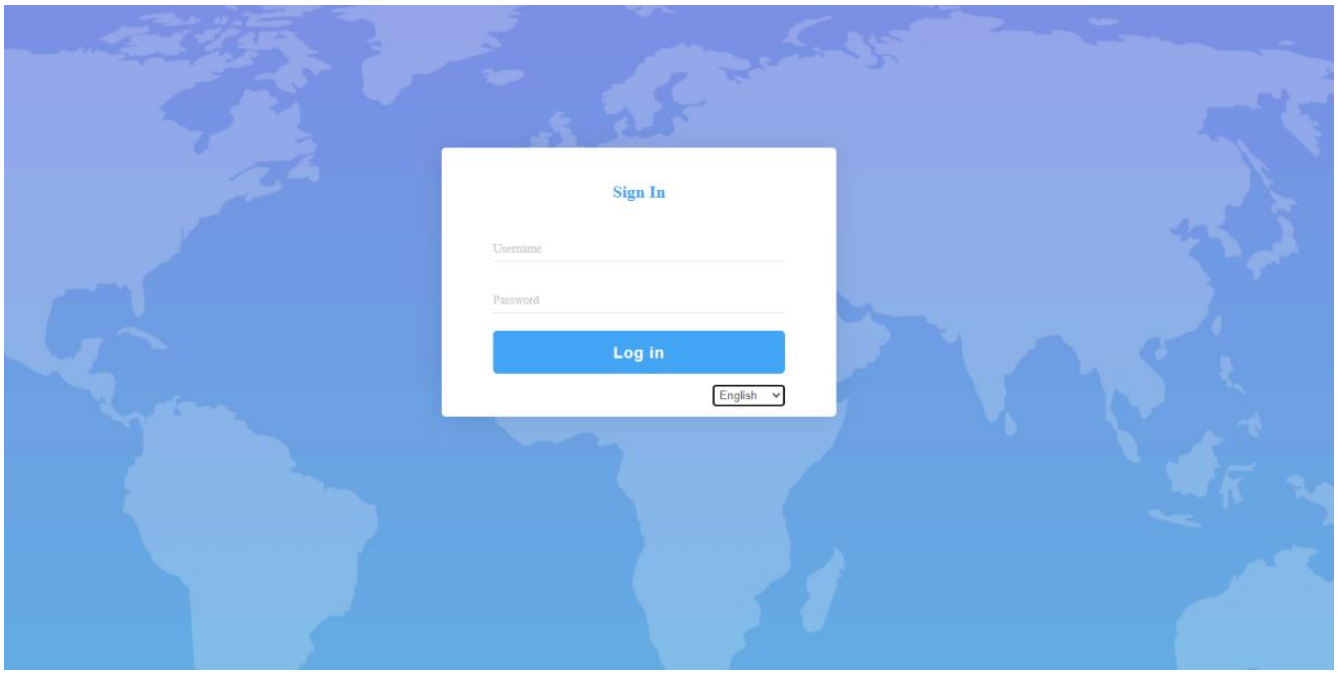
4. Web UI

SC400A has the WEB interface function, you can connect to the SC400A's Wi-Fi, enter the WEB interface and view device information, and set up it. The Wi-Fi hotspot name is the serial number of the receiver.

In the browser window enter the IP address: **192.168.10.1**. This address will open the user registration page (shown below), in which you need to fill in the username and password. For the first registration you can use the login data shown below. You will be able to change the password after your first login.

Username: admin

Password: password



After authentication, it will be possible to see the name of the instrument and the list of available commands (below picture). The commands are shown and analyzed in the following paragraphs.

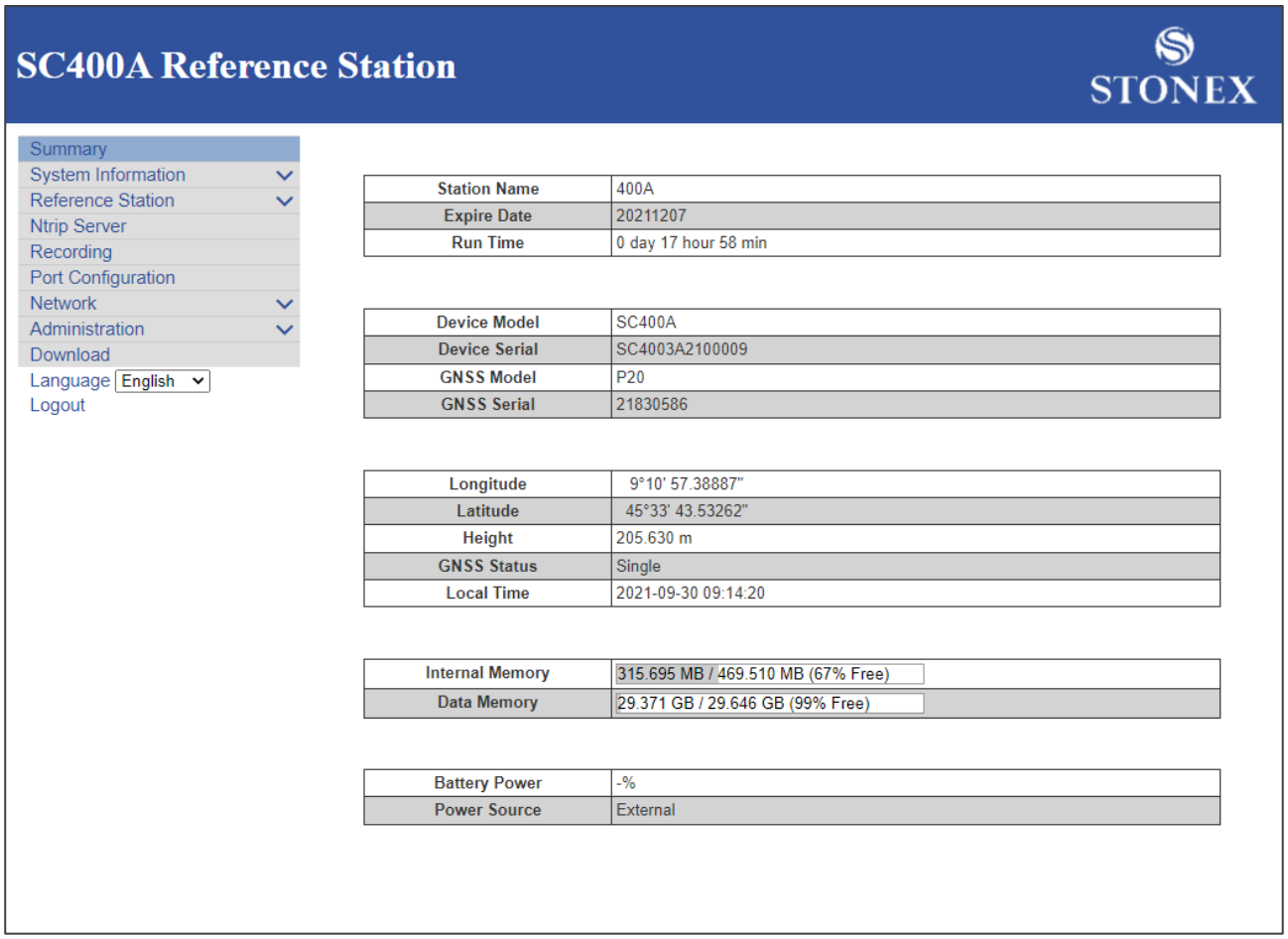
4.1 Summary and System Information

Summary command does not have submenus. The System command has 3 submenus: System Information, GPS status, and Satellites, which will be explained below.

The first two pages of the Summary and System Information command give information about the device and its operation. The other pages are dedicated to configuration. Each configuration page has the Submit and Reload buttons at the bottom: no change is effective if the Submit button is not pressed. Reload is used to reload the page with the last saved values

4.1.1 Summary

As shown in the figure below, the Summary reports general information about the Station.

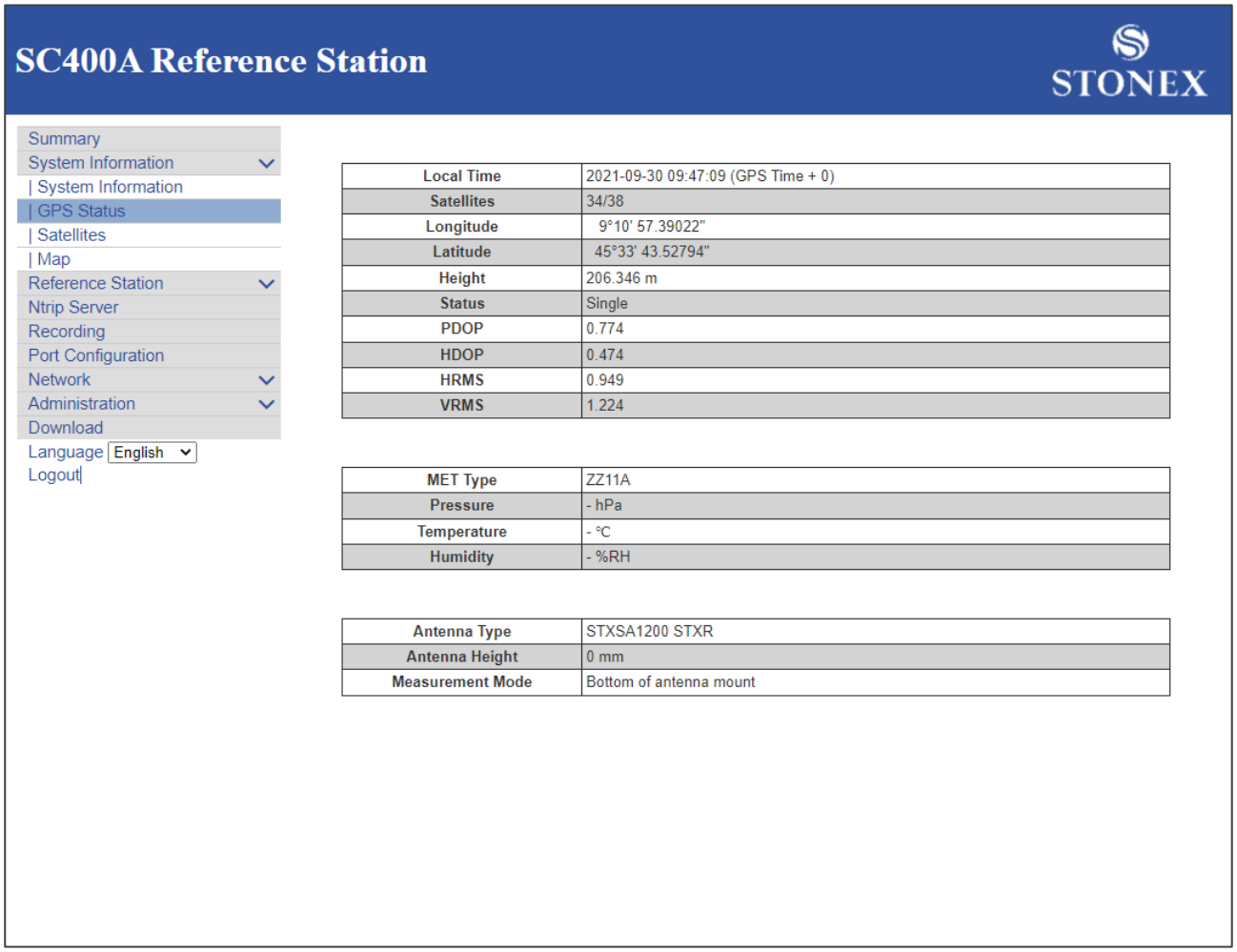


4.1.2 System Information

In System information page the information is divided into blocks, starting from the top we find the name of the station, expiration date and since it has been in operation. Next, we find information on the model of the device and its serial number as well as the model of the GNSS and its serial number. Below we find information on the position, GNSS status and time. After we find a section dedicated to information on the memory. Finally, we have the information on power supply.

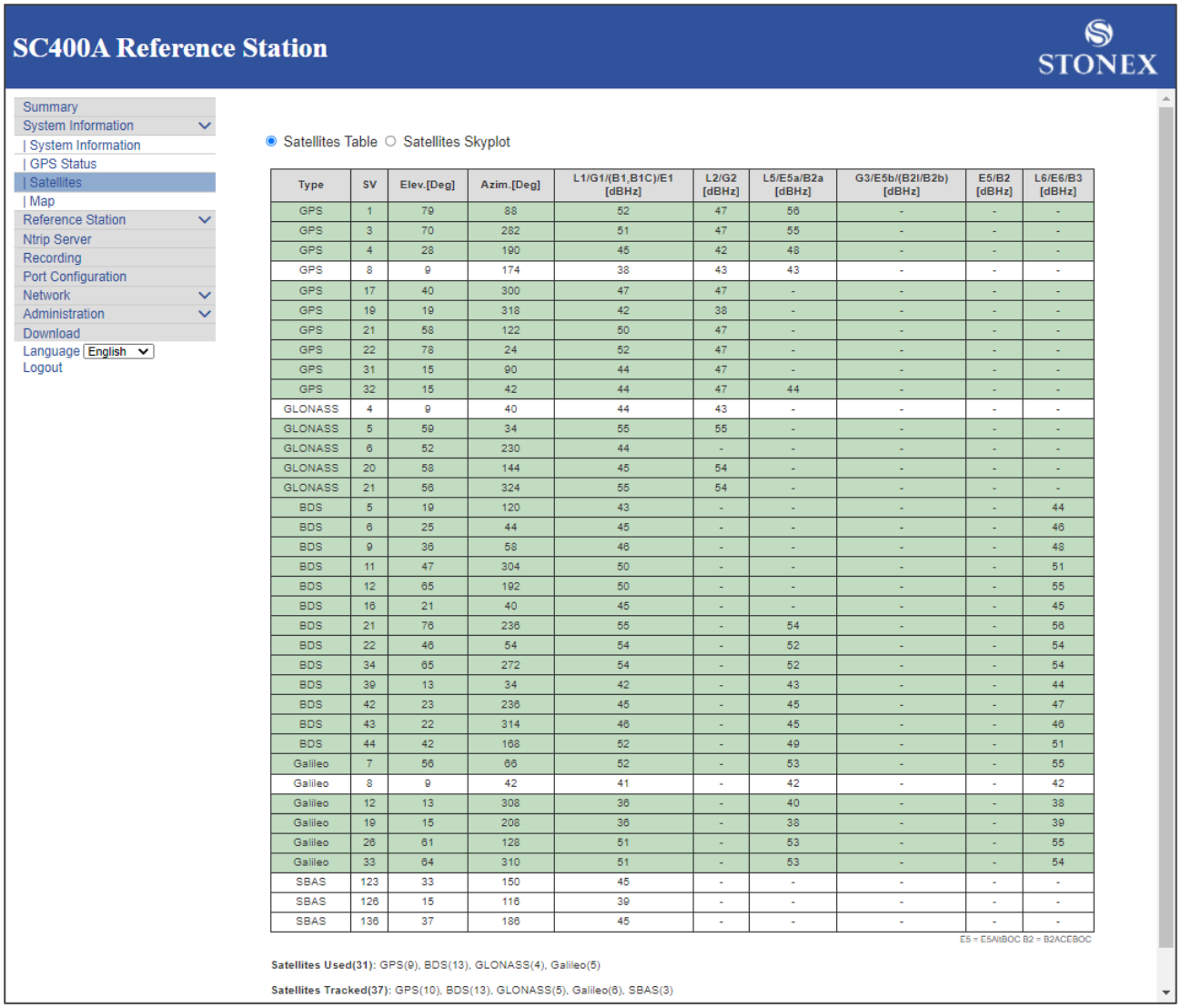
4.1.3 GPS Status

Status page displays the current SC400A positioning state, the base station coordinates and antenna type, height, and measurement mode.



4.1.4 Satellites

In this page you can choose what to display. By selecting the option at the top, you will see the list of satellites, or the sky plot (both screens in the figures below). In the satellites table the different colors show used satellites (green) and tracked (white).

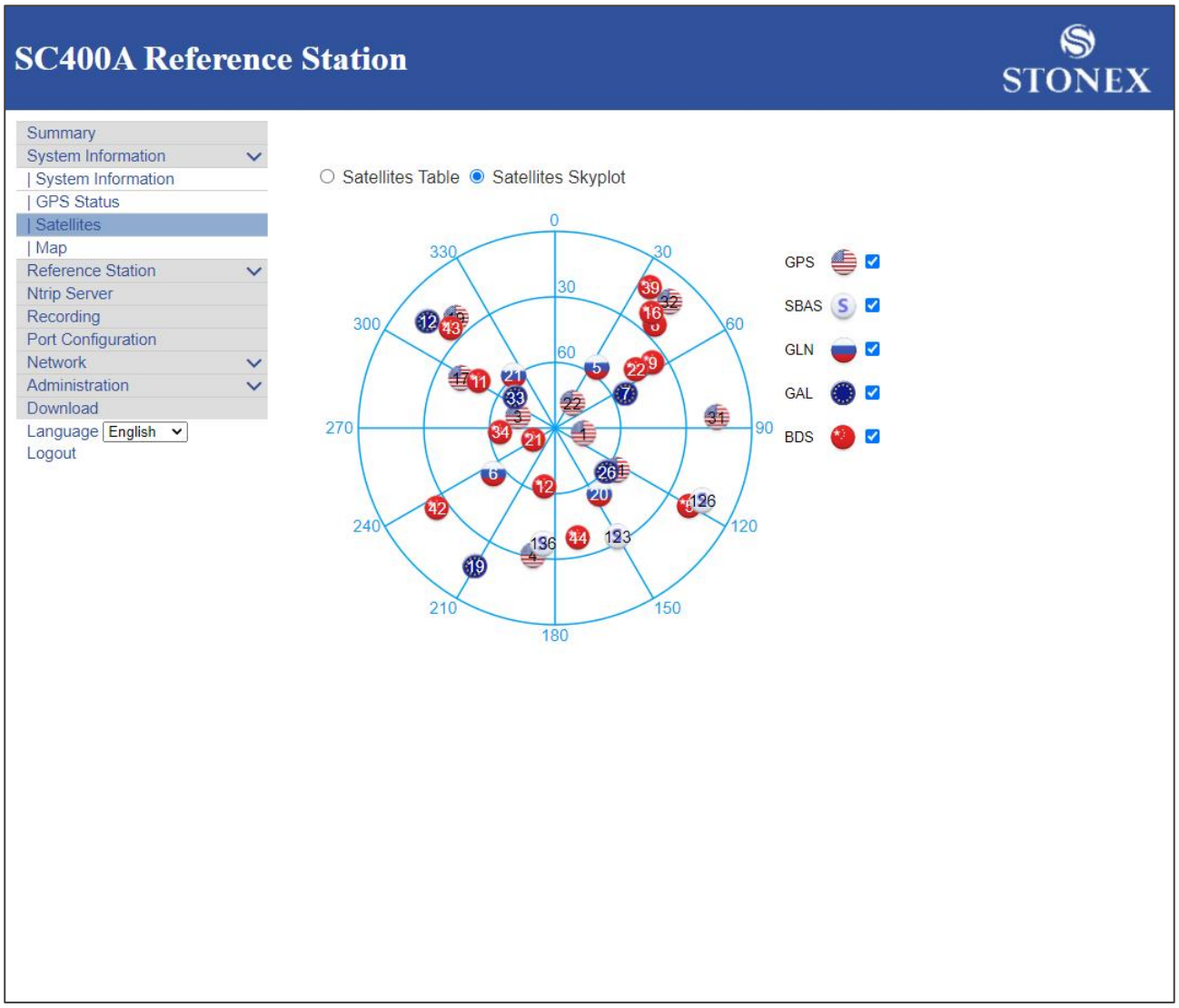


Type	SV	Elev.[Deg]	Azim.[Deg]	L1/G1/(B1,B1C)/E1 [dBHz]	L2/G2 [dBHz]	L5/E5a/B2a [dBHz]	G3/E5b/(B2I/B2b) [dBHz]	E5/B2 [dBHz]	L6/E6/B3 [dBHz]
GPS	1	79	88	52	47	56	-	-	-
GPS	3	70	282	51	47	55	-	-	-
GPS	4	28	190	45	42	48	-	-	-
GPS	8	9	174	38	43	43	-	-	-
GPS	17	40	300	47	47	-	-	-	-
GPS	19	19	318	42	38	-	-	-	-
GPS	21	58	122	50	47	-	-	-	-
GPS	22	78	24	52	47	-	-	-	-
GPS	31	15	90	44	47	-	-	-	-
GPS	32	15	42	44	47	44	-	-	-
GLONASS	4	9	40	44	43	-	-	-	-
GLONASS	5	59	34	55	55	-	-	-	-
GLONASS	6	52	230	44	-	-	-	-	-
GLONASS	20	58	144	45	54	-	-	-	-
GLONASS	21	56	324	55	54	-	-	-	-
BDS	5	19	120	43	-	-	-	-	44
BDS	6	25	44	45	-	-	-	-	46
BDS	9	36	58	46	-	-	-	-	48
BDS	11	47	304	50	-	-	-	-	51
BDS	12	65	192	50	-	-	-	-	55
BDS	16	21	40	45	-	-	-	-	45
BDS	21	76	236	55	-	54	-	-	56
BDS	22	46	54	54	-	52	-	-	54
BDS	34	65	272	54	-	52	-	-	54
BDS	39	13	34	42	-	43	-	-	44
BDS	42	23	236	45	-	45	-	-	47
BDS	43	22	314	46	-	45	-	-	46
BDS	44	42	168	52	-	49	-	-	51
Galileo	7	56	66	52	-	53	-	-	55
Galileo	8	9	42	41	-	42	-	-	42
Galileo	12	13	308	36	-	40	-	-	38
Galileo	19	15	208	36	-	38	-	-	39
Galileo	26	61	128	51	-	53	-	-	55
Galileo	33	64	310	51	-	53	-	-	54
SBAS	123	33	150	45	-	-	-	-	-
SBAS	126	15	116	39	-	-	-	-	-
SBAS	136	37	186	45	-	-	-	-	-

E5 = E5AltBOC B2 = B2ACEBOC

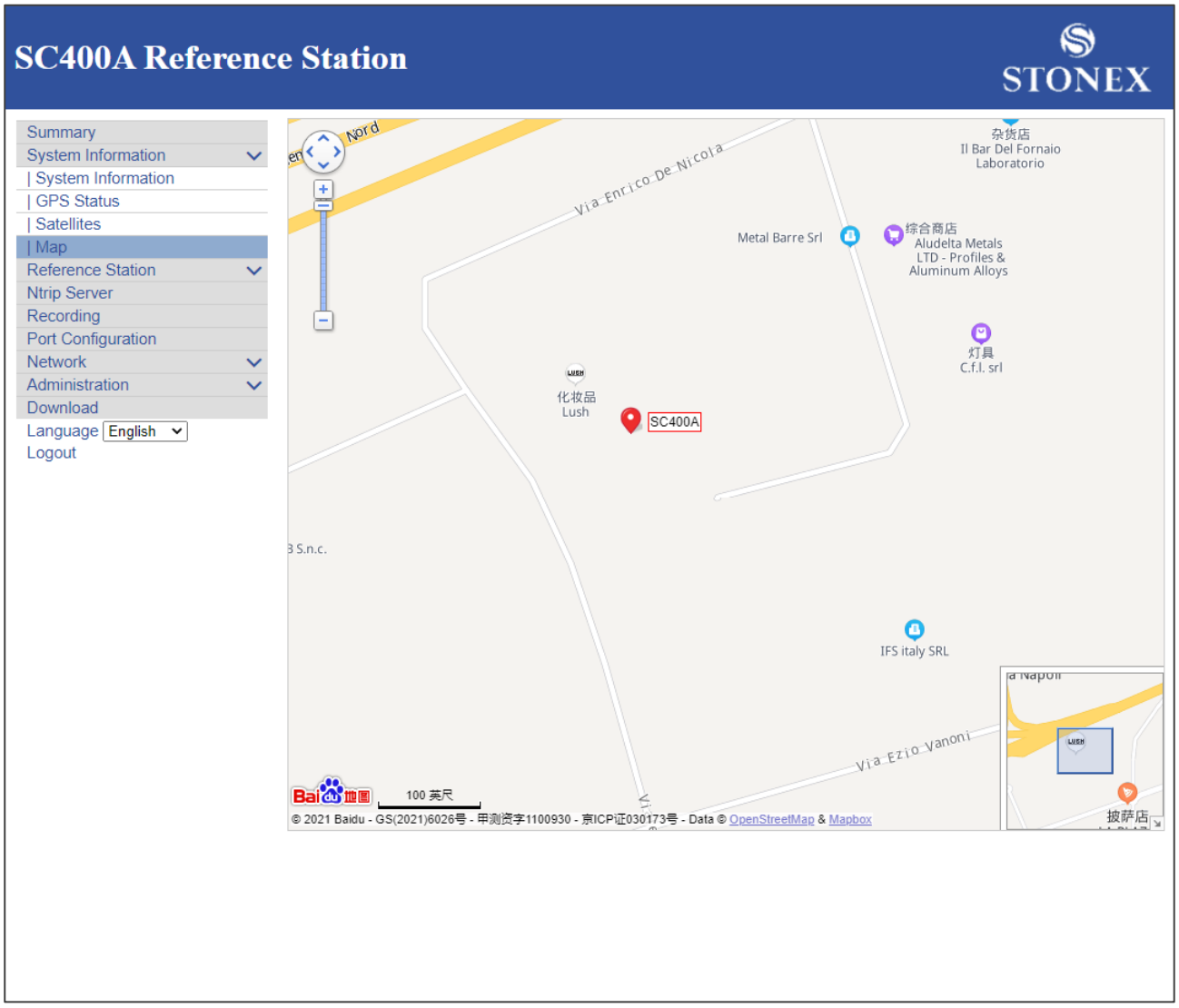
Satellites Used(31): GPS(9), BDS(13), GLONASS(4), Galileo(5)

Satellites Tracked(37): GPS(10), BDS(13), GLONASS(5), Galileo(6), SBAS(3)


SC400A Reference Station
STONEX
Summary
System Information
| System Information
| GPS Status
| Satellites
| Map
Reference Station
Ntrip Server
Recording
Port Configuration
Network
Administration
Download
Language English
Logout
Satellites Table
Satellites Skyplot
0
30
60
90
120
150
180
210
240
270
300
330
GPS
SBAS
GLN
GAL
BDS

4.1.5 Map

On this page you can see the position of the station on the map.



4.2 Reference Station

This command is for the GNSS station configuration and consists of site information, antenna and coordinates. It is made up of 3 subcommands: Reference Station, GNSS Configuration, Tracking Satellites.

4.2.1 Reference Station

This is a very important page if the device is used as base. If, on the other hand, it is used as rover, it is enough to set the type of antenna.

Here you can enter information about the station, number of receivers and you can enter settings about the time zone, country, web server protocol and HTTP server port. The second block of information refers to the antenna. You can select the antenna from those available (or upload new ones). You can read the antenna's serial number, and the values relating to the chosen antenna. Below is the information about working mode. Lastly, you can find the block of information about the station coordinates. The coordinates can be entered manually (as geodetic coordinates or Cartesian coordinates), or if there are no known coordinates, the current position of the instrument can be loaded. It is possible to enter the height of the point on the ground, the antenna height, and its measurement mode. Measurement mode indicates whether the coordinates are referred to the phase center or to the ground. If they refer to the ground, any height from the ground can be indicated in the antenna height field. These settings are reflected in the recorded files (see Recording menu) and in the coordinates transmitted by the base (See NTRIP server menu).

SC400A Reference Station

STONEX

- Summary
- System Information
  - System Information
  - GPS Status
  - Satellites
  - Map
- Reference Station
- Ntrip Server
- Recording
- Port Configuration
- Network
- Administration
- Download

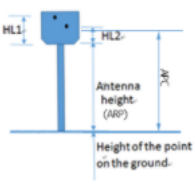
Language English

Logout

Observer Name	OBSERVER
Agency Name	AGENCY
Station Name	400A
Marker Number	0
Marker Type	GEODETIC
Receiver Number	0
Country Code	ITA - Italy
Site ID	
Time Zone	GMT
Web Server Protocol	HTTP
HTTP Server Port	80

Antenna Type	STXSA1200 STXR Download Choose File No file chosen Upload
Antenna Serial	
R(mm)	0
H(mm)	0
HL1(mm)	134.69
HL2(mm)	150.03

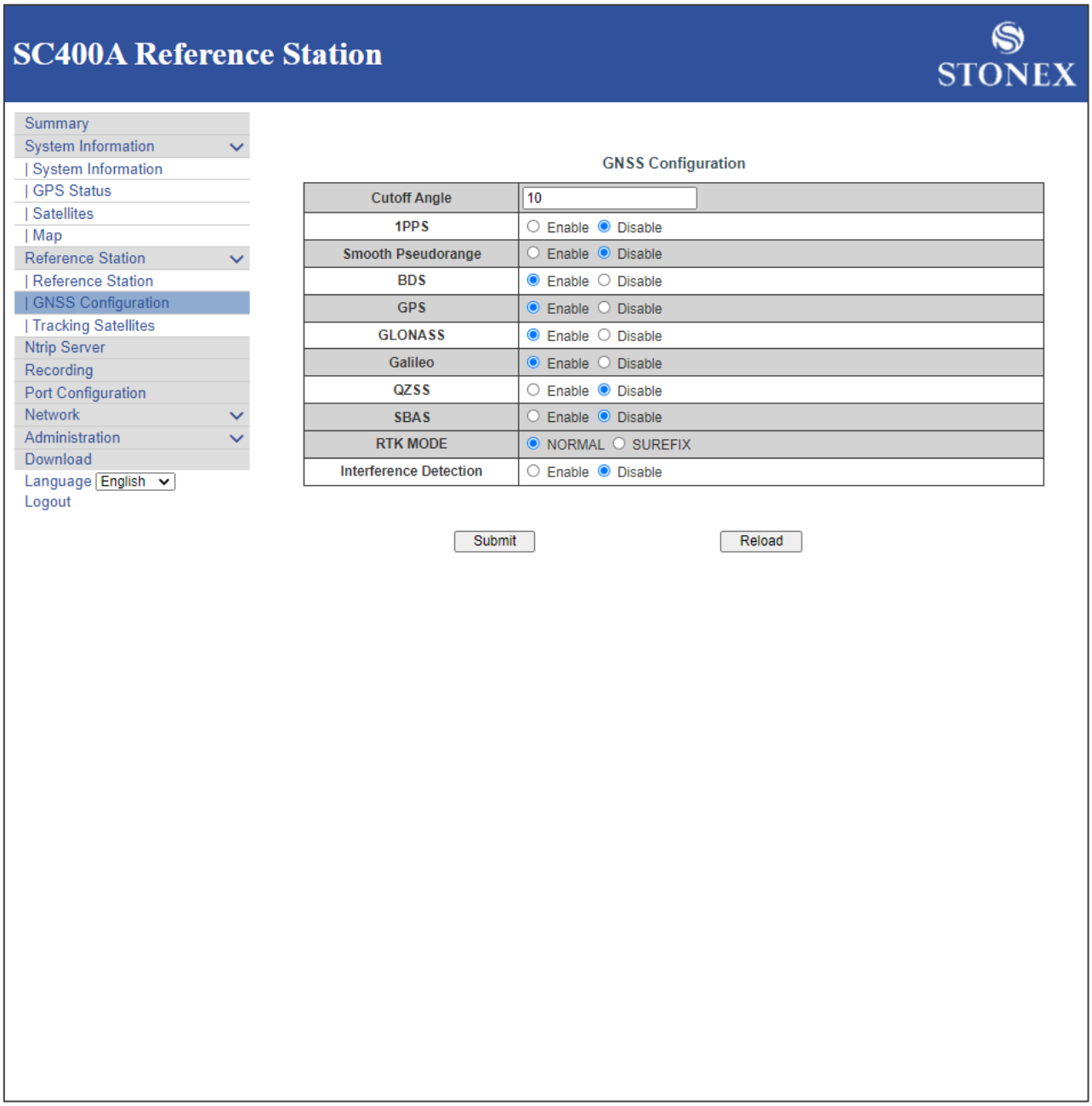
Working Mode	Base Rover
Base Position	Repeat Position

Coordinate System	Geodetic Coordinates (B,L,H)	Load Current Position
Base Longitude	9 ° 10 ' 57 . 3768732 "	Load Smooth Position
Base Latitude	45 ° 33 ' 43 . 4978496 "	Cancel Base Position
Base Height(m)	206.28799999999998	
Height of the point on the ground(m)	206.146	
Antenna Height(mm)	0	
Measurement Mode	Bottom of antenna mount	

Submit Reload

4.2.2 GNSS Configuration

On this page you can set information about the satellite systems. Cut-off angle, constellations used, RTK mode, interference detection. Excluding the cut off angle, all other settings are a series of options that can be activated.

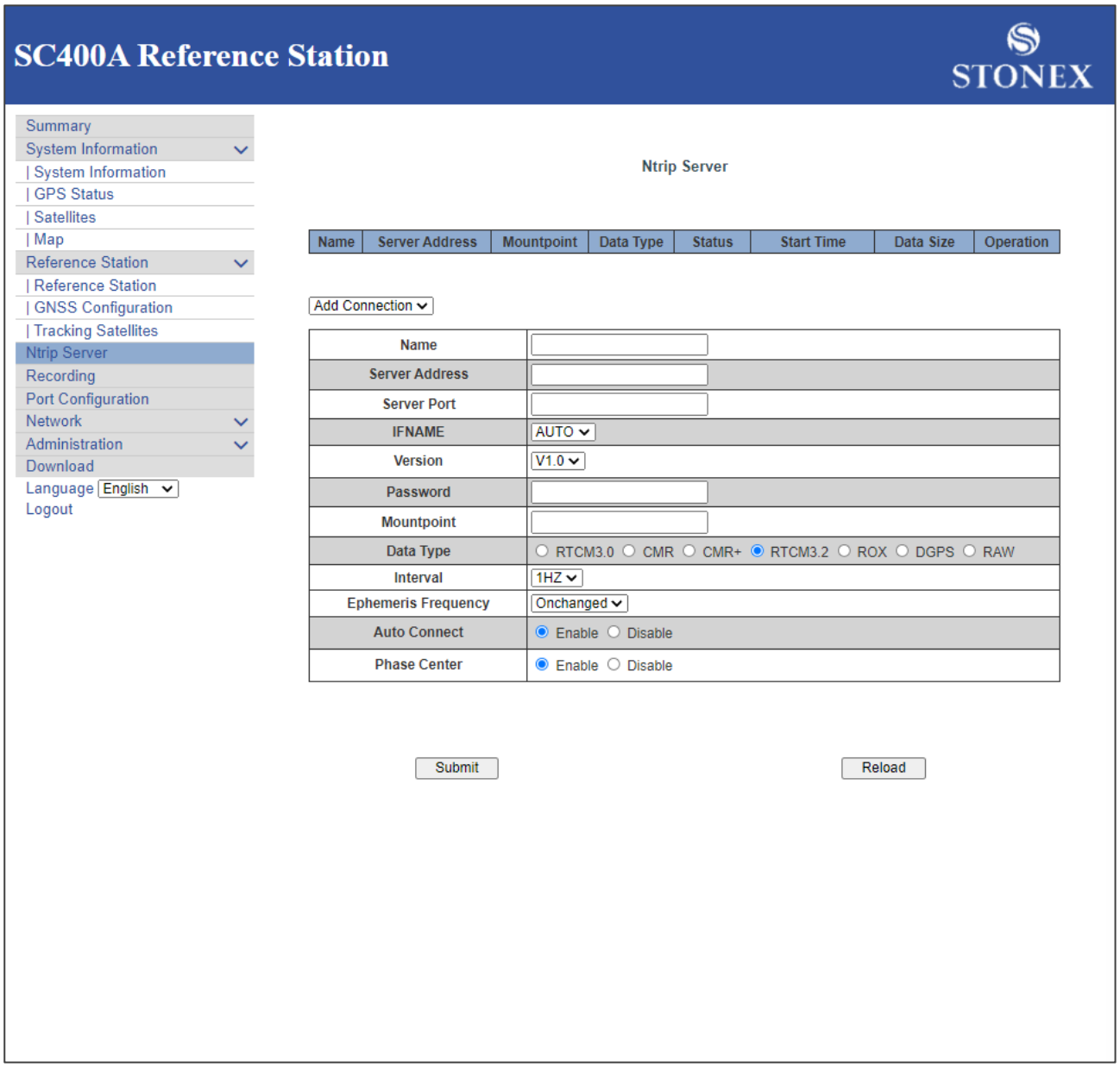


4.2.3 Tracking Satellites

On this page, it is possible to select satellites to exclude from tracking. With the sidebar you can scroll down to see all the satellites of each constellation. Below are the commands to select all the satellites and to deselect them all.

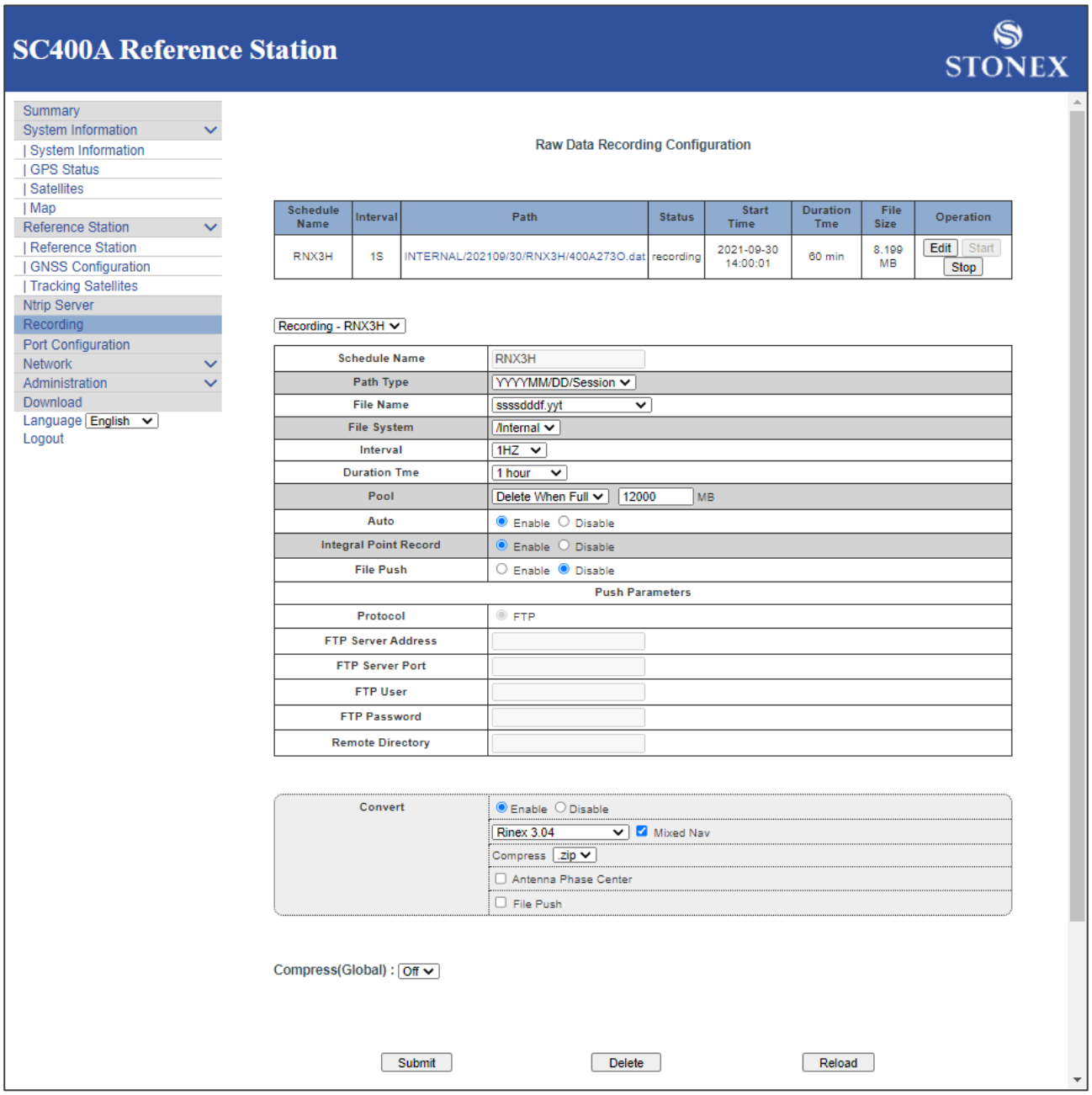
4.3 NTRIP Server

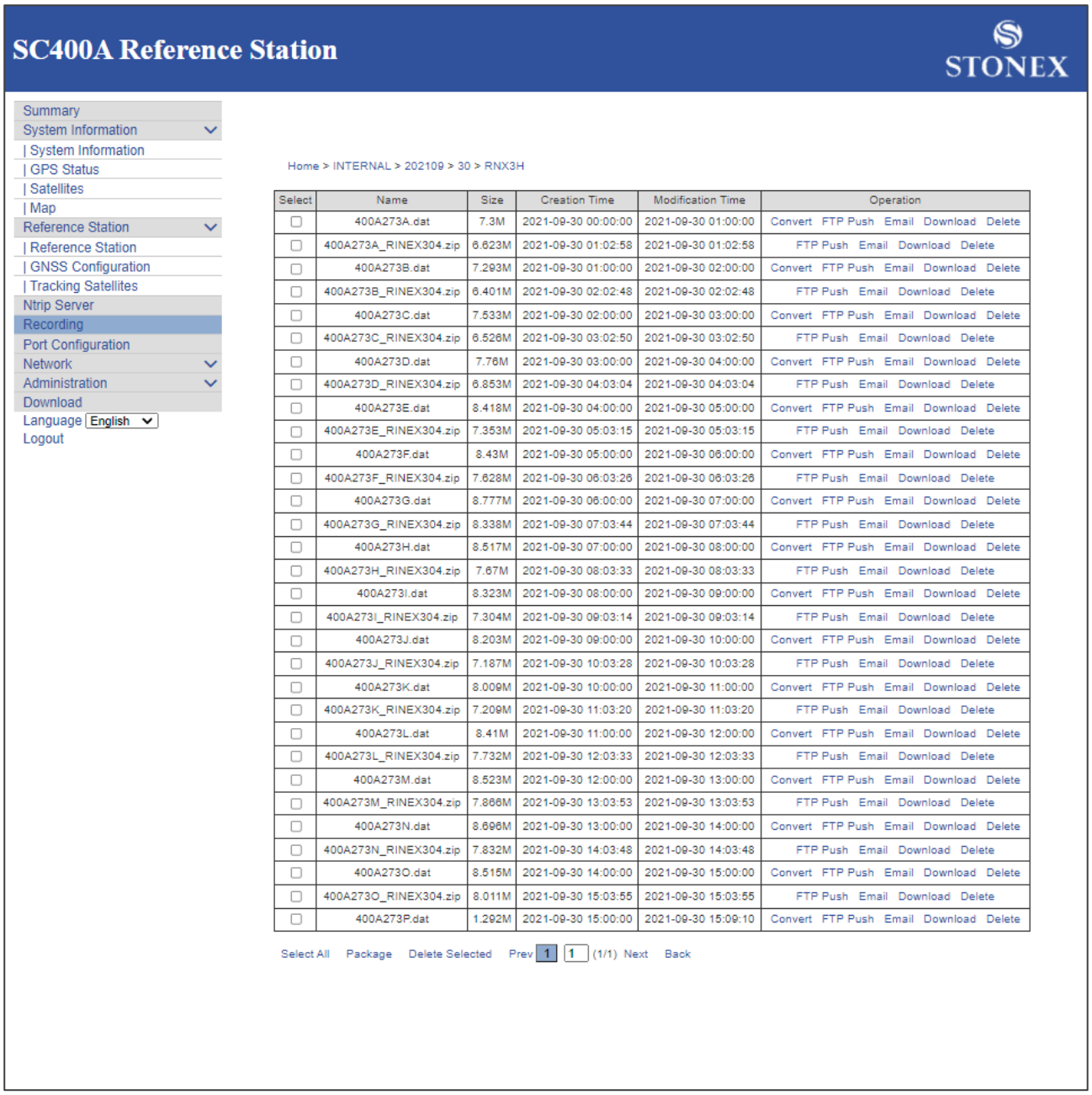
Command for data transmission configuration with NTRIP protocol. This command does not have submenus. On the only page available in this section, you can set the transmission content and the server for the SC400A reference station. The password on this page can be entered arbitrarily but the field cannot be left blank. When [Auto Connect] is chosen, after the network is disconnected, the data transmission will be connected automatically, otherwise the transmission will have to be started manually. Before setting the parameters, go back to the reference station page and make sure the base station coordinates are correct. If you need to start with known coordinates, enter the known coordinates. After setting the parameters. In the status bar, you can see the status of the data transfer displayed.
If the data must be transmitted to an external caster: address, port and password are those of the external caster.
If SC400A is to act as a caster: NTRIP caster function must be enabled (see Port Configuration page) address is 127.0.0.1, port must be the same as that indicated on the NTRIP caster function (see Port Configuration page).
Phase center: if enabled, the transmitted coordinates are correct for the offset of the phase center. Otherwise, the coordinates defined on the Reference Station page are transmitted.



4.4 Recording

Section for data recording and RINEX conversion. At the top of the page, you can see what is being recorded and in what format. Recording can be stopped from this bar. By clicking on the file contained in the Path cell you can view the recorded files (see the second picture below, you can perform some operations on the recorded files, such as FTP push).





Select	Name	Size	Creation Time	Modification Time	Operation
☐	400A273A.dat	7.3M	2021-09-30 00:00:00	2021-09-30 01:00:00	Convert FTP Push Email Download Delete
☐	400A273A_RINEX304.zip	6.623M	2021-09-30 01:02:58	2021-09-30 01:02:58	FTP Push Email Download Delete
☐	400A273B.dat	7.293M	2021-09-30 01:00:00	2021-09-30 02:00:00	Convert FTP Push Email Download Delete
☐	400A273B_RINEX304.zip	6.401M	2021-09-30 02:02:48	2021-09-30 02:02:48	FTP Push Email Download Delete
☐	400A273C.dat	7.533M	2021-09-30 02:00:00	2021-09-30 03:00:00	Convert FTP Push Email Download Delete
☐	400A273C_RINEX304.zip	6.526M	2021-09-30 03:02:50	2021-09-30 03:02:50	FTP Push Email Download Delete
☐	400A273D.dat	7.76M	2021-09-30 03:00:00	2021-09-30 04:00:00	Convert FTP Push Email Download Delete
☐	400A273D_RINEX304.zip	6.853M	2021-09-30 04:03:04	2021-09-30 04:03:04	FTP Push Email Download Delete
☐	400A273E.dat	8.418M	2021-09-30 04:00:00	2021-09-30 05:00:00	Convert FTP Push Email Download Delete
☐	400A273E_RINEX304.zip	7.353M	2021-09-30 05:03:15	2021-09-30 05:03:15	FTP Push Email Download Delete
☐	400A273F.dat	8.43M	2021-09-30 05:00:00	2021-09-30 06:00:00	Convert FTP Push Email Download Delete
☐	400A273F_RINEX304.zip	7.628M	2021-09-30 06:03:26	2021-09-30 06:03:26	FTP Push Email Download Delete
☐	400A273G.dat	8.777M	2021-09-30 06:00:00	2021-09-30 07:00:00	Convert FTP Push Email Download Delete
☐	400A273G_RINEX304.zip	8.338M	2021-09-30 07:03:44	2021-09-30 07:03:44	FTP Push Email Download Delete
☐	400A273H.dat	8.517M	2021-09-30 07:00:00	2021-09-30 08:00:00	Convert FTP Push Email Download Delete
☐	400A273H_RINEX304.zip	7.67M	2021-09-30 08:03:33	2021-09-30 08:03:33	FTP Push Email Download Delete
☐	400A273I.dat	8.323M	2021-09-30 08:00:00	2021-09-30 09:00:00	Convert FTP Push Email Download Delete
☐	400A273I_RINEX304.zip	7.304M	2021-09-30 09:03:14	2021-09-30 09:03:14	FTP Push Email Download Delete
☐	400A273J.dat	8.203M	2021-09-30 09:00:00	2021-09-30 10:00:00	Convert FTP Push Email Download Delete
☐	400A273J_RINEX304.zip	7.187M	2021-09-30 10:03:28	2021-09-30 10:03:28	FTP Push Email Download Delete
☐	400A273K.dat	8.009M	2021-09-30 10:00:00	2021-09-30 11:00:00	Convert FTP Push Email Download Delete
☐	400A273K_RINEX304.zip	7.209M	2021-09-30 11:03:20	2021-09-30 11:03:20	FTP Push Email Download Delete
☐	400A273L.dat	8.41M	2021-09-30 11:00:00	2021-09-30 12:00:00	Convert FTP Push Email Download Delete
☐	400A273L_RINEX304.zip	7.732M	2021-09-30 12:03:33	2021-09-30 12:03:33	FTP Push Email Download Delete
☐	400A273M.dat	8.523M	2021-09-30 12:00:00	2021-09-30 13:00:00	Convert FTP Push Email Download Delete
☐	400A273M_RINEX304.zip	7.866M	2021-09-30 13:03:53	2021-09-30 13:03:53	FTP Push Email Download Delete
☐	400A273N.dat	8.696M	2021-09-30 13:00:00	2021-09-30 14:00:00	Convert FTP Push Email Download Delete
☐	400A273N_RINEX304.zip	7.832M	2021-09-30 14:03:48	2021-09-30 14:03:48	FTP Push Email Download Delete
☐	400A273O.dat	8.515M	2021-09-30 14:00:00	2021-09-30 15:00:00	Convert FTP Push Email Download Delete
☐	400A273O_RINEX304.zip	8.011M	2021-09-30 15:03:55	2021-09-30 15:03:55	FTP Push Email Download Delete
☐	400A273P.dat	1.292M	2021-09-30 15:00:00	2021-09-30 15:09:10	Convert FTP Push Email Download Delete

Path type defines the folder structure where files are saved.

File Name defines the name of the files.

They both use variables:

YYYY	year
MM	month
DD	day of the month
DOY	day of the year
Session	Schedule name

Tip: to get file names compliant with RINEX standards use the names: ssssdddf.yyt (version 2) or Rinex302.dat (version 3).

Pool allows you to manage the data memory: if enabled, it is possible to define a quantity of disk space to dedicate to the recording session. When the sum of the session files reaches the defined limit, if Delete is set, the oldest files are deleted, if Stop is set, the recording stops.

It is recommended to always enable the Pool if the Auto option is enabled.

Auto: if enabled, it records continuously, otherwise when the first file is finished it stops.

Integral point record: if enabled, it sets the start time of the files as a multiple of the set duration, otherwise the start time depends on the first start. It is recommended to enable this option.

File push: Enable automatic transfer of raw files via FTP.

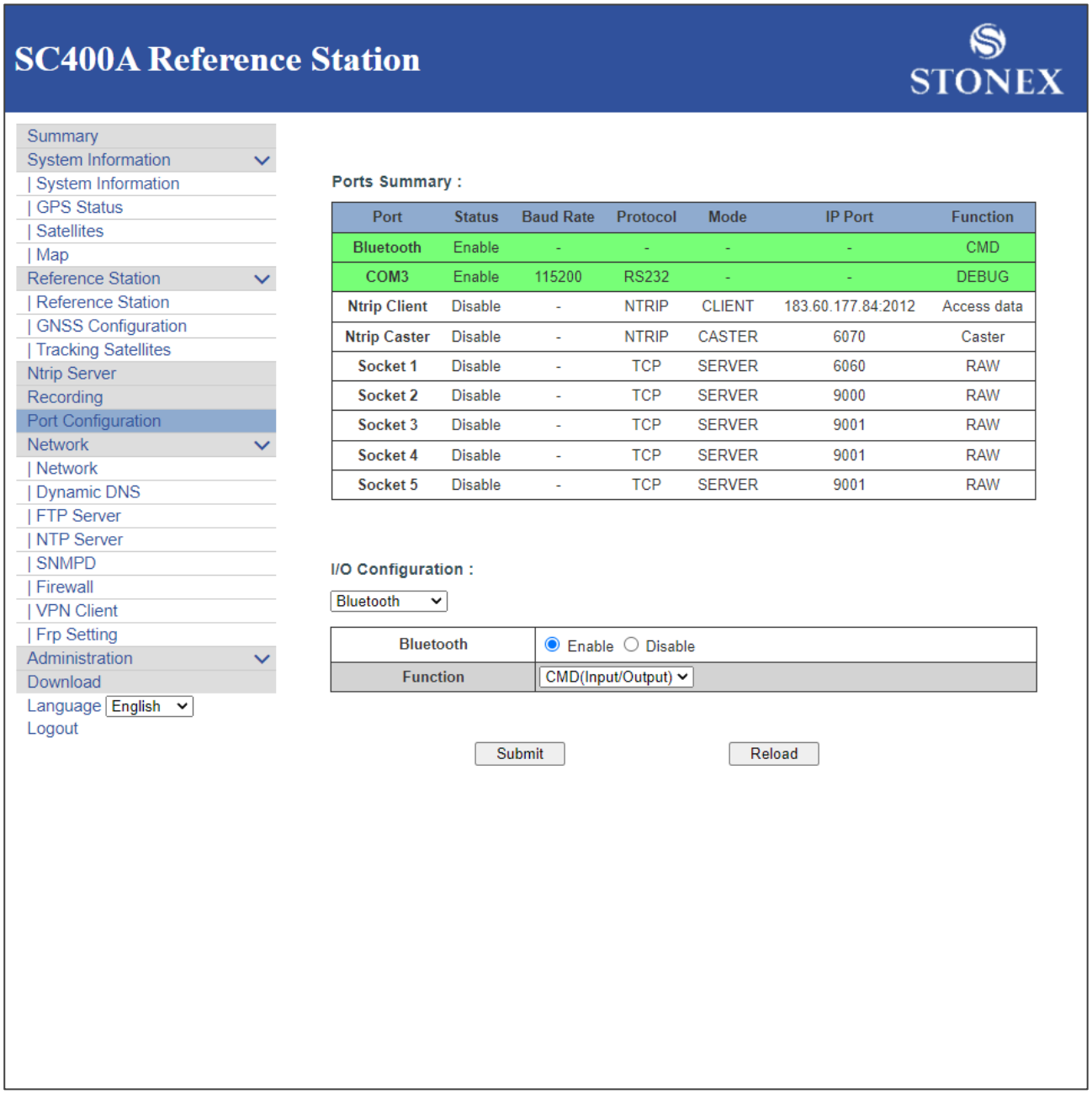
Convert: enable the conversion of the raw file to RINEX. For the RINEX 3.x format the Mixed Nav option is available: if enabled, it creates a single mixed navigation RINEX file.

Phase center antenna: if enabled, the header coordinates are referred to the phase center.

File Push: Enables automatic transfer of RINEX files via FTP. This option is effective only if raw file transfer is enabled. The FTP server and the access parameters are those indicated in the Push Parameters section.

4.5 Port Configuration

Communication with the receiver and data transmission, on this page you can view the list of I/O ports and you can access their configuration. You can click on the cell containing the port's name to view the possible configuration at the bottom.



The available functions are:

CMD (Input / Output): allows you to send commands and receive responses

NMEA (Output): send NMEA messages

RTK (Input): receives differential data. Use only if work mode is rover

RTK (Output): Transmits differential data. Use only if work mode is Base

RAW (Output): Transmits raw data

BINEX (Output): Transmits data in BINEX format

Spectrum Analysis (Output): Function currently under development

NTRIP Client allows you to connect the SC400A to a caster using the NTRIP protocol. Use only if work mode is rover.

NTRIP Caster: if enabled, activates the Caster service. Allows you to set the transmission port and account for the NTRIP client. The account is unique but allows multiple simultaneous connections.

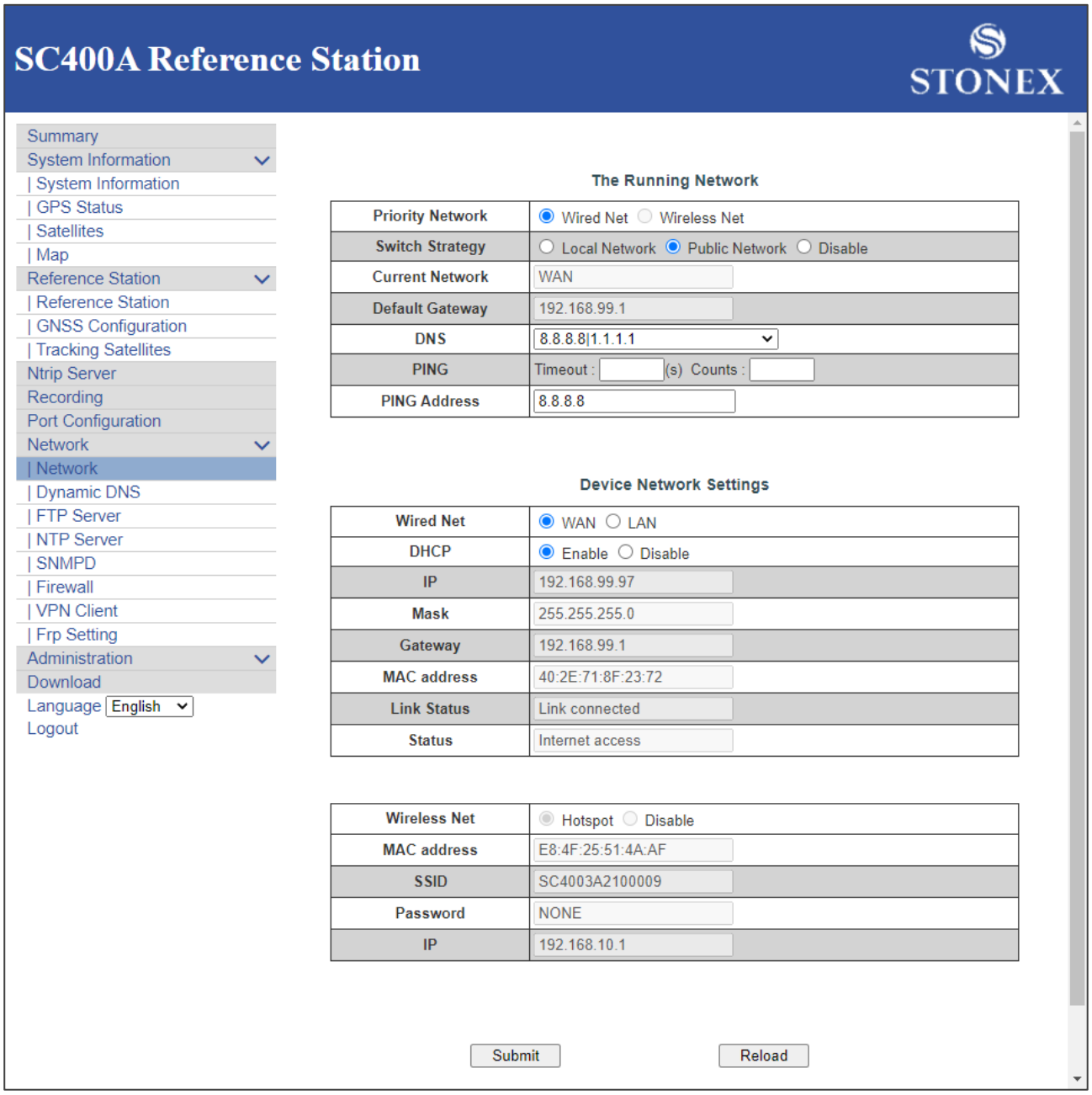
Warning: to use this function, at least one NTRIP Server must be active on address 127.0.0.1 and the same port set in the Caster (See NTRIP Server).

4.6 Network

This is the section for the Internet connection configuration and related services, including DDNS, FTP, VPN. Let's see its pages and subcommands below.

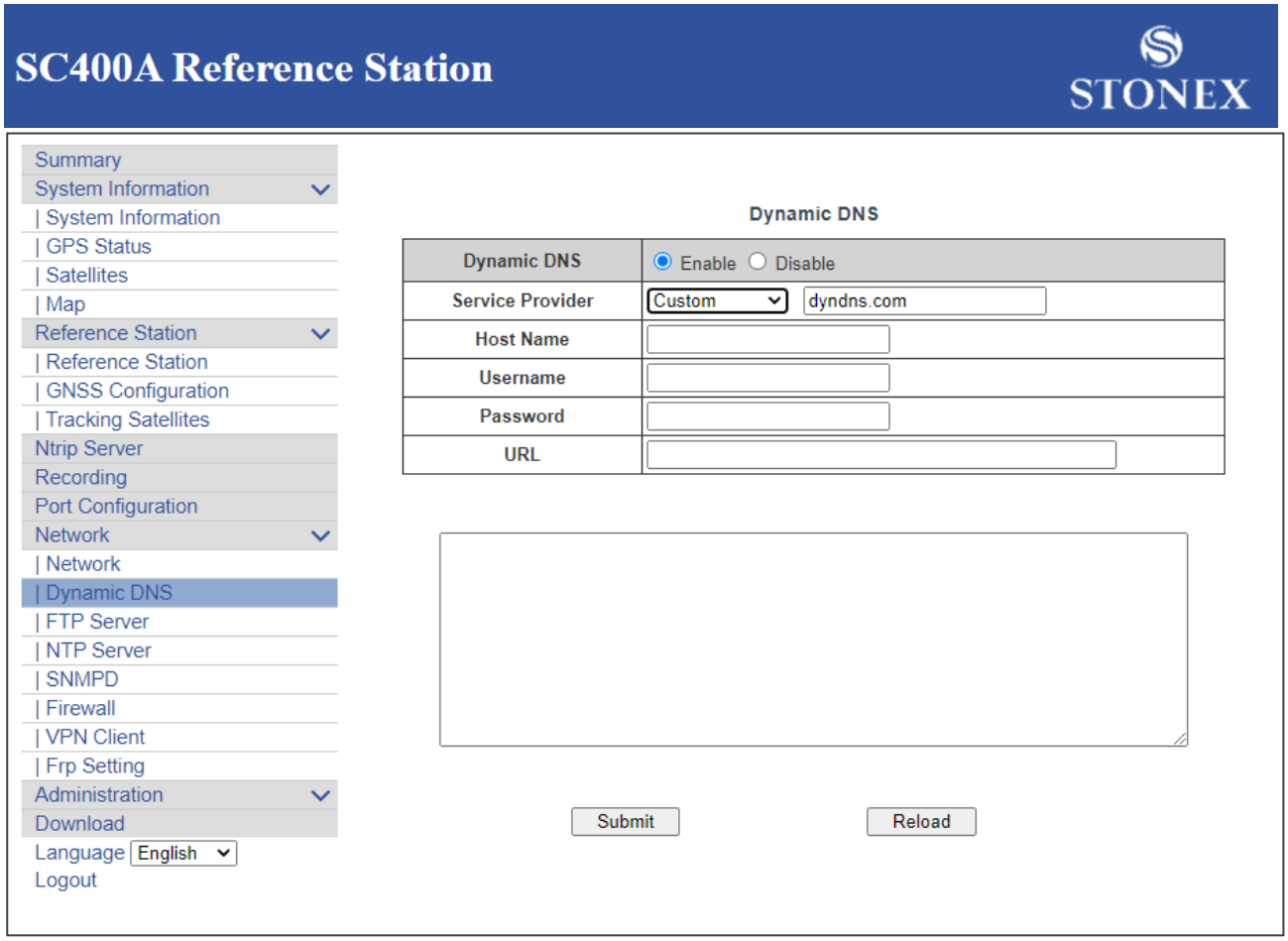
4.6.1 Network

This page is mainly set for the data link method used by SC400A.



4.6.2 Dynamic DNS

This is the page where it is possible to unable/disable the Dynamic DNS. By choosing the enable key it will be possible to enter the service provider, host name, username, and password.

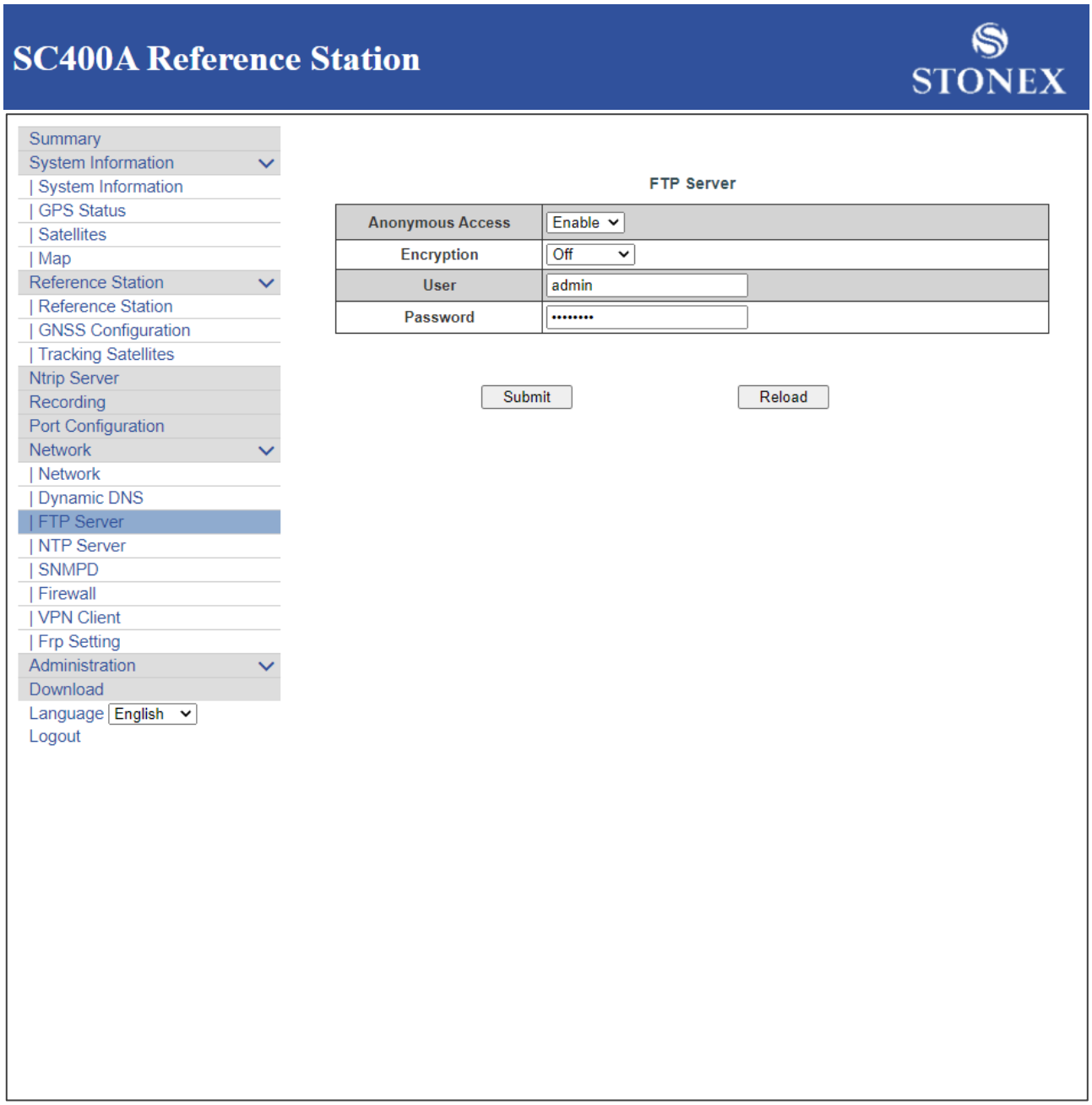


4.6.3 FTP Server

The FTP server feature allows the user to use the CORS as an FTP server. User can download and upload data through it.

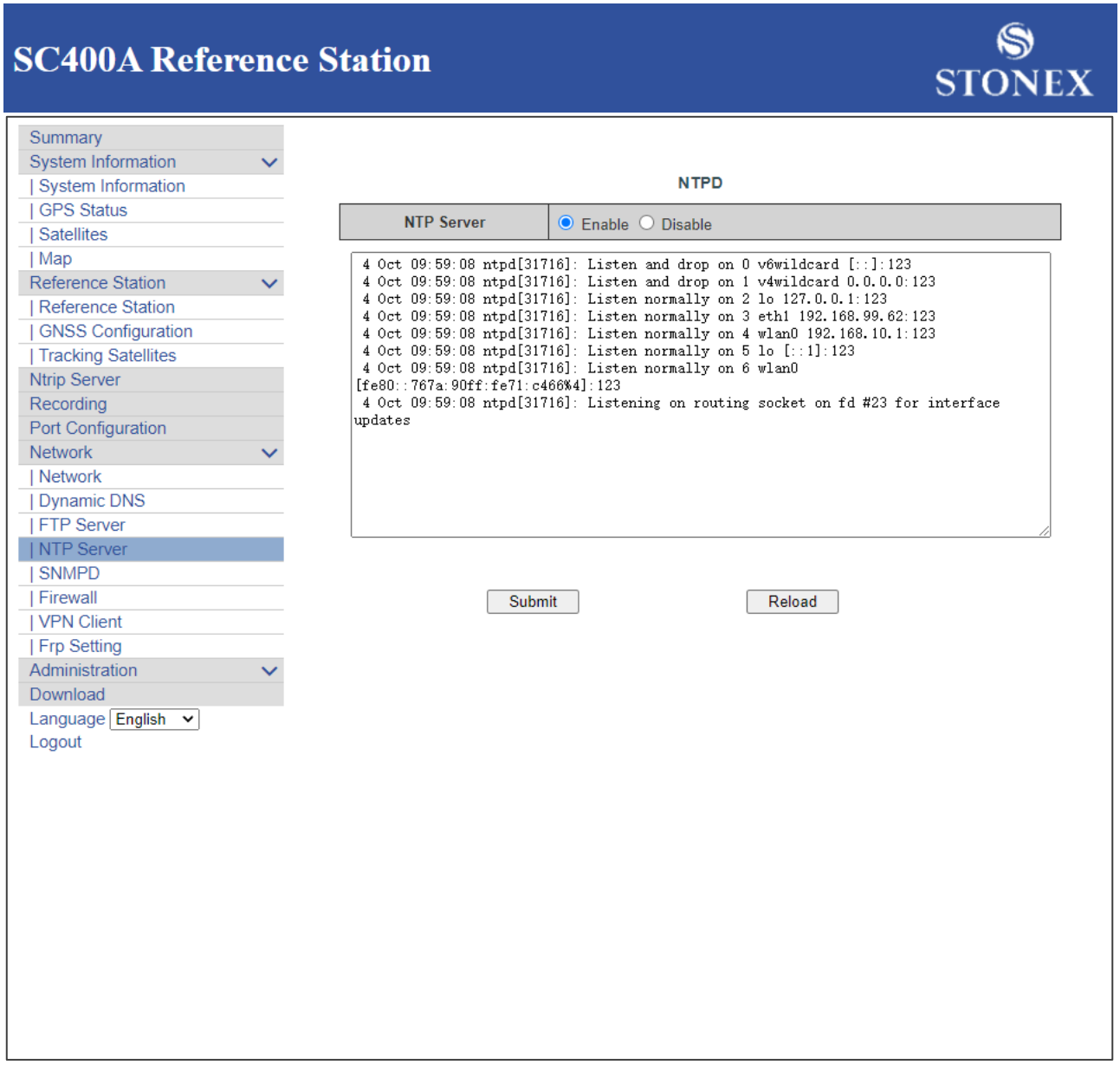
The anonymous access is enabled by default: we recommend disabling it if the receiver is accessible from the Internet.

The Encryption enable the SSL / TLS explicit encryption.



4.6.4 NTP Server

NTP (Network Time Protocol) Server allows you to synchronize the computer clock with the time of the receiver.

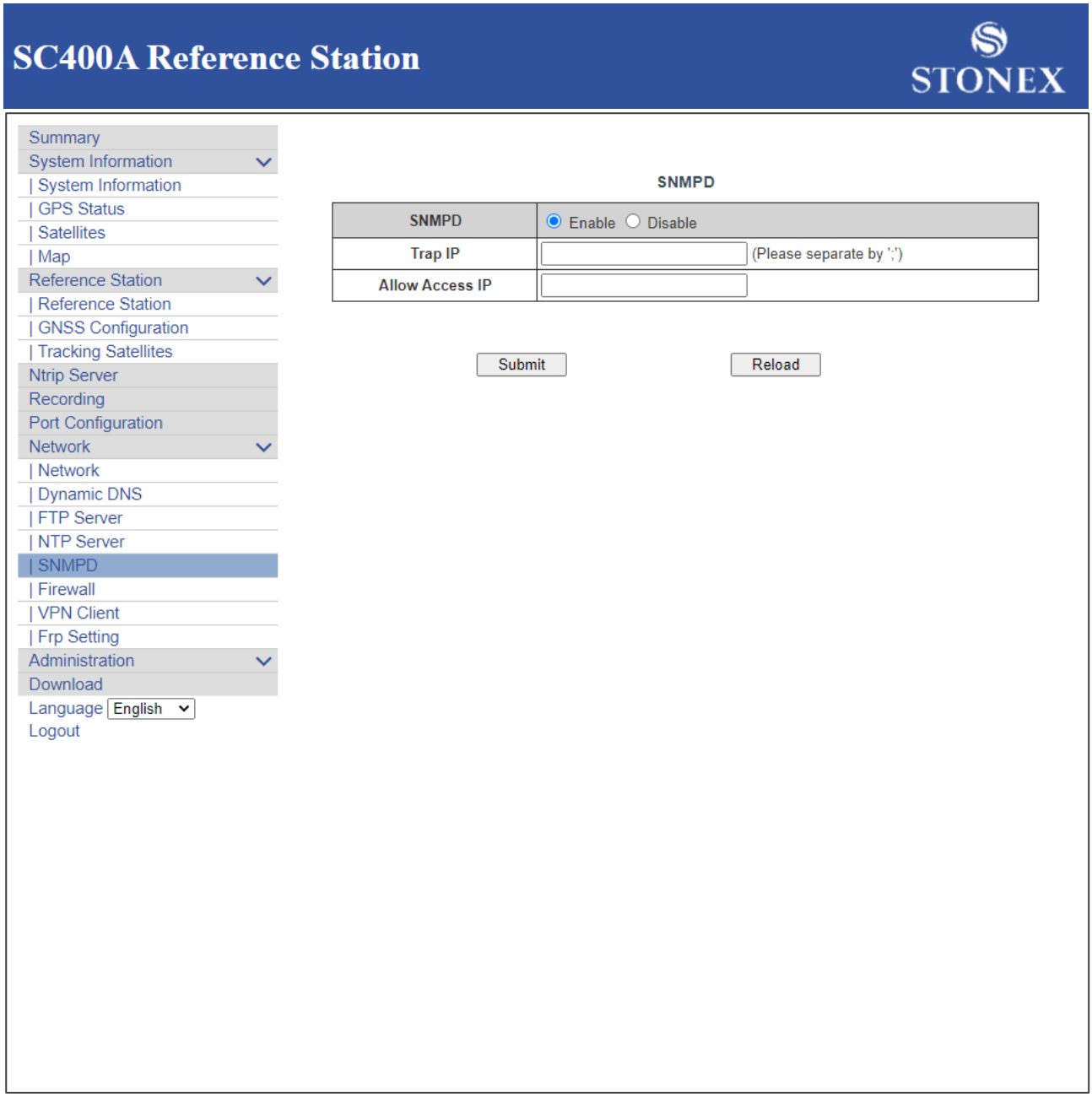


4.6.5 SNMPD

If the command SNMPD (Simple Network Management Protocol) is enabled, you can see a page as the picture below, where you can enter the Trap IP and the Allow Access IP.

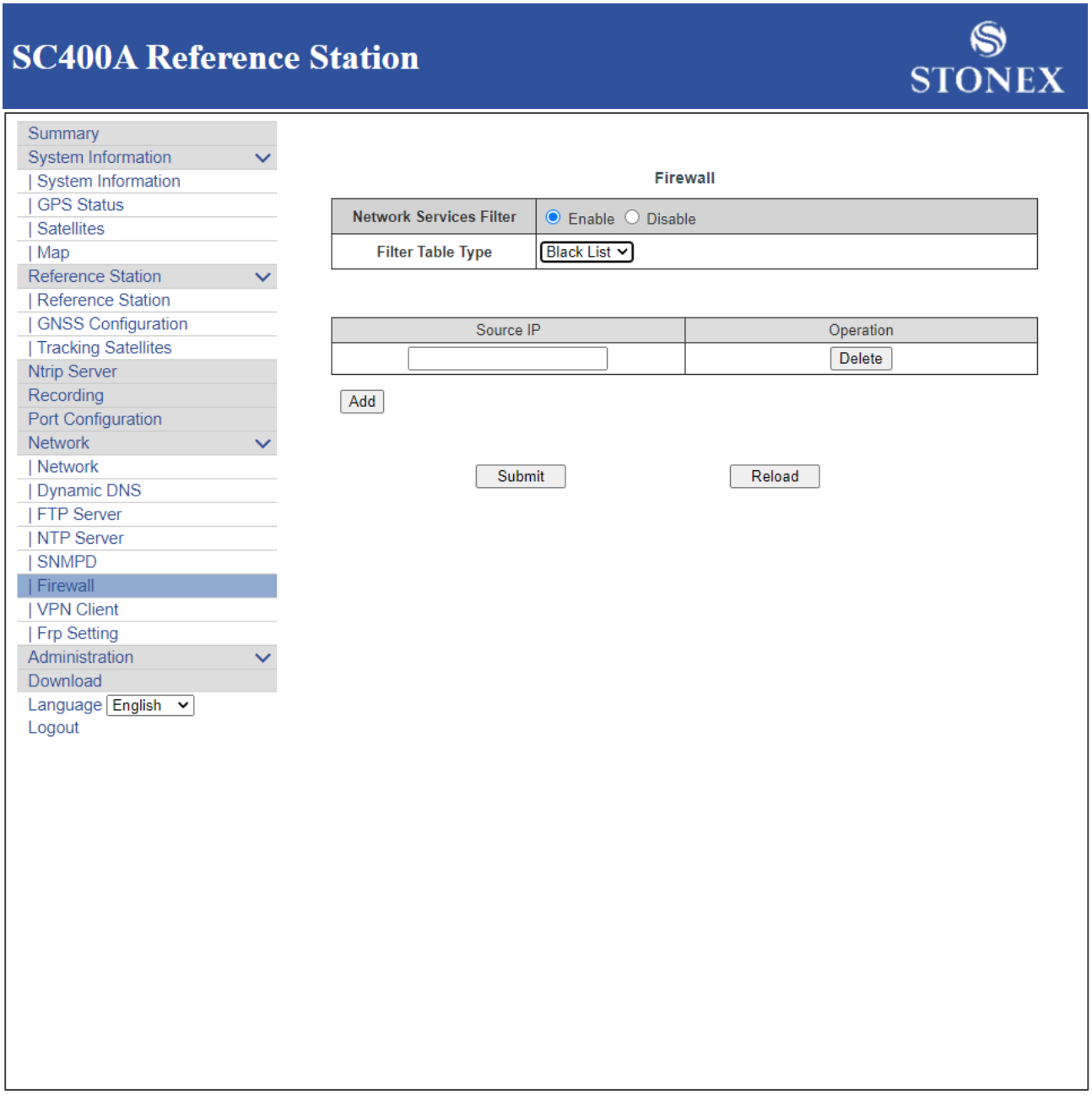
Trap IP: Receivers can specify some IPs and then automatically send information to those IPs.

Allow Access IP: Receivers can allow some devices to proactively obtain information about receivers through IP addresses.



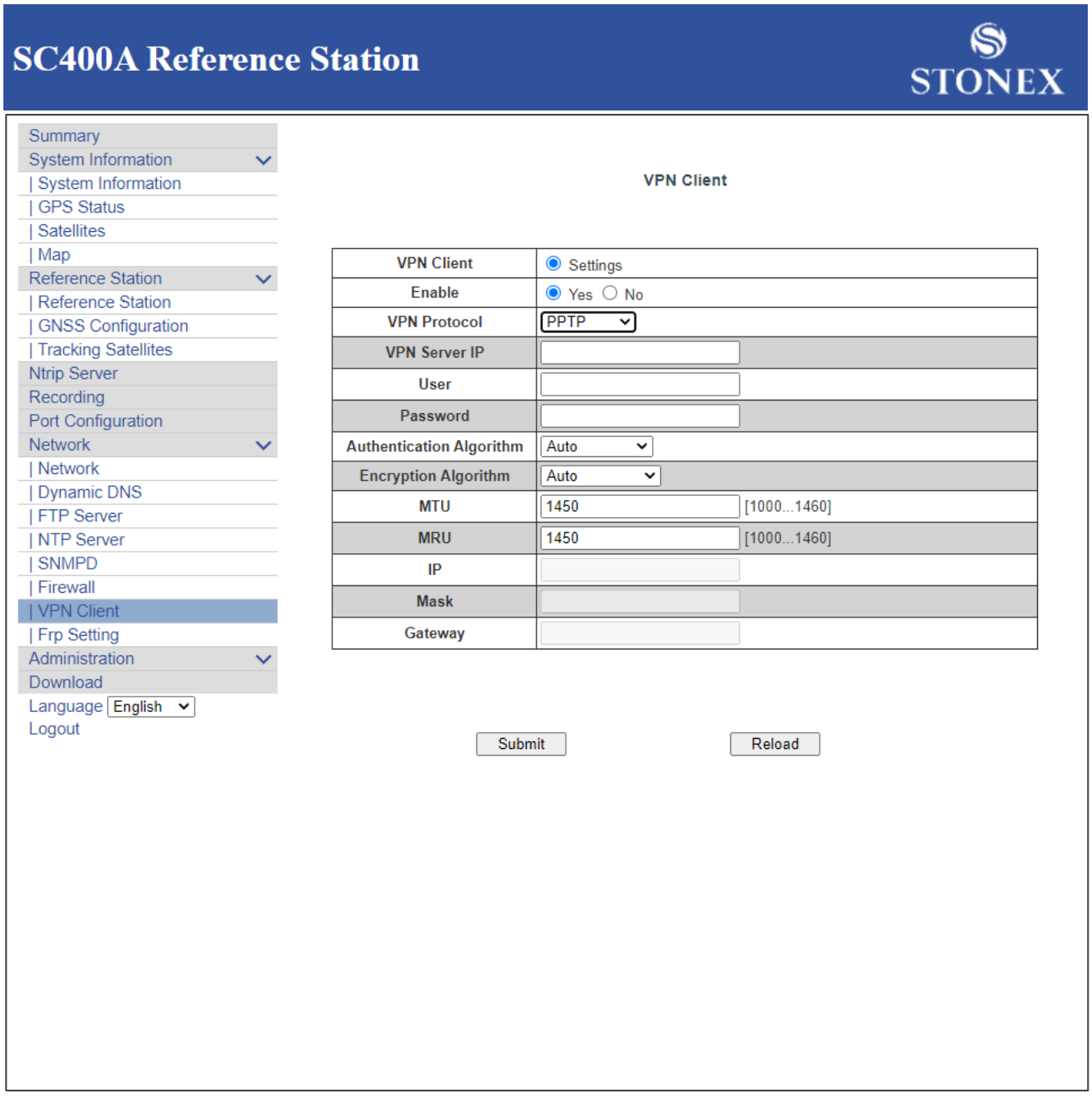
4.6.6 Firewall

On this page, you can choose whether to turn on the firewall. The firewall feature allows you to protect access to the web interface. There are two protection mechanisms, referred to as Filter table type: whitelist and blacklist. The whitelist allows you to define the only IPs from which you can access the web interface, any other IP is blocked. Blacklist works the opposite way: it allows to define the only IPs that cannot access the web interface while any other IP can access.



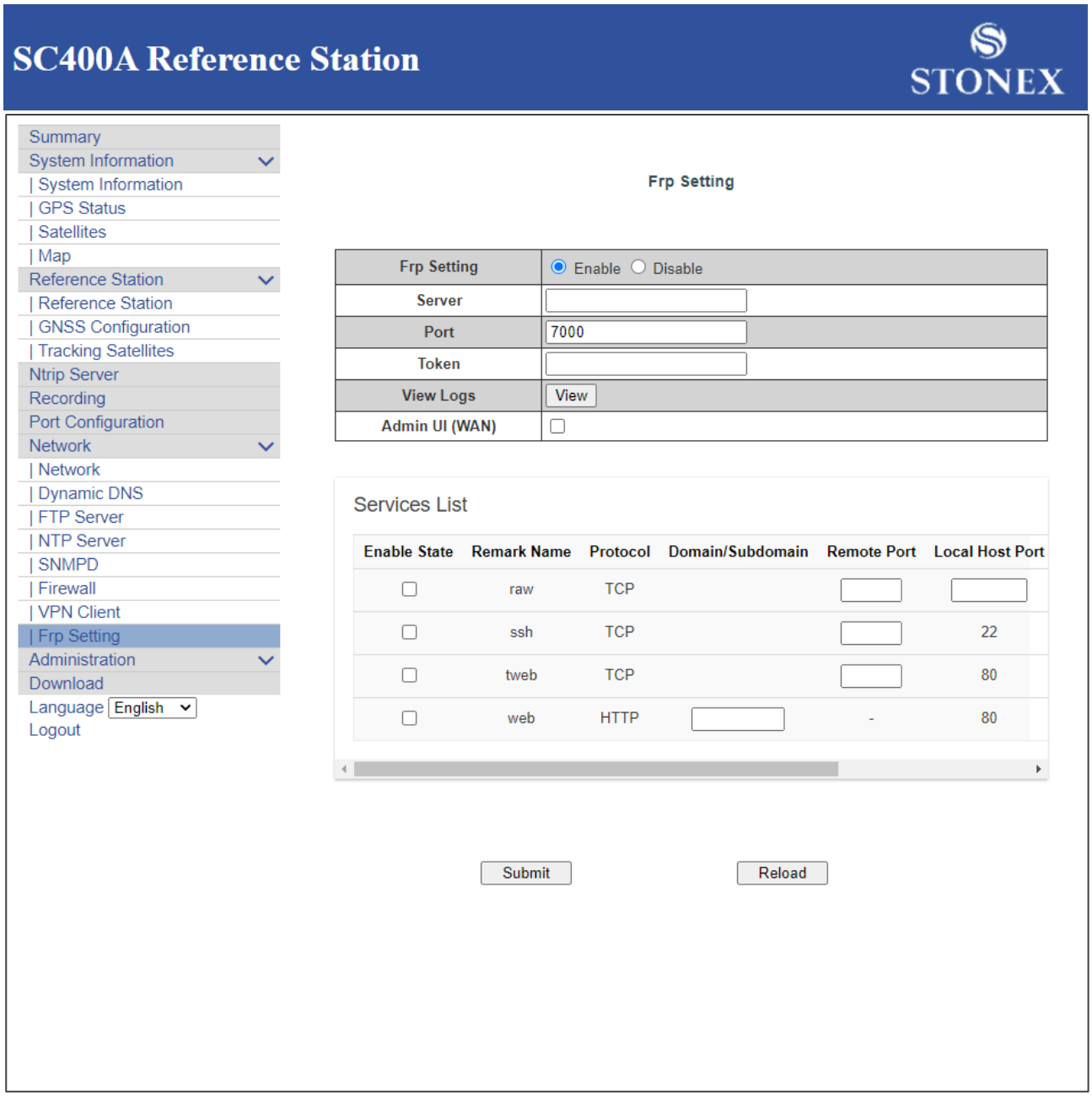
4.6.7 VPN Client

This function is under development.



4.6.8 Frp Setting

This function is for internal use.

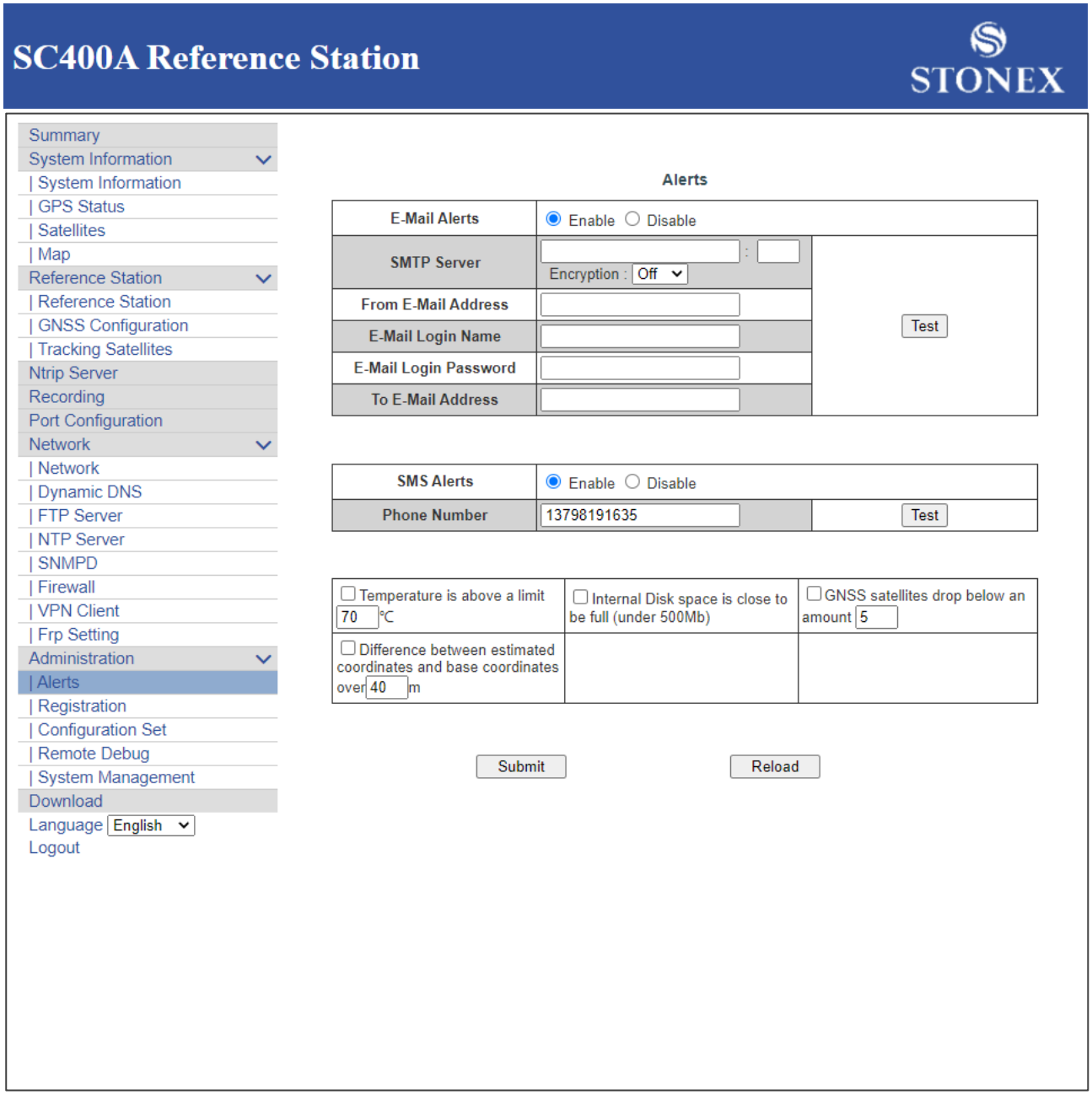


4.7 Administration

This section includes Receiver update, alarm configurations, System log, restart/reset commands.

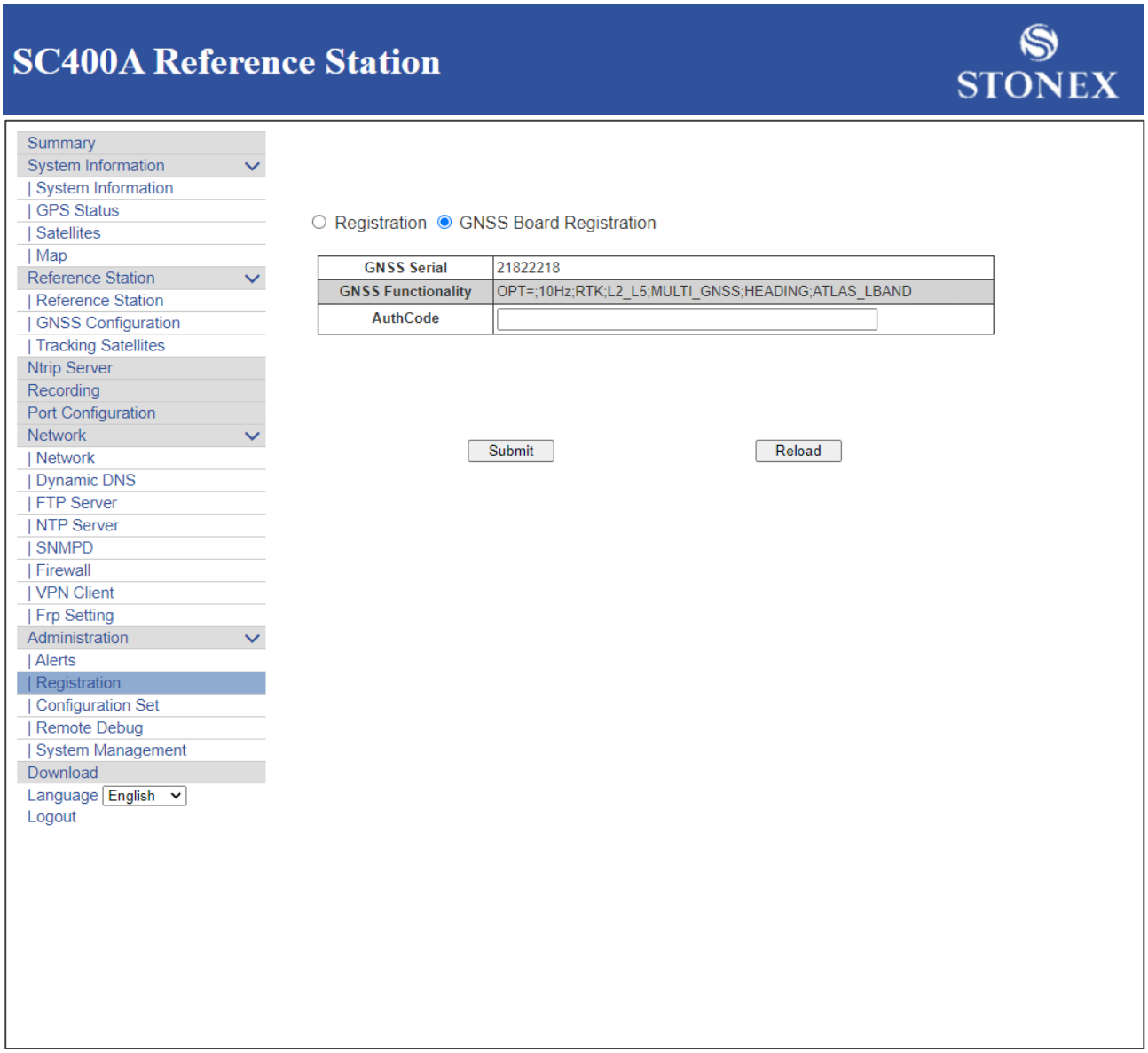
4.7.1 Alerts

On this page you can set alerts send via e-mail and/or SMS. If you want to send text messages, you need to use a mobile network. Below in the page you can see the topics on which the alarm can be triggered. Some of these arguments allow you to set a reference value.



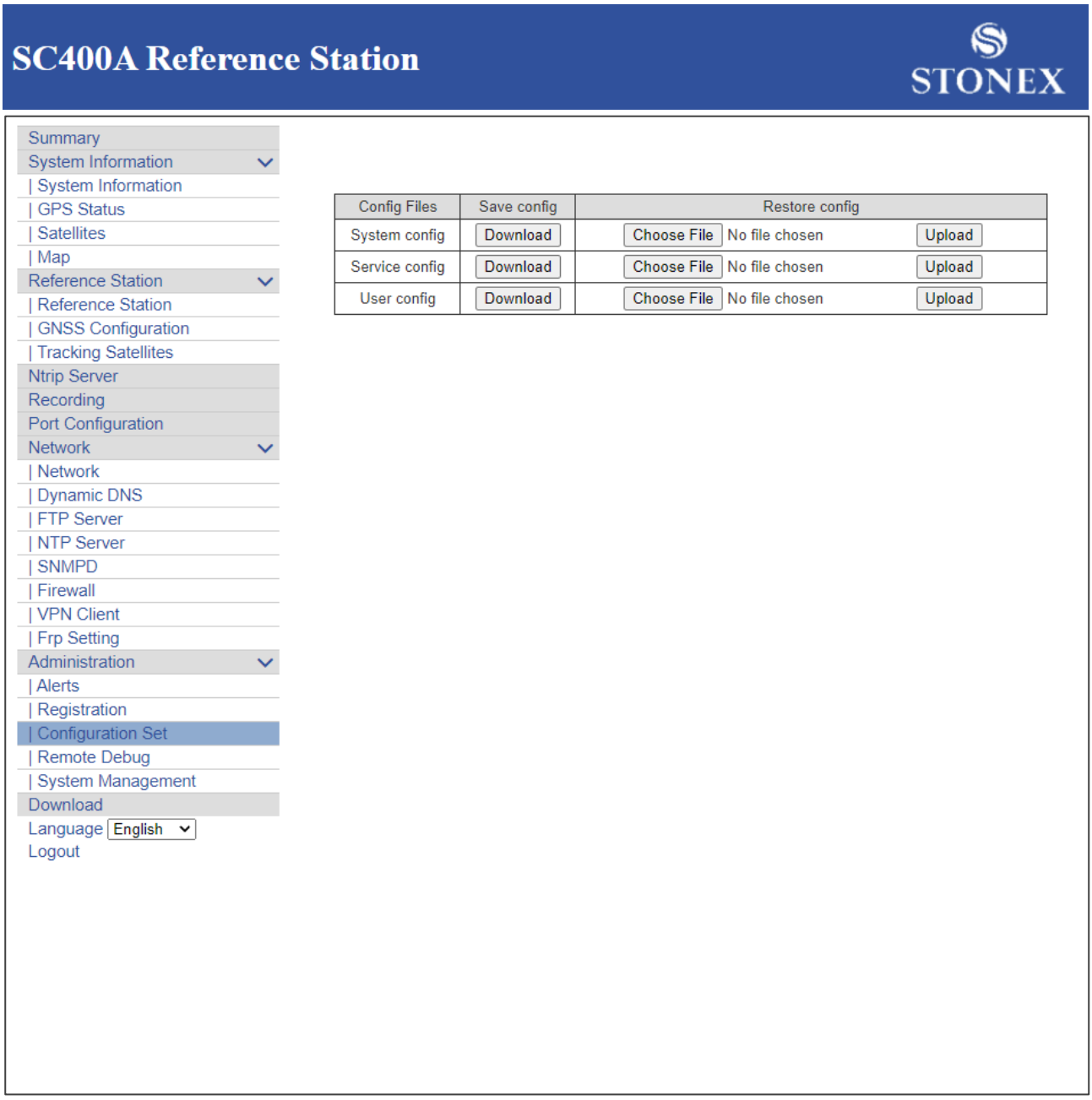
4.7.2 Registration

On this page, you can check the registration information of the receiver and the GNSS board.



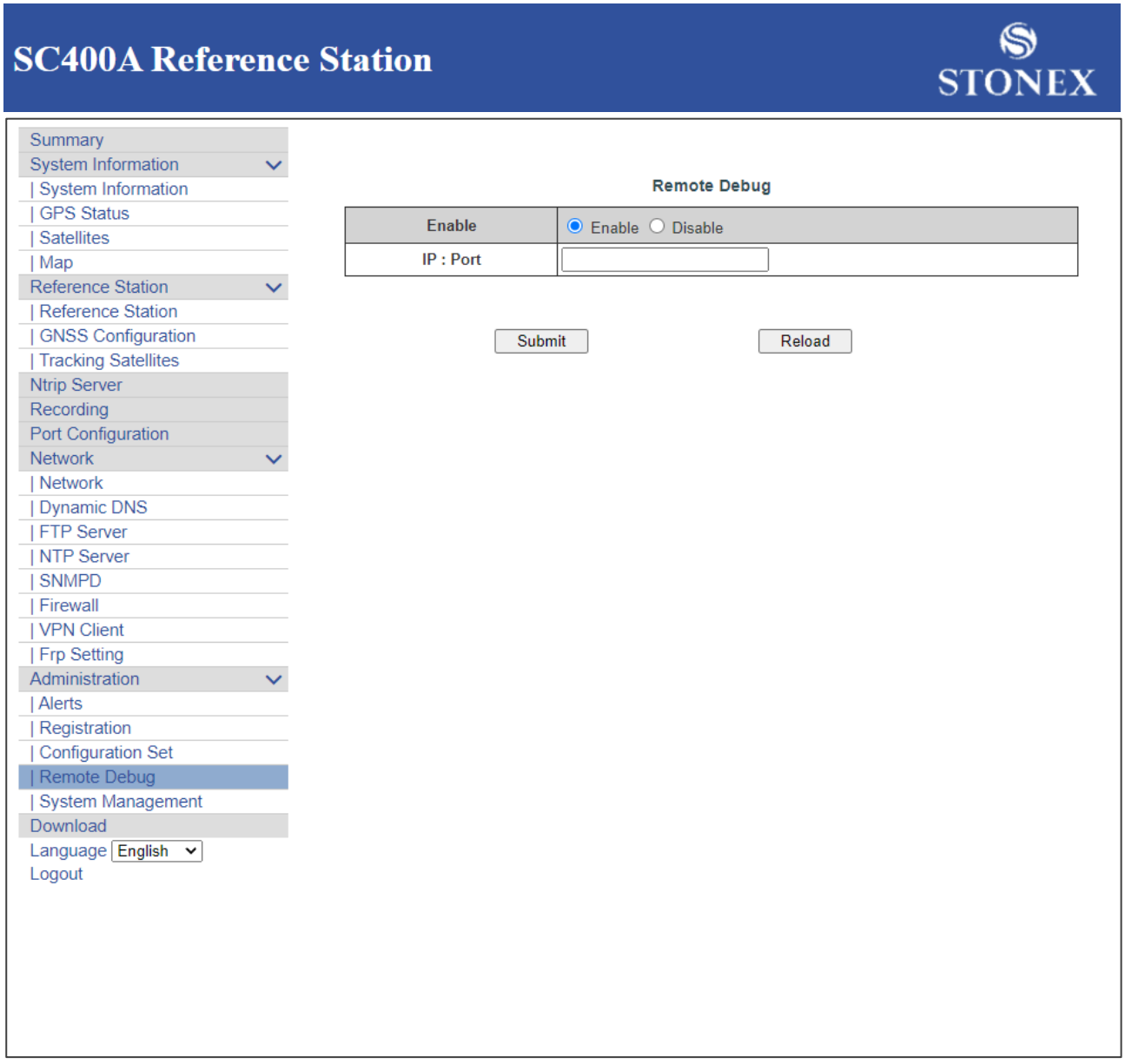
4.7.3 Configuration Set

In this page you can download/upload configuration files.



4.7.4 Remote Debug

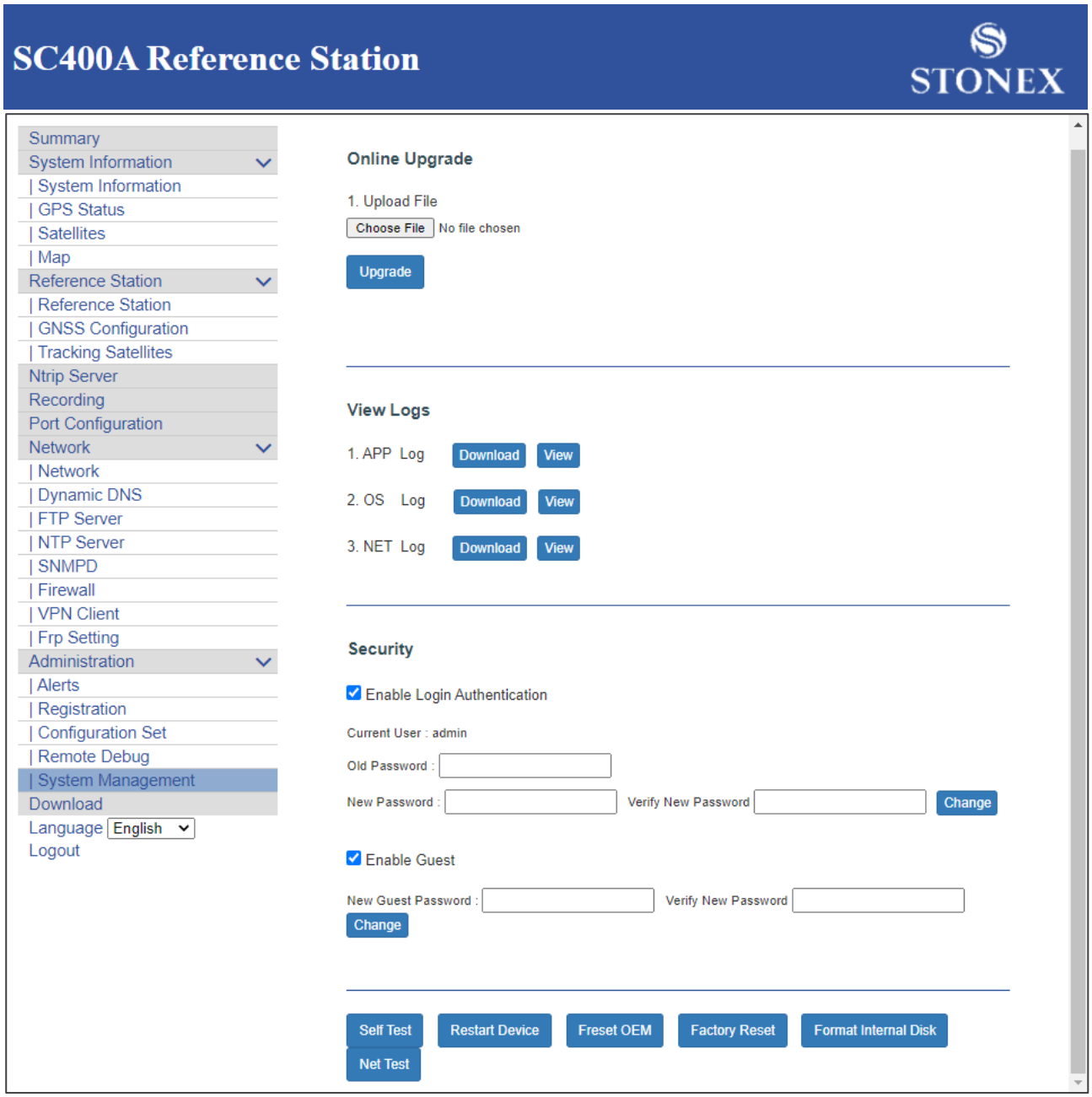
Remote debug allows to connect SC400A with Cube-cors. Simply insert the IP of the server where Cube-cors is running and its ports. Further details on Cube-cors manual.



4.7.5 System Management

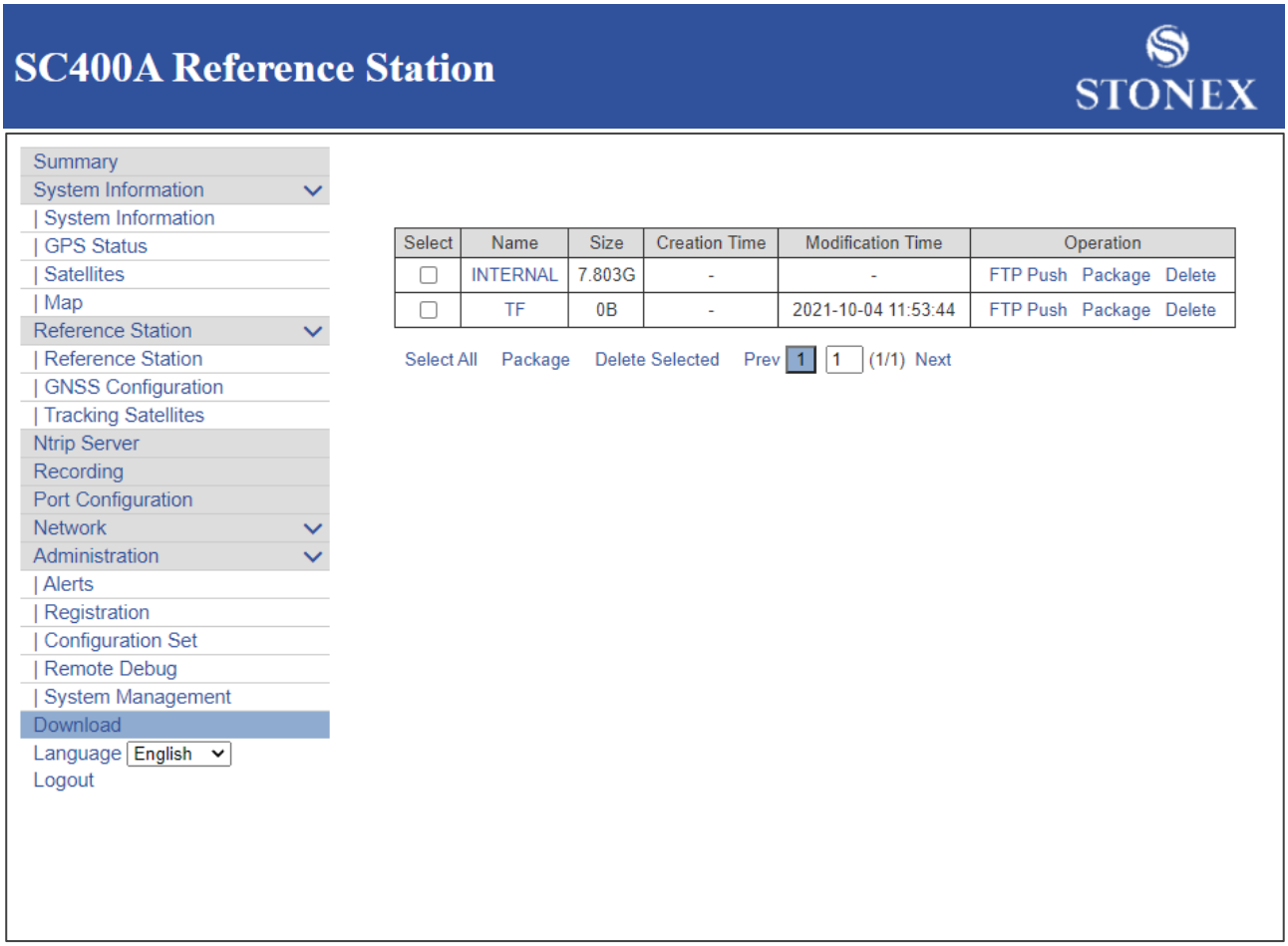
On this page you can update the receiver firmware, modify the security settings, view the logs. At the bottom you can find some controls to do tests and to reset.

Online upgrade: mainboard/GNSS firmware update and MCU component.



4.8 Download

This command is for the manual download of recorded files, it has no subcommands. You can download the files registered locally as a package or perform an FTP push. To check the recorded files just click on the name cell. Individual files can be converted to RINEX on-the-fly clicking on Convert button. Regarding the options of conversion, please refer to Recording page.



4.9 Language and Log Out

Language command allows you to select the language. The available languages are English, Russian, traditional Chinese, simplified Chinese.

Logout command if clicked closes the session.

5. Bundles

SC400A is available in standard version with 10Hz as position rate. There is the possibility to upgrade it to 20Hz.

Model:

Product Code	Description
B75-000217	SC400A CORS, GNSS 800 Ch, 10Hz, Wi-Fi, BT
	Power Adaptor with 3 plugs (US, UK and EU), 15V/2A, 2PIN

List of **Optional** accessories:

Product Code	Description
30-357125	DB9 female-DB9 female
30-350298	Power Cable 2pin, +/- voltage

30-357112	Cable 10m for antenna GNSS (AC-10M)
30-357126	Cable for Choke Ring antenna (30m)
30-357127	Cable for Choke Ring antenna (40m)
30-350243	SA1800, GNSS 3D Choke Ring antenna
30-357128	SA1500, GNSS 2D Choke Ring antenna
30-357135	SA1200 GNSS 3D Choke Ring Antenna
30-357136	SA1000, GNSS Mini Choke Ring Antenna
30-357134	SA65 GNSS Geodetic Antenna

Appendix 1: Copyrights, warranty, and environmental recycling

Copyrights and trademarks

STONEX®, the STONEX® logo, and SC400A CORS receiver are trademarks of STONEX® Limited.

STONEX® Cube-a, STONEX® Cube-Connector, STONEX® Cube-cors are trademarks of STONEX® Limited.

Release Notice

October 2021 release of the STONEX® SC400A GNSS new model receiver user guide.

The following limited warranties give you specific legal rights. You may have others, which vary from state/jurisdiction to state/jurisdiction.

Standard Limited Warranty

Version 2021

The terms and conditions of this Limited Warranty constitute the complete and exclusive warranty agreement between The Customer or Dealer and STONEX® for the Product and supersedes any prior agreement or representation made in any STONEX® sales document or advice that may be provided to Customer by any STONEX® representative in connection with Customer's purchase of the Product. No change to the conditions of this Limited Warranty is valid unless it is made in written form and signed by an authorized STONEX® supervisor.

STONEX® warrants that its Products:

Are free from defects in materials or workmanship for generally 1 year.

Accessories or specific parts for which different limited warranty period shall apply.

Have been tested/calibrated in proper working status prior to shipment.

The warranty period starts from date of first sale of the instruments. At its sole discretion, under the warranty period, STONEX® will repair the product or send parts for replacement at its expense. STONEX® agrees to repair or replace the defected instrument within thirty (30) days only if STONEX® Europe recognizes that the defects of the instrument are not caused by human factors or no obvious damage to its surface is visible. STONEX® warrants any new replaced parts or products are warranted to be free from defects in materials and workmanship for thirty (30) days or for the remainder of the Limited Warranty Period of the Product in which they are installed, whichever is longer. Faulty Parts or Products replaced under this Limited Warranty shall become property of STONEX®. All products that have to be repaired have to be returned to our technical representative office location via any delivery company the customer prefers, nevertheless STONEX® is not accountable for the unlikely event that the Products gets lost in transit. Any damage inflicted by the customer or by third party after the products has been delivered to the customer is excluded from the limited warranty as well any damage arising from an improper use, from any action or use not provided for in the enclosed user guides and/or manuals.

Shipping policy

The Customer or the dealer is required to pay for the charges for shipping of fault parts or instruments to STONEX® representative office and STONEX® is providing the shipping for return. Dealers need to follow STONEX® repair/service procedure to achieve a better and prompt service result.

Firmware/Software warranty

Stonex does not warrant that operation of Firmware/Software on any instruments will be uninterrupted or error-free, or that functions contained in Firmware/Software will operate to meet your requirements.

Stonex will forward the Software/Firmware Fix to the dealer or customer. Firmware/software Fix means an error correction or other update created to fix a previous firmware version that substantially doesn't conform to the instrument's specification.

Over Warranty repair(s) policy

Customer shall pay the standard repair fees for any service (whether part replacement or repairs) and performed by STONEX® under request and explicit authorization of the customer itself. In this case the customer is charged for return shipment's fees as well.

Disclaimer and Limitation of Remedy

All other express and implied warranties for this product, including the implied warranties of merchantability and fitness for a particular purpose and/or not infringement of any third party's rights, are hereby disclaimed. Stonex® expressly disclaims all warranties not stated in this limited warranty. Any implied warranties that may be imposed by law are limited in duration to the term of this limited warranty. Some jurisdictions do not allow the exclusion of implied warranties or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to customer. Customer must read and follow all set-up and usage instructions in the applicable user guides and/or manuals enclosed. If customer fails to do so, this product may not function properly and may be damaged. Customer may lose data or sustain personal injuries. Stonex®, its affiliates and suppliers do not warrant that operation of this product will be uninterrupted or error free; as do all electronics at times. If this product fails to work as warranted above, customer's sole and exclusive remedy shall be repair or replacement. In no event will Stonex®, its affiliates or suppliers be liable to customer or any third party for any damage in excess of the purchase price of the product. This limitation applies to damages of any kind whatsoever including (1) damage to, or loss or corruption of, customer's records, programs, data or removable storage media, or (2) any direct or indirect damages, lost profits, lost savings or other special, incidental, exemplary or consequential damages, whether for breach of warranty, contract, tort or otherwise, or whether arising out of the use of or inability to use the product and/or the enclosed user guides and/or manuals, even if Stonex, or an authorized Stonex® representative, authorized service provider or reseller has been advised of the possibility of such damages or of any claim by any other party. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages for some products, so the exclusions or limitations may not apply to customer. This limited warranty gives customer specific legal rights, and customer may also have other rights which vary from country/state/jurisdiction to country/state.

Instruments

Two (2) year on STONEX® Products:

GNSS receiver: SC400A GNSS Series.

Environmental recycling

The cardboard box, the plastic in the package and the various parts of this product must be recycled and disposed of in accordance with the current legislation of your Country.

For countries in the European Union (EU)

The disposal of electric and electronic device as solid urban waste is strictly prohibited: they must be collected separately.

Contact Local Authorities to obtain practical information about correct handling of the waste, location, and times of waste collection center. When you buy a new device of ours, you can give back to our dealer a used similar device.

The dumping of these devices at unequipped or unauthorized places may have hazardous effects on health and environment.

The crossed dustbin symbol means that the device must be taken to authorize collection centers and must be handled separately from solid urban waste.

For countries outside European Union (EU)

The treatment, recycling, collection, and disposal of electric and electronic devices may vary in accordance with the laws in force in the Country in question.

Appendix 2: Safety Recommendations

Warnings and Cautions

An absence of specific alerts does not mean that there are no safety risks involved in the use of this equipment.

Always follow the instructions that accompany a Warning or Caution, reported in this.

This information is intended to minimize the risk of personal injury and/or damage to propriety.

Observe safety instructions that are presented in the following form:

WARNING - A Warning alerts about risk for health and/or damage to the propriety. A warning identifies the nature of the risk and the extent the possible injury and/or damage. It also describes how to protect yourself and/or the equipment from this risk.

CAUTION - A Caution alerts about a possible risk of damage to the equipment and/or loss of data, but no risk for human safety.

Wireless Module Approval

The receivers use internal wireless modules. Regulations regarding the use of the modem vary greatly from country to country. In some countries, the unit can be used without obtaining an approval license. Other countries require specific approval or auto certification by the set maker.

Before using this instrument, check if authorization to operate the receiver is required in your country. It is the responsibility of the importer to verify if it is necessary a certification or license for the equipment in the country of use.

Instrument Approval

Covers technical features of the equipment relatives to electromagnetic emissions that can cause interference and disturbances to other instruments (note like emc compatibility) or generate not correct functionalities of the instrument itself. Approval is granted by the manufacturer of the equipment. Some countries have unique technical requirements for operation in particular frequency bands. To comply with those requirements, Stonex Srl may modified the equipment to be subjected to grant.

Unauthorized modification of the units voids already got approvals, the warranty time and the operational licenses of the instrument.

STONEX® SRL

Viale dell'Industria, 53 - 20037 Paderno Dugnano (MI)

Tel: +39 02 78619201

www.stonex.it | info@stonex.it