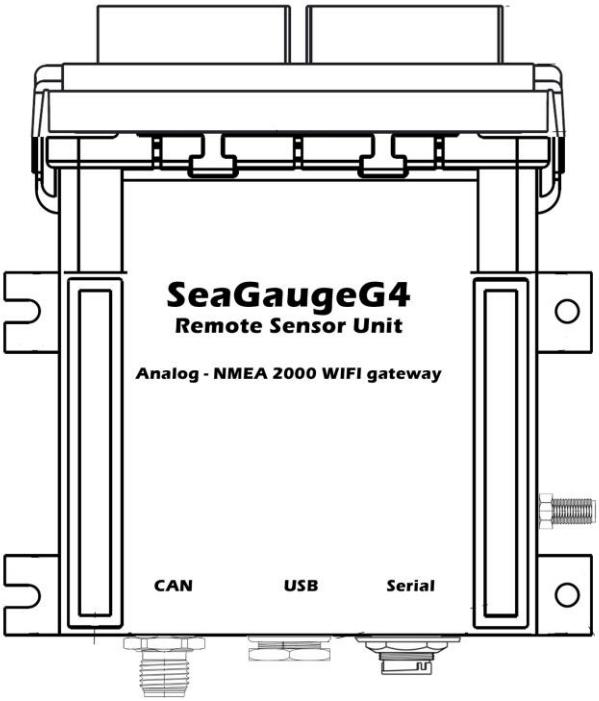
Application Note

ANSSG325091302 – SeaGauge G4 Enable PushSmart



Chetco Digital Instruments, Inc

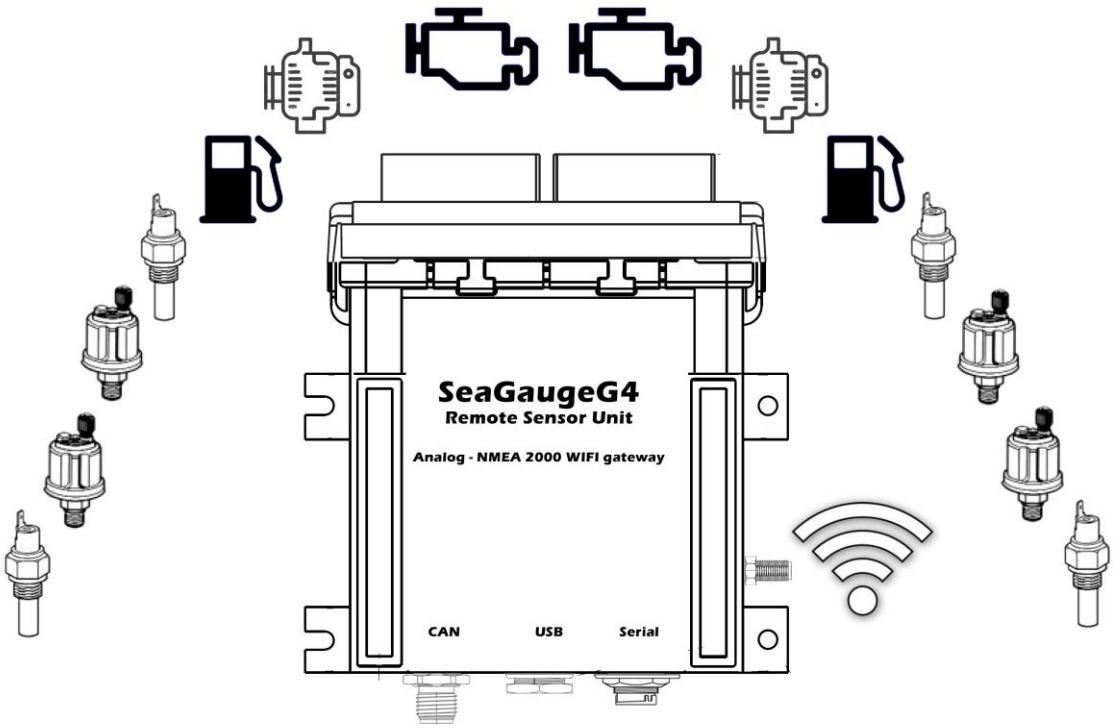
Revision 091325

SeaGaugeG4 supports up to 12 resistive or voltage style analog sensor inputs and 3 pulse style inputs.

SeaGaugeG4 also provides 4 additional indicator/status inputs (18VDC max) and 4 relay driver (12VDC) outputs

Sensors are connected to the dual 20 pin Molex style connectors and analog voltages converted to digital protocol compatible with CAN bus and WIFI interfaces.

SeaGaugeG4 can trigger multiple alarms based on sensor voltages from any of the 12 analog inputs and 3 pulse inputs



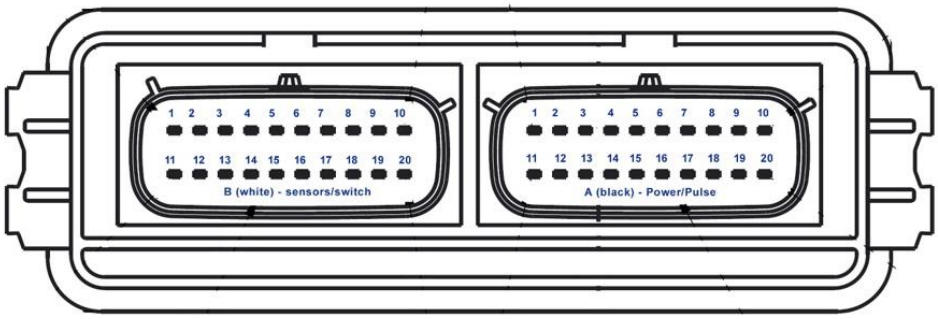
SeaGaugeG4 supports up to 3 pulse sensor inputs via a 20 pin Molex MX150 plug (white).

Molex style crimp pins are provided to attach 18 gauge tinned wire and insert into appropriate locations in supplied plugs.

The 3 pulse inputs (P0-P2) are used to provide Tachometer, Fluid Flow, and other rotational sensor inputs.

Each pulse channel has a runtime accumulator that counts the number of seconds the channel is active up to 16,777,216 seconds

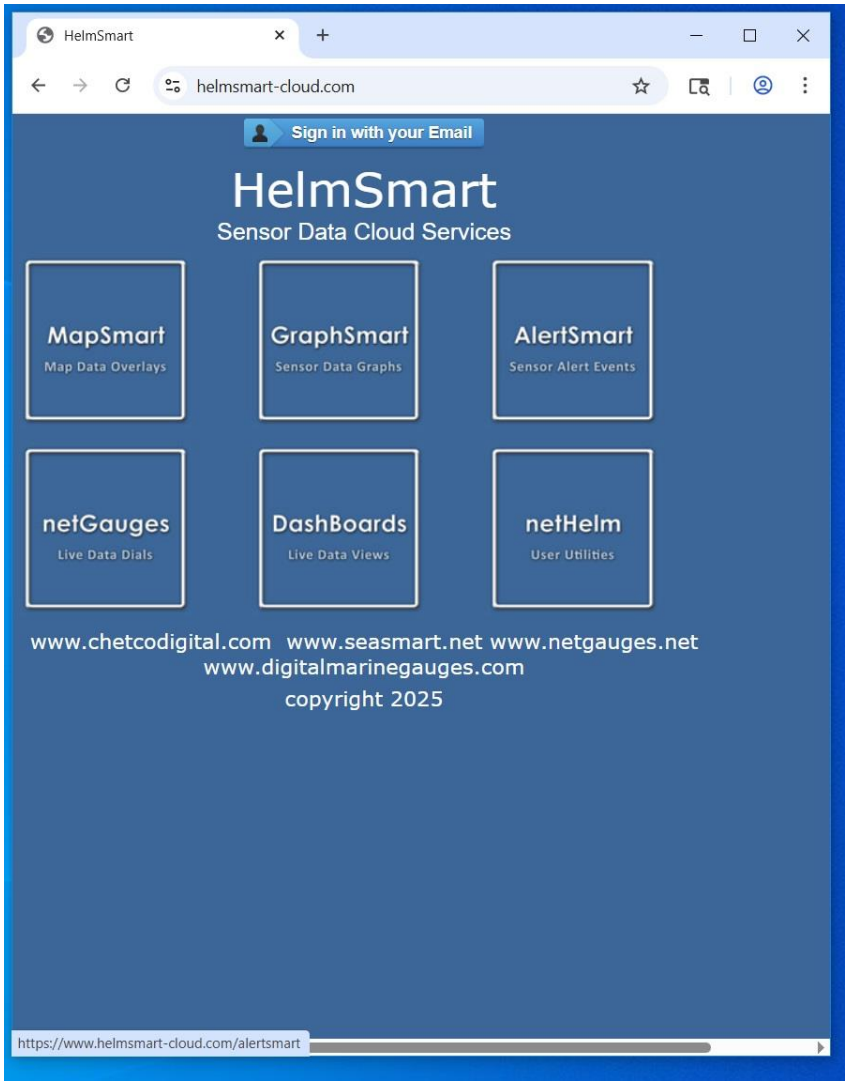
SeaGaugeG4 Header



B1 - NC	B11 - NC	A1 - SW5	A11 – SW4
B2 - NC	B12 - NC	A2 - SW7	A12 – SW6
B3 – SEN10 (SBOOST)	B13 – SEN11 (STRAN)	A3 - NC	A13 - NC
B4 – SEN04 (STEMP)	B14 – SEN05 (SOIL)	A4 – P1 (SRPM)	A14 - GND
B5 – SEN06 (SFUEL)	B15 – SEN07 (SBAT)	A5 – P0 (PRPM)	A15 - GND
B6 – SEN00 (PBAT)	B16 – SEN01 (PFUEL)	A6 – P2	A16 - GND
B7 – SEN02 (PTEMP)	B17 – SEN03 (POIL)	A7 – 5VOUT	A17 – 5VOUT
B8 – SEN08 (PBOOST)	B18 – SEN09 (PTRAN)	A8 - GND	A18 - GND
B9 – INC03	B19 – INC02	A9 – 12VIN	A19 = 12VIN
B10 – INC01	B20 – INC00	A10 - NC	A20 - NC

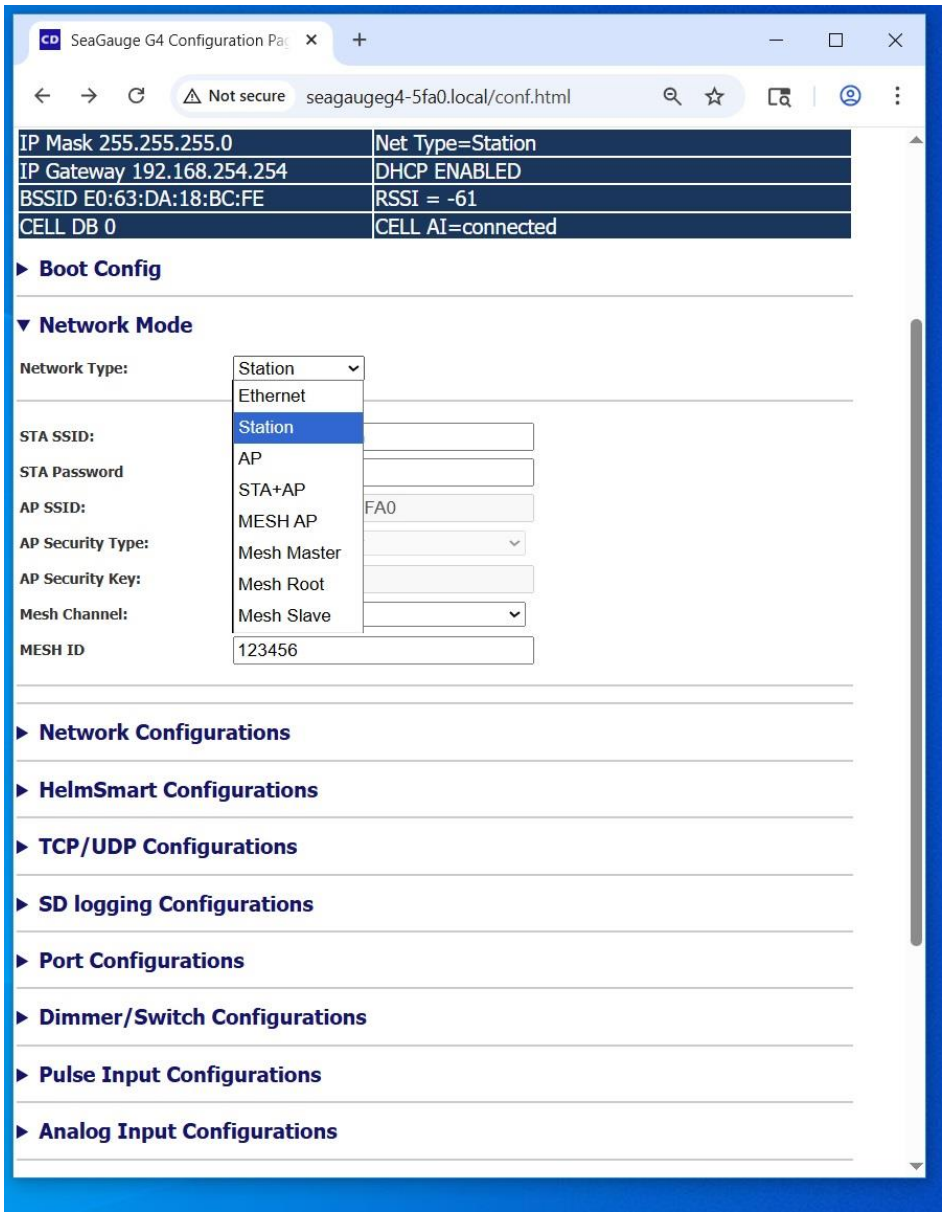
SeaGaugeG4 provides an embedded web client that allows automatic HTTP connections to HelmSmart-Cloud services for upload of live sensor data.

Once posted to the HelmSmart-Cloud service, live and stored data can be retrieved using any standard web browser interface

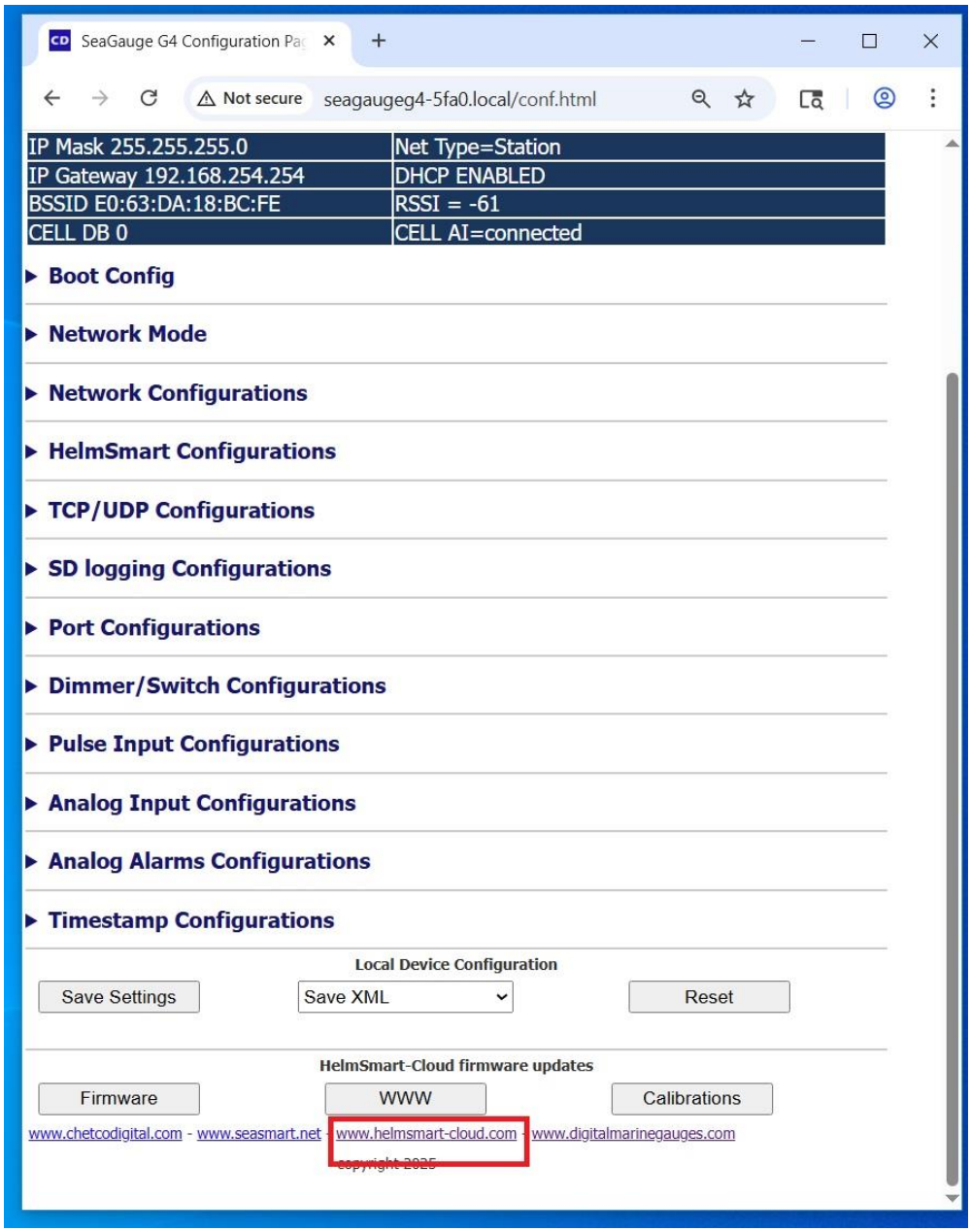


To connect to cloud services, SeaGaugeG4 must be in **Station** or **Ethernet** mode and joined on a local network with internet connection

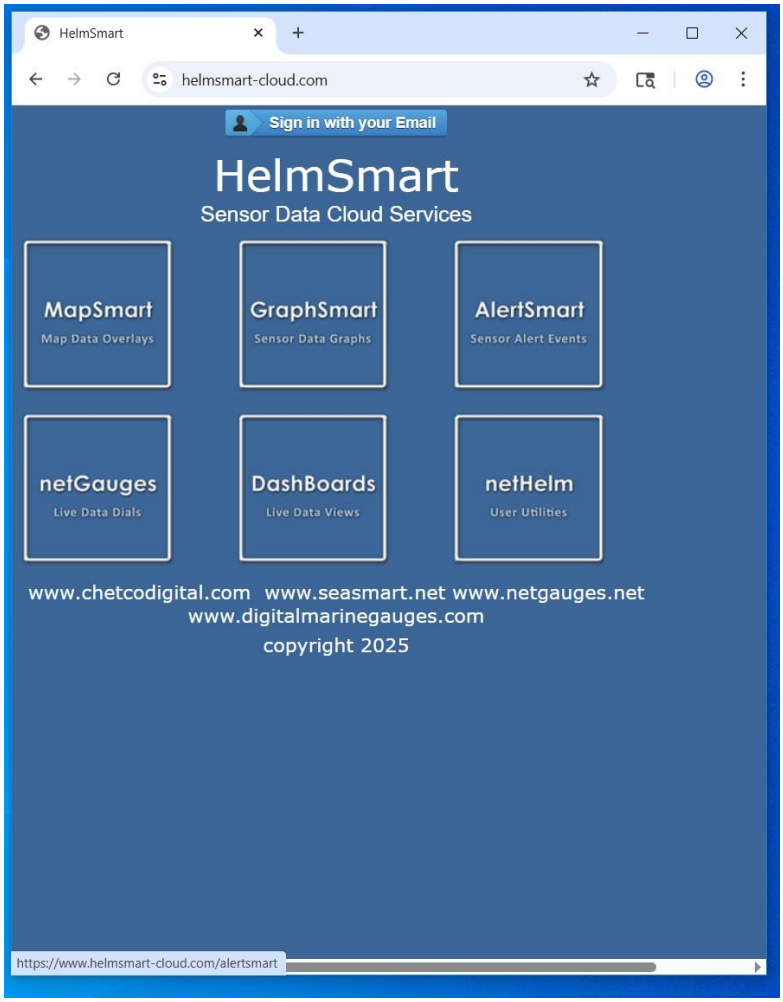
****** See App Note [AN_SS230228_SeaSmartSTAmode.pdf]() for full details on setting up STATION (router based infrastructure) mode *****



Test for an active internet connection using the links at the bottom of the **HOME** or **CONFIGURATION** pages



If the selected web site loads, continue with configuration



The **HelmSmart** section of the **Configuration** page can be expanded by clicking on the left side arrow

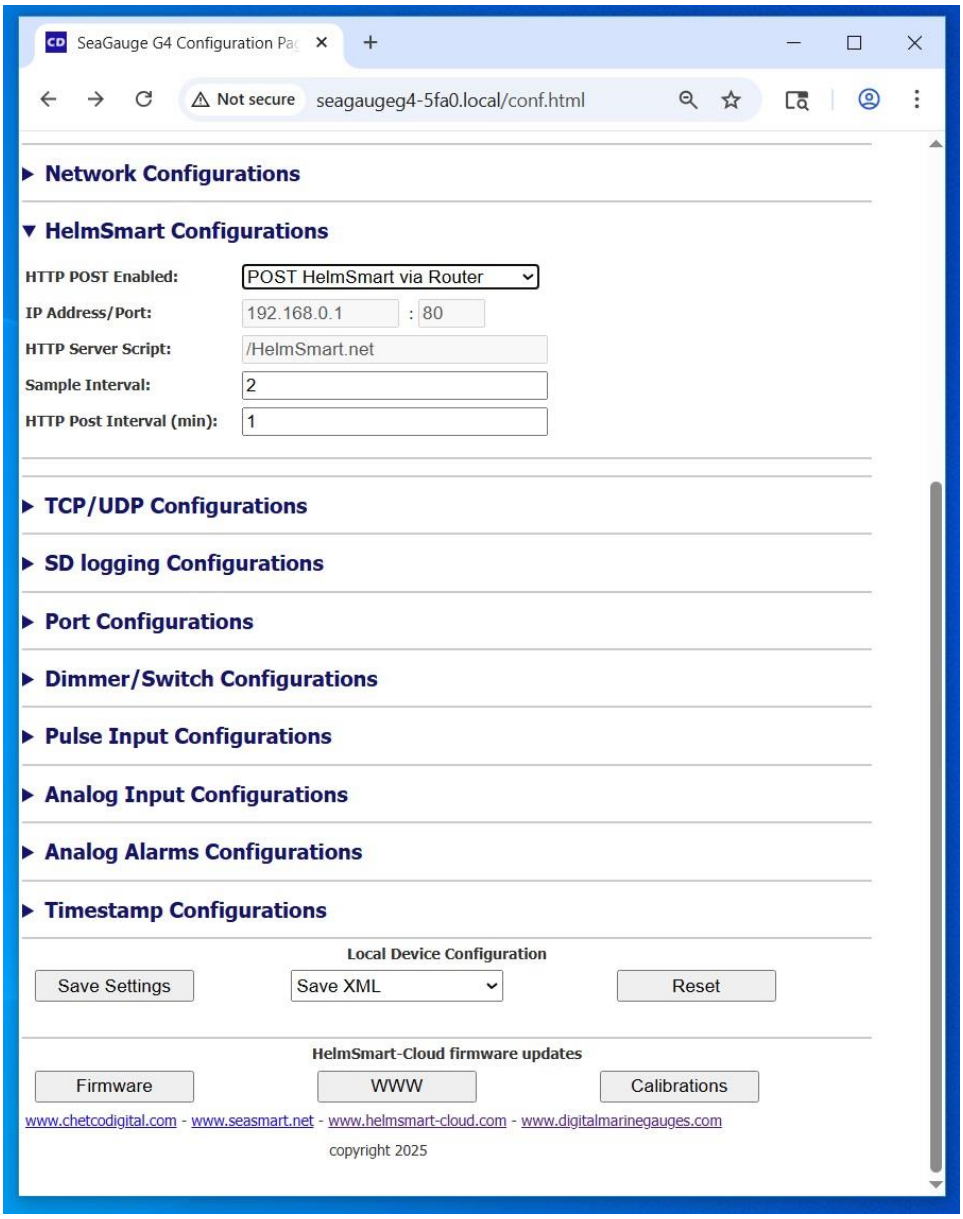
PushSmart Post is enabled by selecting the **Mode** and **HTTP Post** interval.

Only two modes are available for SeaGageG4 –

- **Post via Router** – Sends data at selected interval without recovery
- **Post via Router (SD Cached)** - Sends data and stores in SD cache for retransmission if POST fails due to loss of network connection. Will resend later when network recovers.

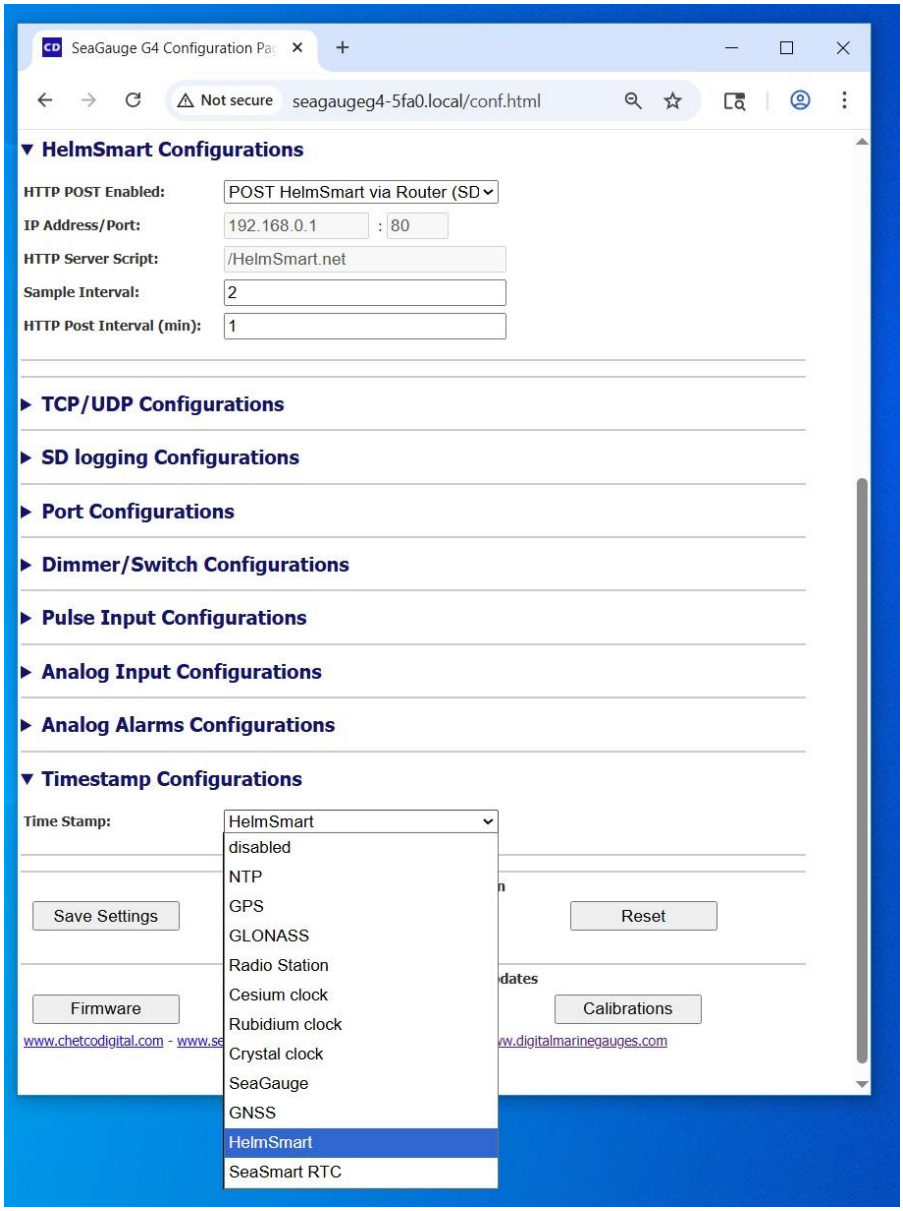
Using SD Cached can take longer to Post each update

Select the desired **POST** mode and **HTTP Post Interval** in minutes

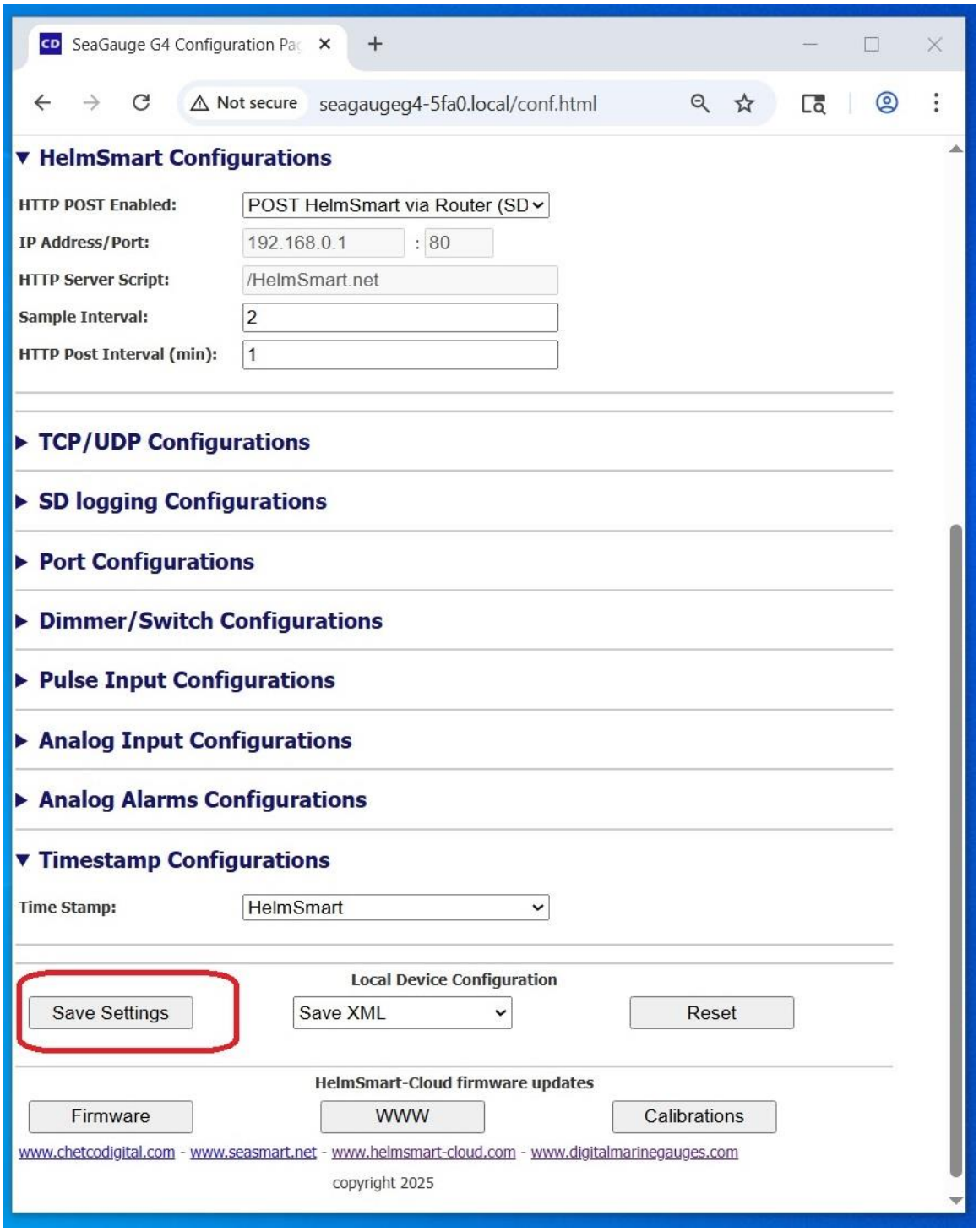


To be sure SeaGaugeG4 has correct internal current time, select either **NTP** or **HelmSmart** as time source

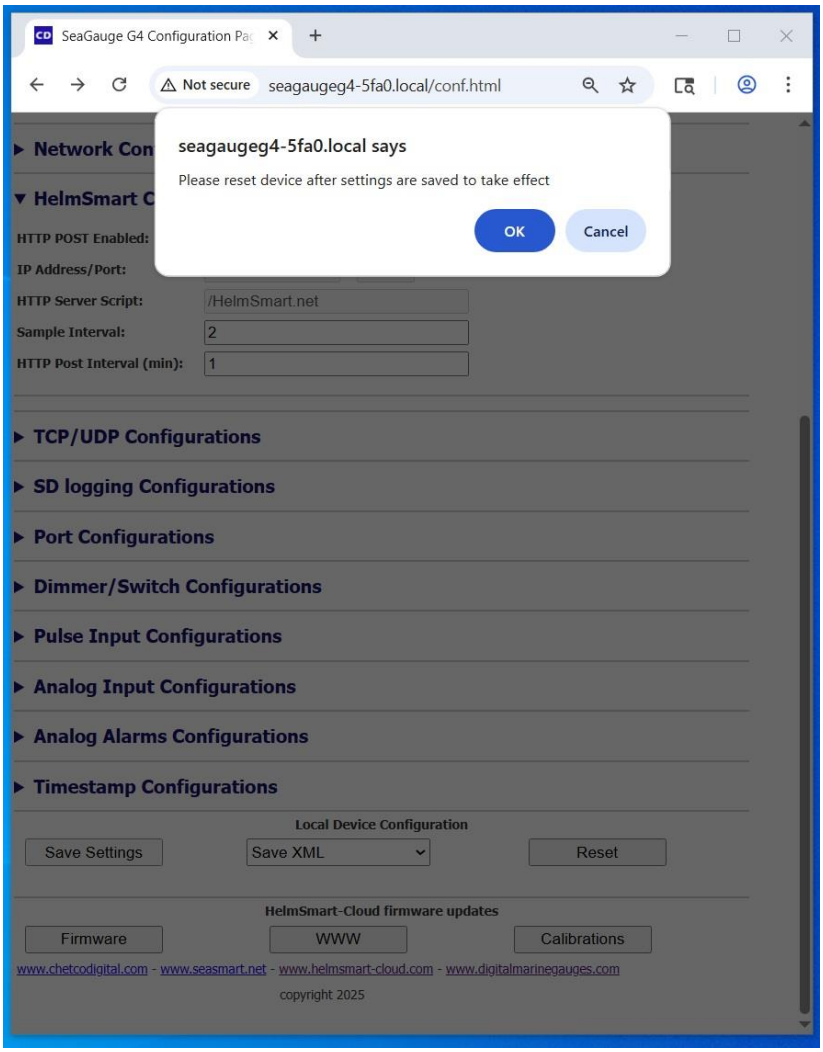
- **NTP** is a local Network Time Service when connected to internet
- **HelmSmart** is a synchronized time update on each HTTP Post



Save Settings to store in NVRAM for next reboot

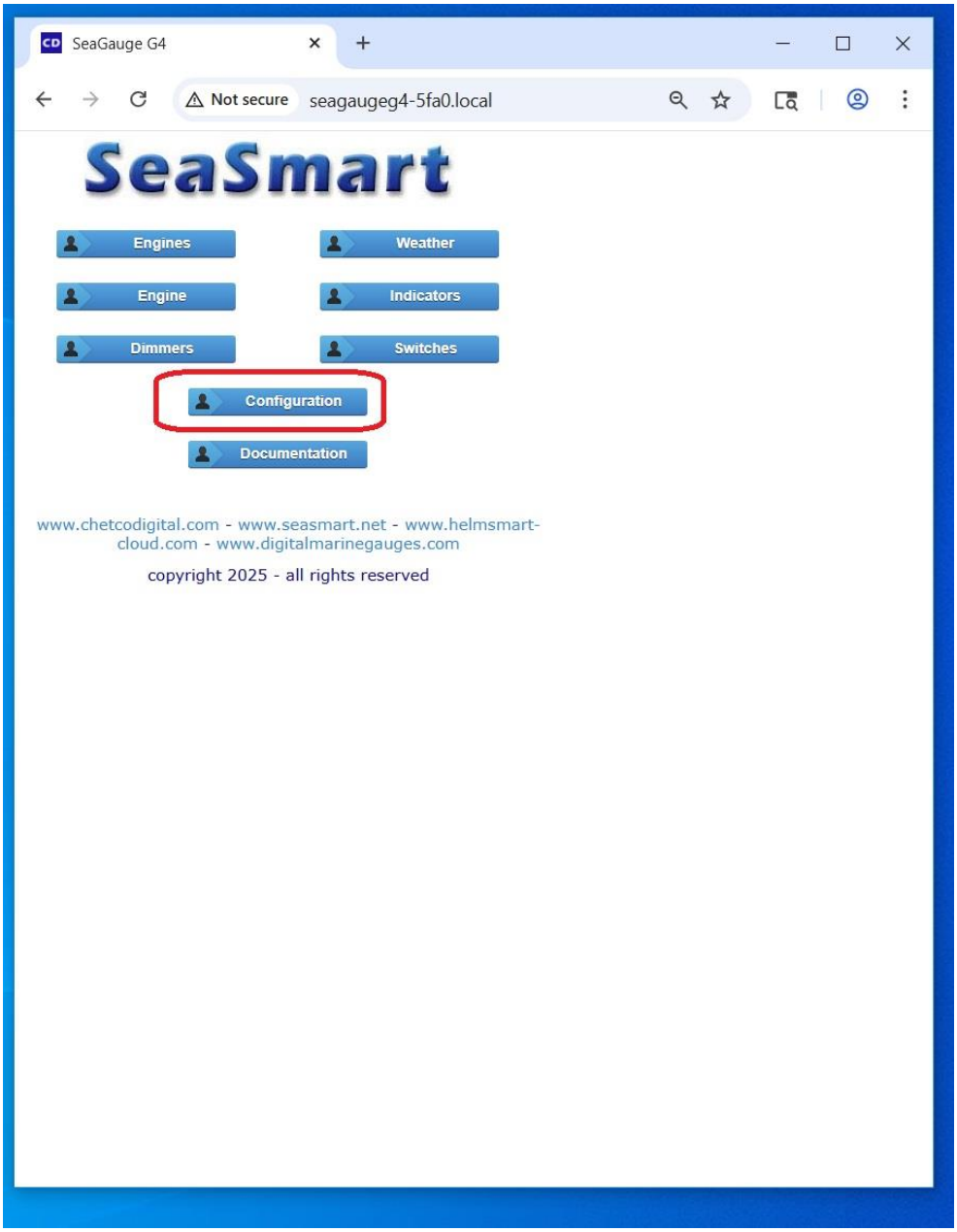


You will be prompted to reboot device after settings are saved

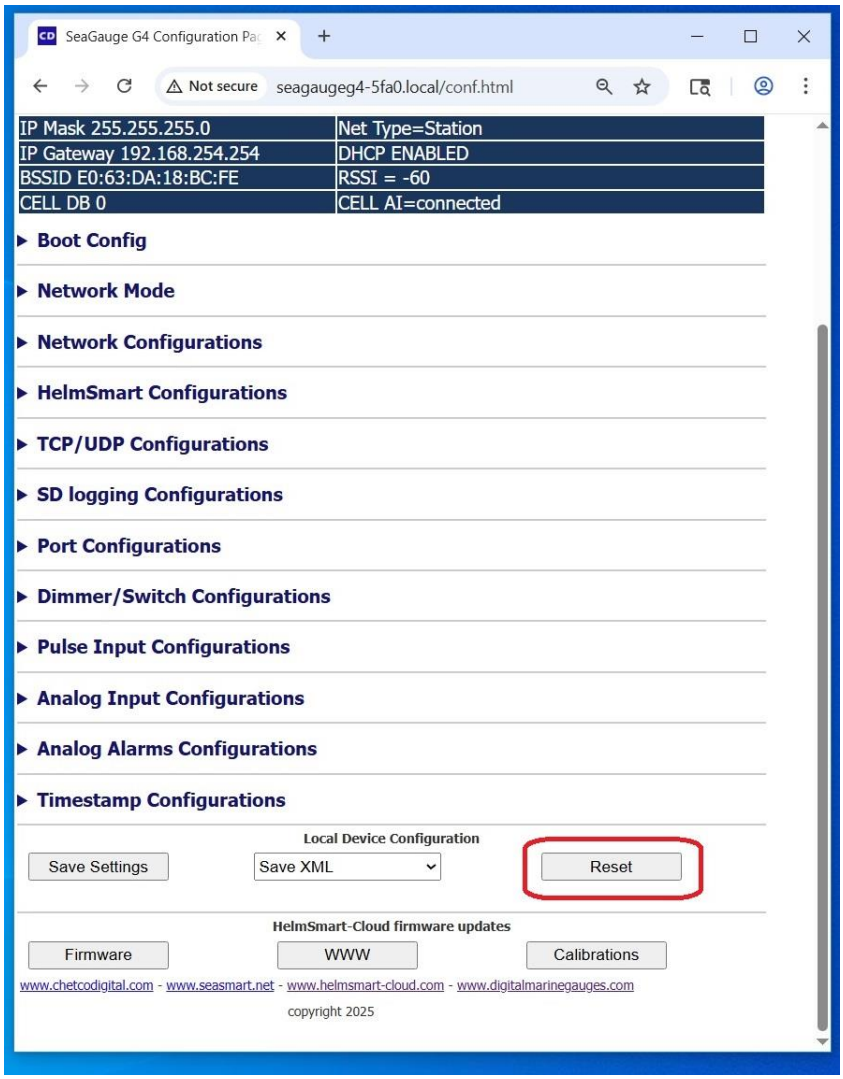


Device will return back to Home page.

Choose the **Configuration** link to return to config page so you can reboot device

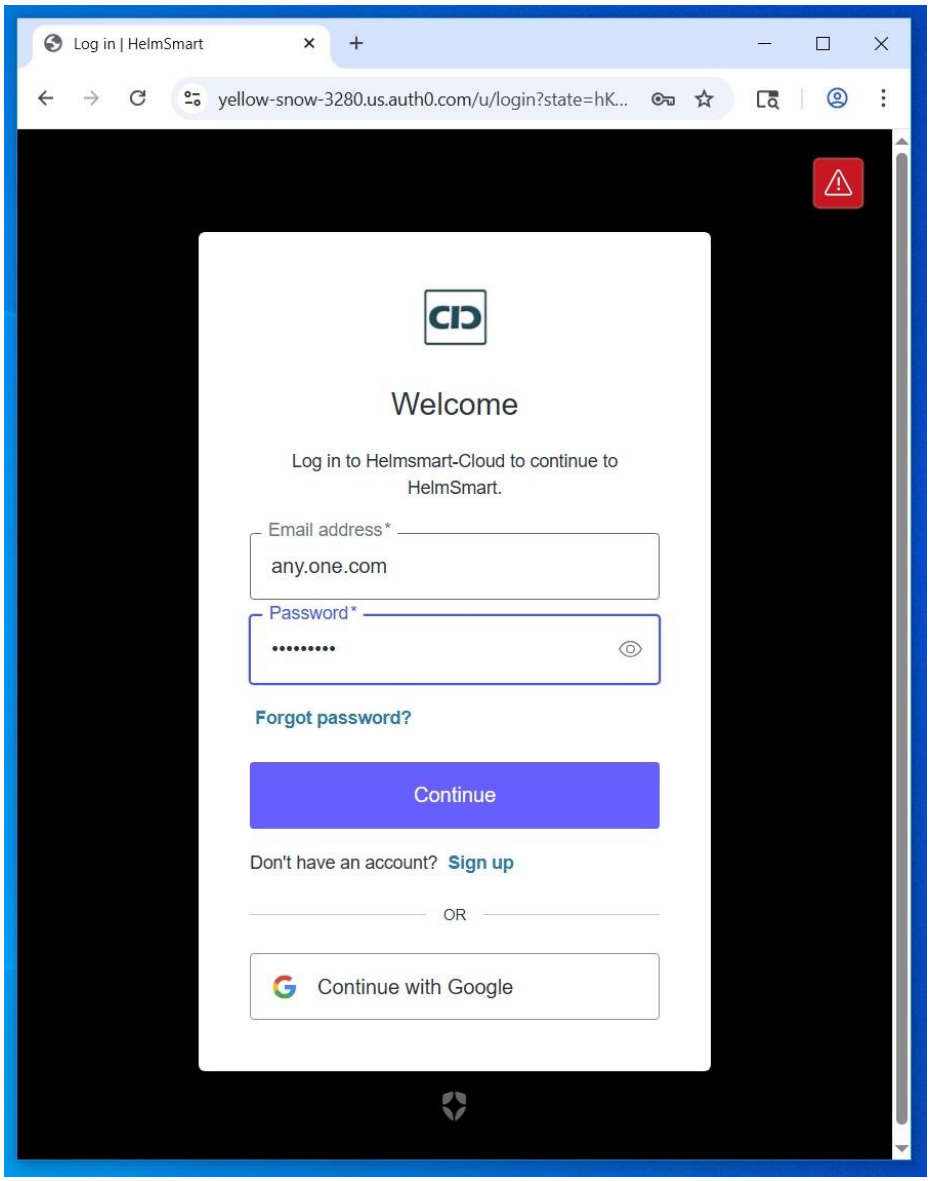


RESET to reboot device and start the HPPT Post.

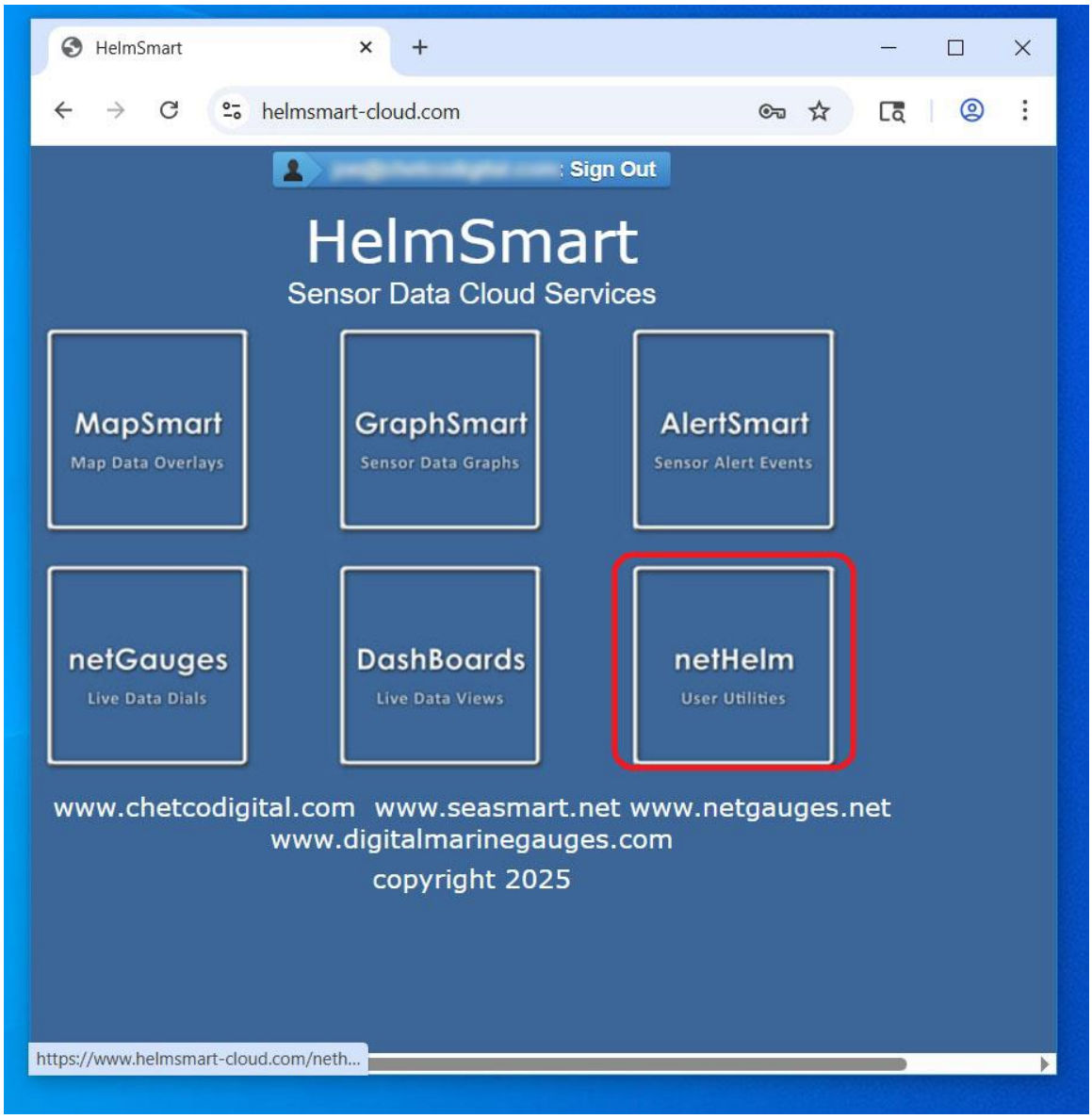


To test the PushSmart POST to the HelmSmart-Cloud service is active, navigate to http://www.helmsmart-cloud.com on any web browser

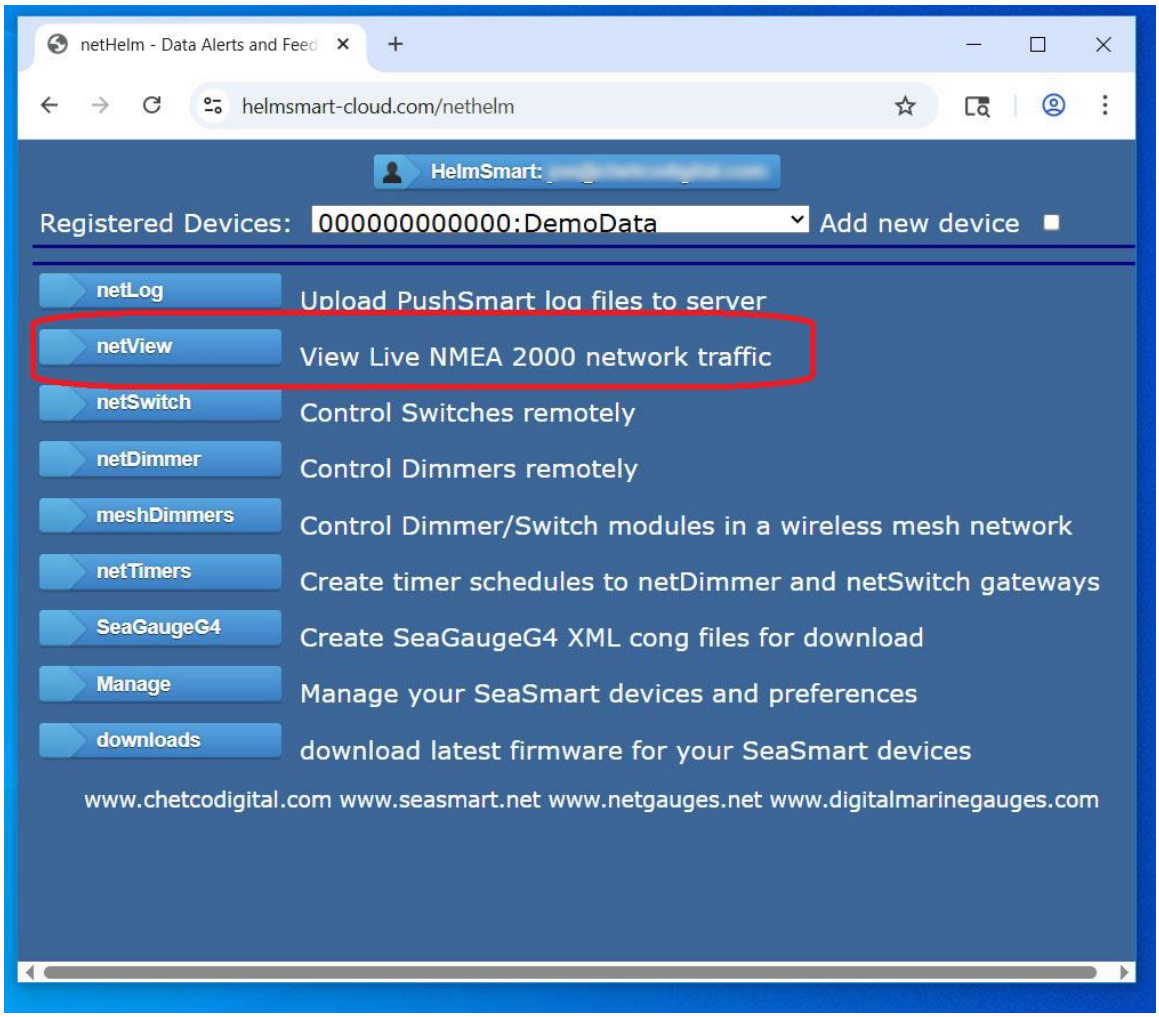
Enter your **HelmSmart** login credentials.



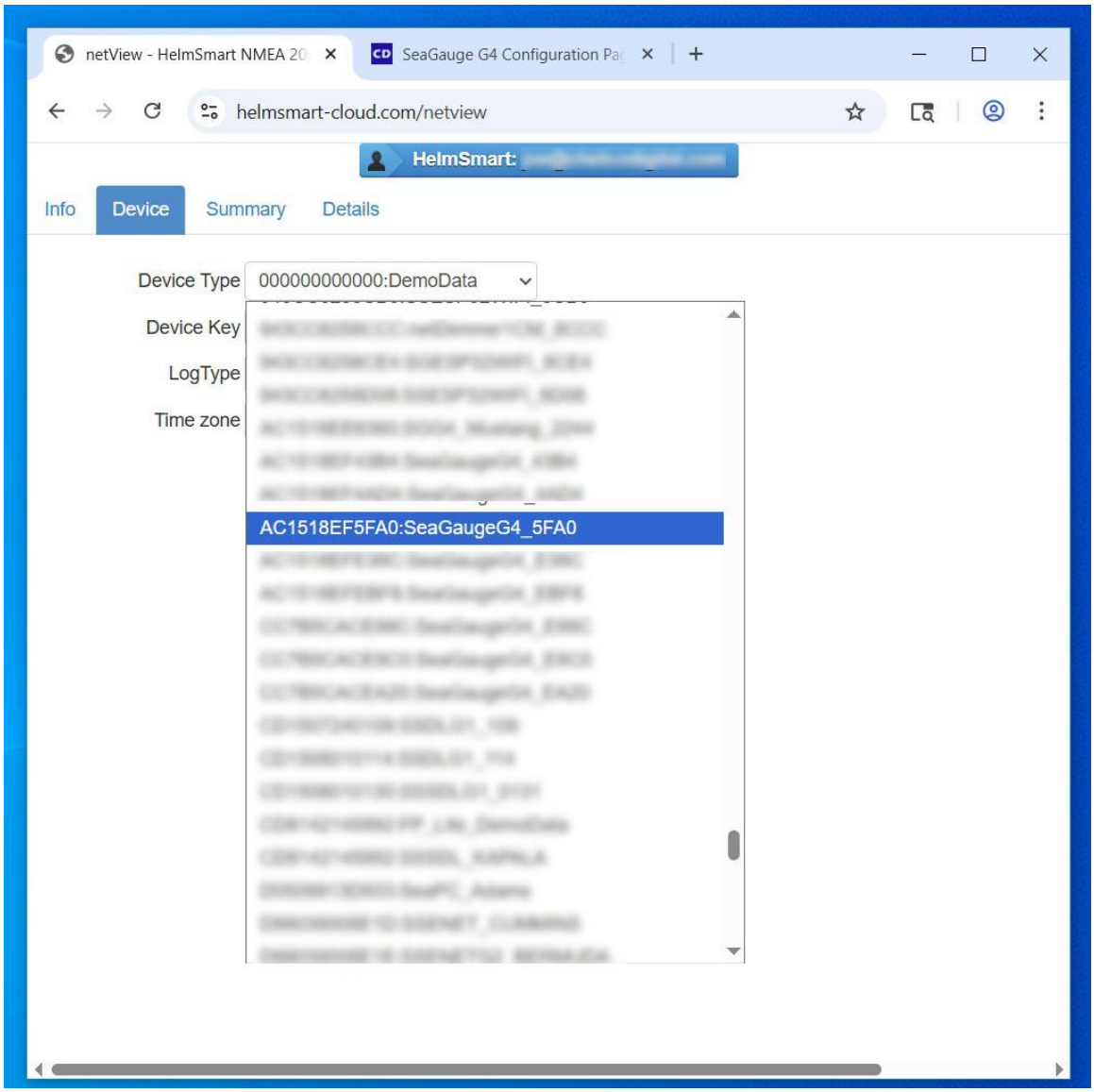
Select the **netHelm** Link



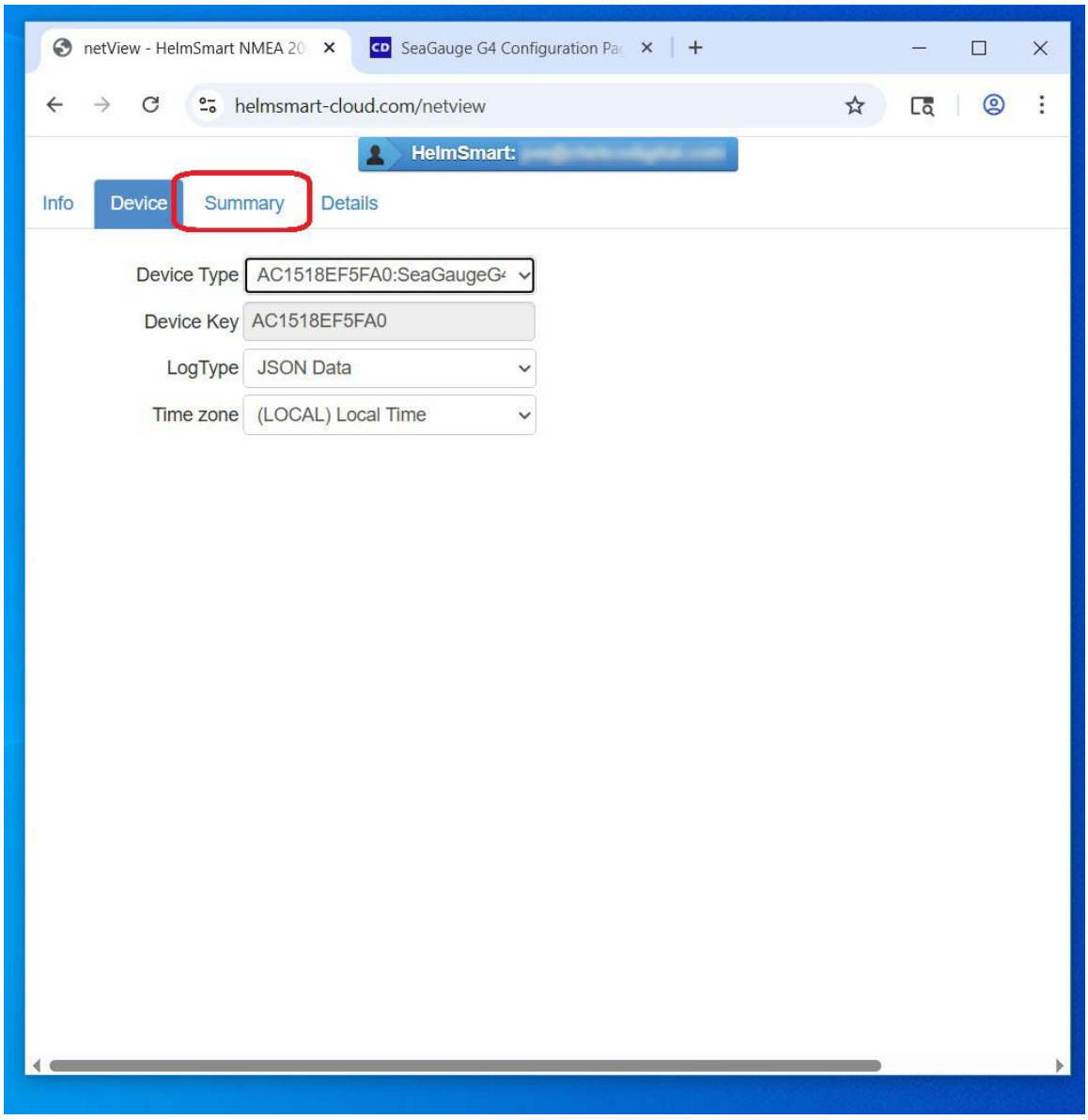
Select the **netView** link to view live updates



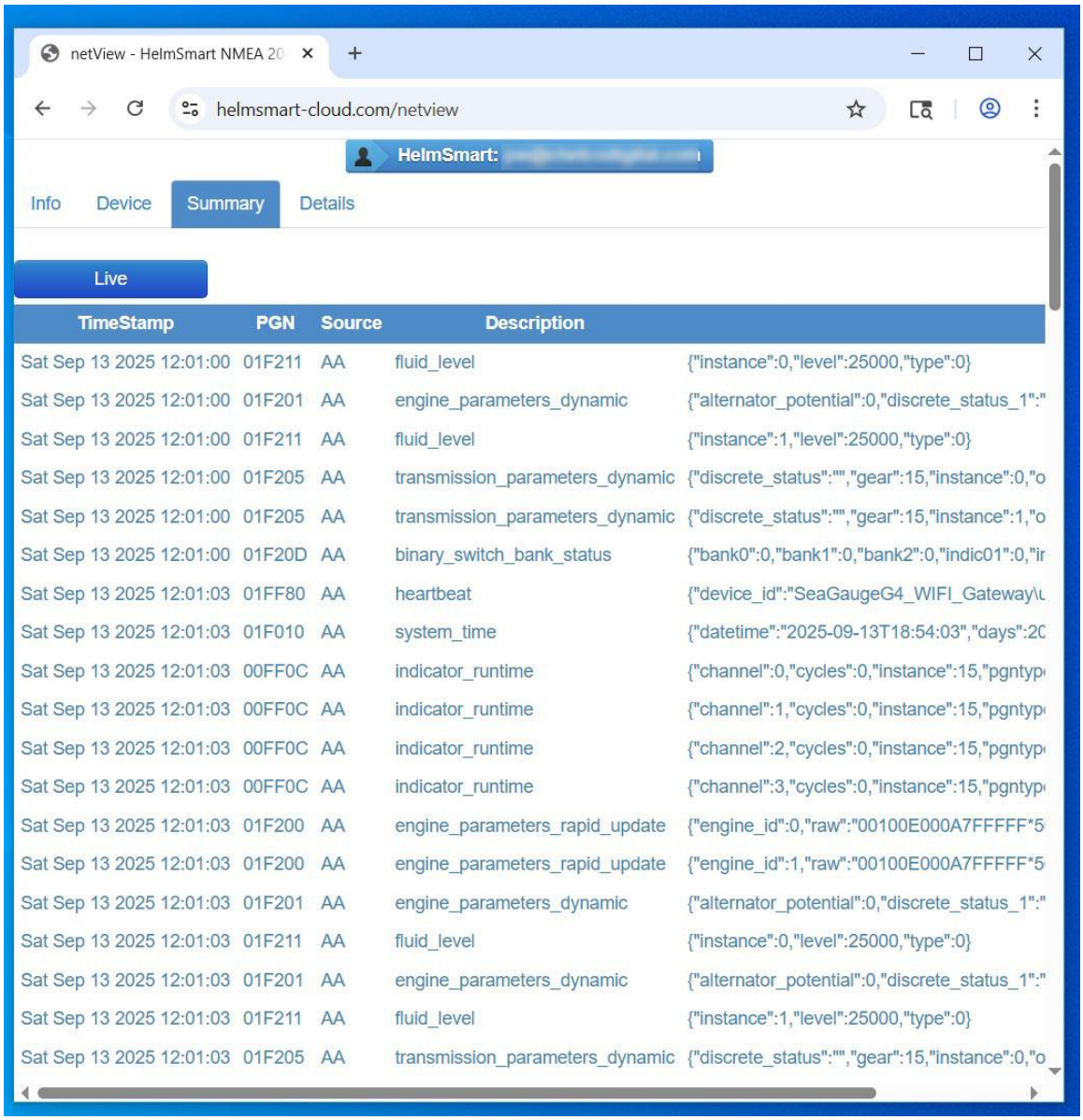
Under **DEVICE** you should see the registered device in the drop down link



Select **SUMMARY** to view current status



If the PushSmart HTTP is working correctly - you will see live data with current time.



TimeStamp	PGN	Source	Description	
Sat Sep 13 2025 12:01:00	01F211	AA	fluid_level	{"instance":0,"level":25000,"type":0}
Sat Sep 13 2025 12:01:00	01F201	AA	engine_parameters_dynamic	{"alternator_potential":0,"discrete_status_1":"
Sat Sep 13 2025 12:01:00	01F211	AA	fluid_level	{"instance":1,"level":25000,"type":0}
Sat Sep 13 2025 12:01:00	01F205	AA	transmission_parameters_dynamic	{"discrete_status":"","gear":15,"instance":0,"o
Sat Sep 13 2025 12:01:00	01F205	AA	transmission_parameters_dynamic	{"discrete_status":"","gear":15,"instance":1,"o
Sat Sep 13 2025 12:01:00	01F20D	AA	binary_switch_bank_status	{"bank0":0,"bank1":0,"bank2":0,"indic01":0,"ir
Sat Sep 13 2025 12:01:03	01FF80	AA	heartbeat	{"device_id":"SeaGaugeG4_WIFI_Gateway\u
Sat Sep 13 2025 12:01:03	01F010	AA	system_time	{"datetime":"2025-09-13T18:54:03","days":2(
Sat Sep 13 2025 12:01:03	00FF0C	AA	indicator_runtime	{"channel":0,"cycles":0,"instance":15,"pgntyp
Sat Sep 13 2025 12:01:03	00FF0C	AA	indicator_runtime	{"channel":1,"cycles":0,"instance":15,"pgntyp
Sat Sep 13 2025 12:01:03	00FF0C	AA	indicator_runtime	{"channel":2,"cycles":0,"instance":15,"pgntyp
Sat Sep 13 2025 12:01:03	00FF0C	AA	indicator_runtime	{"channel":3,"cycles":0,"instance":15,"pgntyp
Sat Sep 13 2025 12:01:03	01F200	AA	engine_parameters_rapid_update	{"engine_id":0,"raw":"00100E000A7FFFFF*5
Sat Sep 13 2025 12:01:03	01F200	AA	engine_parameters_rapid_update	{"engine_id":1,"raw":"00100E000A7FFFFF*5
Sat Sep 13 2025 12:01:03	01F201	AA	engine_parameters_dynamic	{"alternator_potential":0,"discrete_status_1":"
Sat Sep 13 2025 12:01:03	01F211	AA	fluid_level	{"instance":0,"level":25000,"type":0}
Sat Sep 13 2025 12:01:03	01F201	AA	engine_parameters_dynamic	{"alternator_potential":0,"discrete_status_1":"
Sat Sep 13 2025 12:01:03	01F211	AA	fluid_level	{"instance":1,"level":25000,"type":0}
Sat Sep 13 2025 12:01:03	01F205	AA	transmission_parameters_dynamic	{"discrete_status":"","gear":15,"instance":0,"o