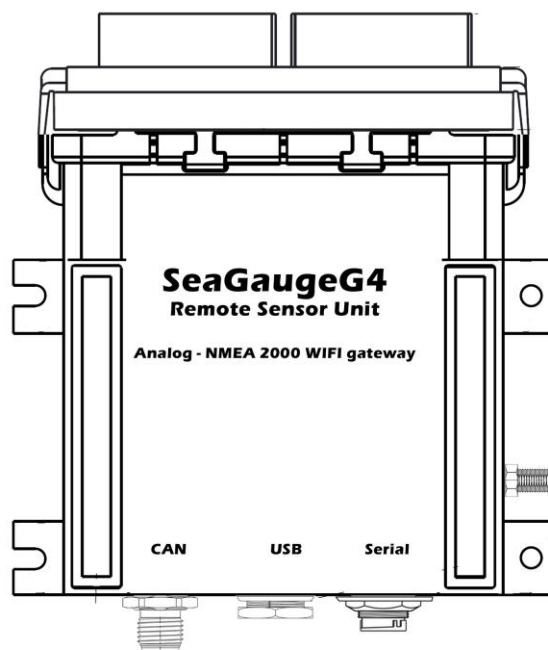


Application Note

ANSGG425091002 – SeaGauge G4 Firmware update via HelmSmart-Cloud.com



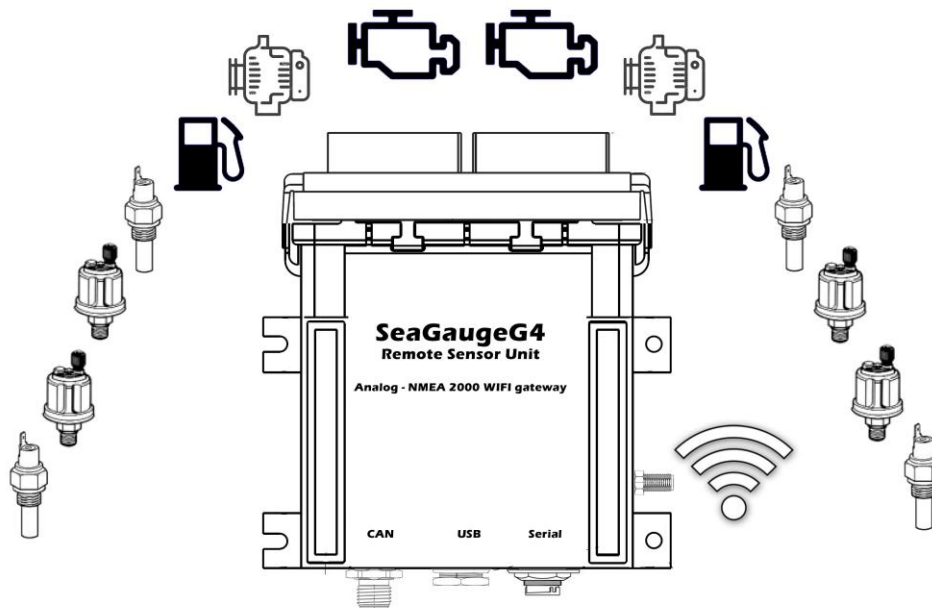
Chetco Digital Instruments, Inc
Revision 091025

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



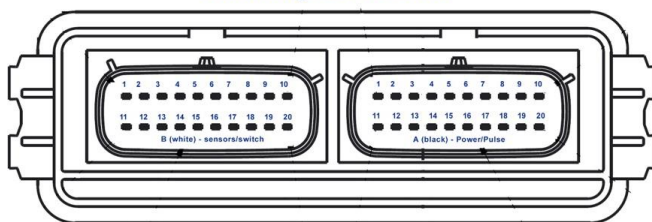
SeaGaugeG4 supports up to 12 analog sensor inputs and 4 indicator inputs via a 20 pin Molex MX150 plug (black) and 3 pulse style inputs via separate 20 pin Molex MX150 plug (white).

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

The 4 indicator inputs (INC00-INC03) are used to provide on/off status for 12VDC circuits. When voltages of 10V to 18VDC are applied, the associated indicator channel will be set. When no voltage is applied, the indicator channel is cleared.

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

SeaGaugeG4 Header



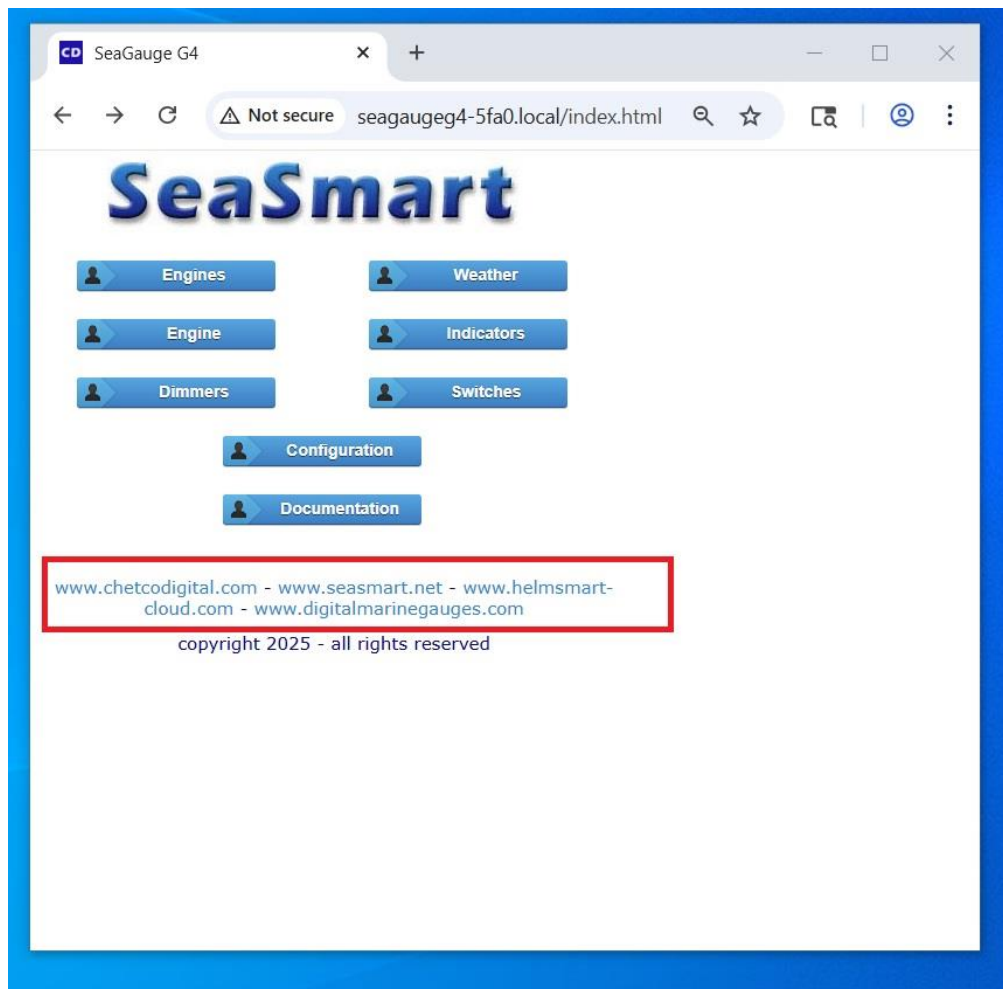
B1 - NC	B11 - NC	A1 - SW5	A11 - SW4
B2 - NC	B12 - NC	A2 - SW7	A12 - SW6
B3 - SEN10 (SBOOST)	B13 - SEN11 (STRAN)	A3 - NC	A13 - NC
B4 - SEN04 (STEMP)	B14 - SEN05 (SOIL)	A4 - P1 (SRPM)	A14 - GND
B5 - SEN06 (SFUEL)	B15 - SEN07 (SBAT)	A5 - P0 (PRPM)	A15 - GND
B6 - SEN00 (PBAT)	B16 - SEN01 (PFUEL)	A6 - P2	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 firmware can be updated using several methods including local SD card and over the internet using the HelmSmart-Cloud.com service.

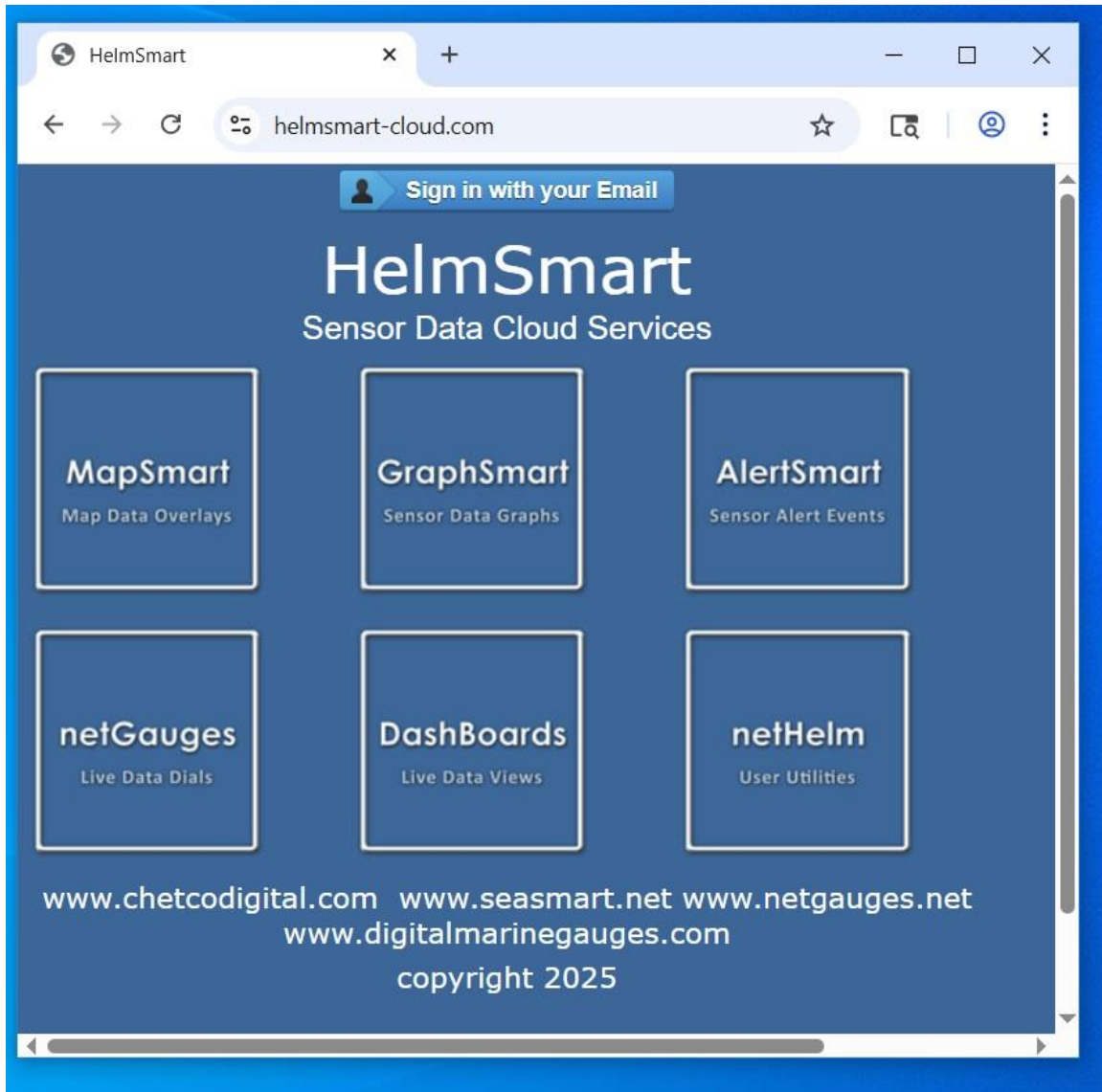
This application note describes how to use an internet connection to update firmware and spiffs files to the latest version.

SeaGaugeG4 must be joined on a local network with internet connectivity (station or ethernet mode). Remote updates are not possible in AP mode.

This can be verified by using one of the links at the bottom of the device Home page



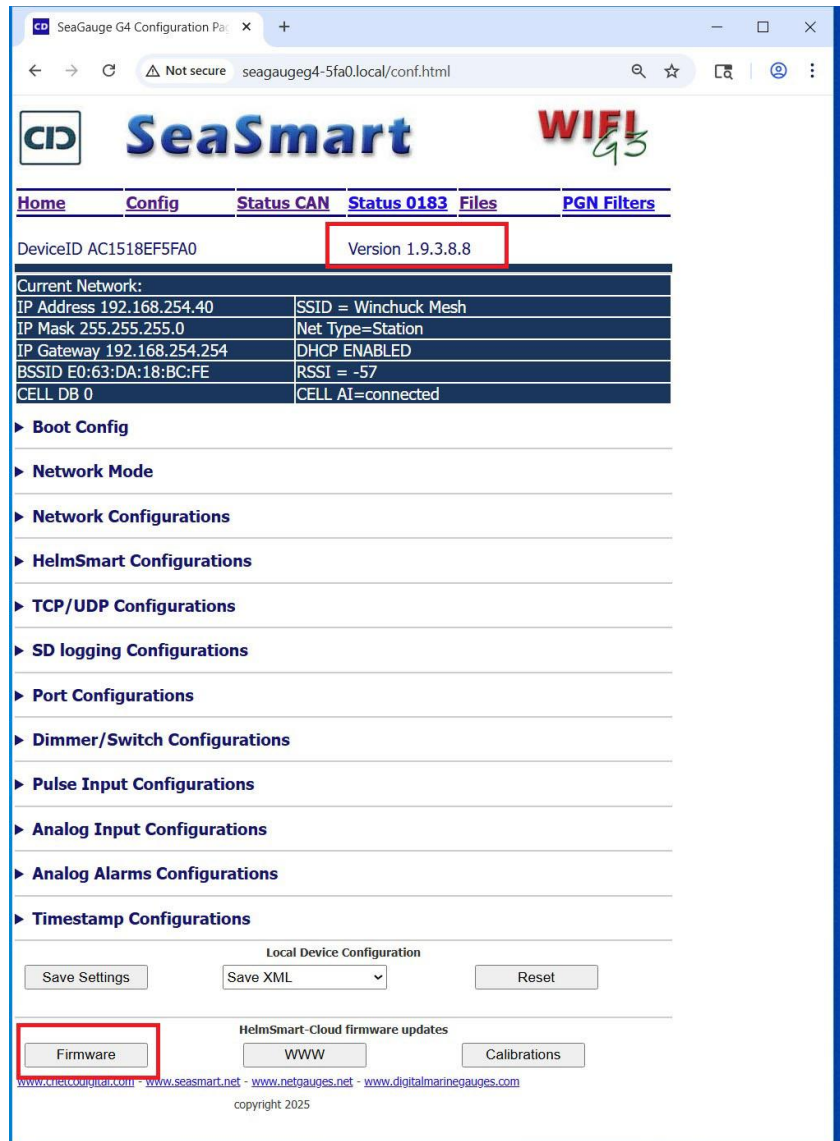
If selecting a link from the SeaGaugeG4 Configuration page brings up the target web site – then you have a good active internet connection to perform the remote update.



The bottom of the configuration page will have three remote update buttons.

- Firmware – updates the device firmware
- WWW – updates the device embedded web server files
- Calibrations – updates the stored analog sensor calibration files

The update procedure is the same for all three options.

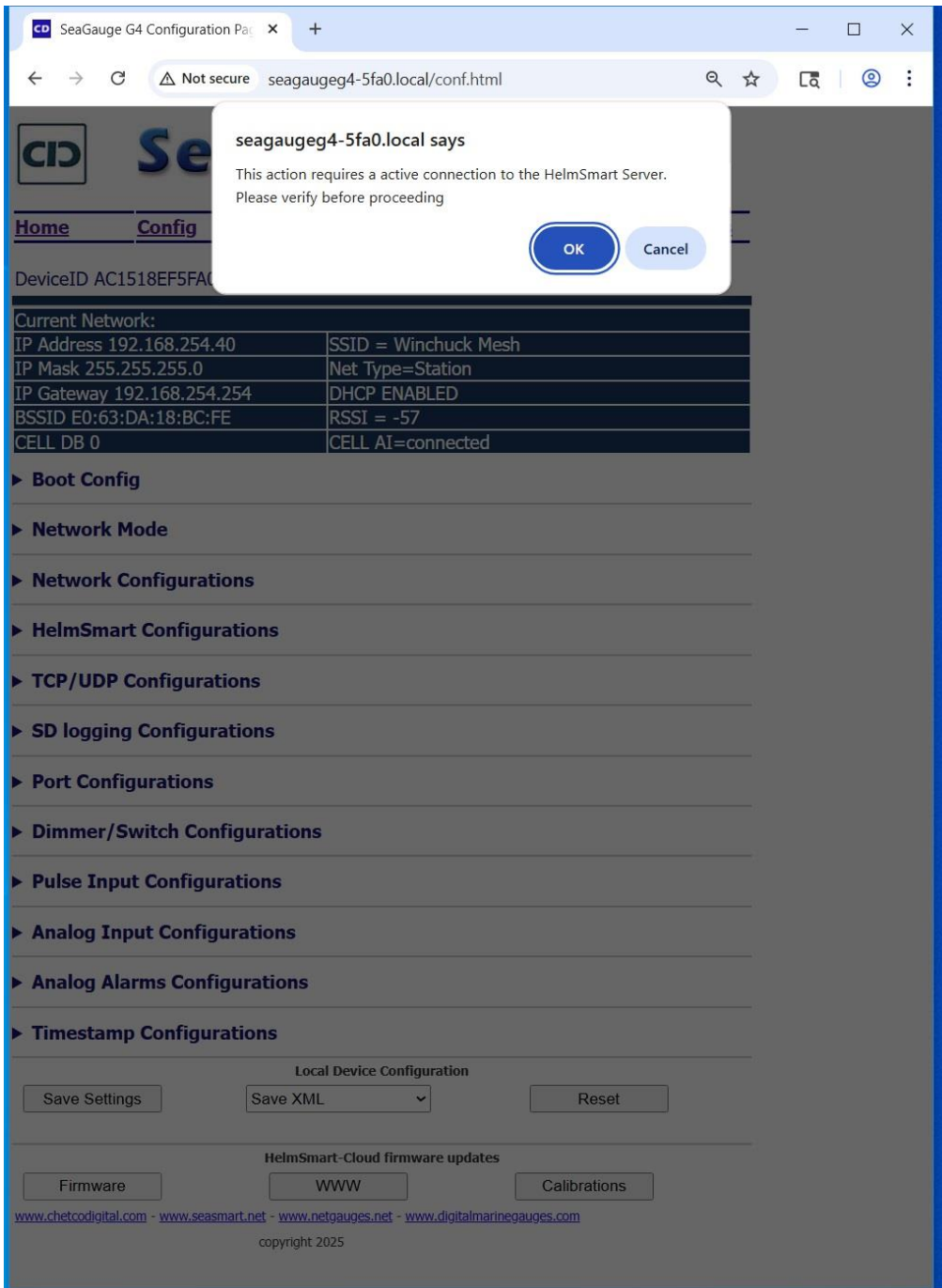


The screenshot shows the SeaSmart configuration page for a SeaGauge G4. The browser address bar shows "seagaugeg4-5fa0.local/conf.html". The page header includes the SeaSmart logo and "WIFI 93". The navigation menu has "Home", "Config", "Status CAN", "Status 0183", "Files", and "PGN Filters". The "Status 0183" tab is active, showing "DeviceID AC1518EF5FA0" and "Version 1.9.3.8.8". Below this is a table for "Current Network:" with fields for IP Address, IP Mask, IP Gateway, BSSID, CELL DB, SSID, Net Type, DHCP, RSSI, and CELL AI. A list of configuration sections follows, including Boot Config, Network Mode, Network Configurations, HelmSmart Configurations, TCP/UDP Configurations, SD logging Configurations, Port Configurations, Dimmer/Switch Configurations, Pulse Input Configurations, Analog Input Configurations, Analog Alarms Configurations, and Timestamp Configurations. At the bottom, there are buttons for "Save Settings", "Save XML", and "Reset" under "Local Device Configuration". Under "HelmSmart-Cloud firmware updates", there are three buttons: "Firmware", "WWW", and "Calibrations". The "Firmware" button is highlighted with a red box. The footer contains the website URL and copyright information.

Make note of the current firmware version before updating.

The screenshot shows a web browser window with the URL `seaugueg4-5fa0.local/conf.html`. The page header includes the CID logo, the text "SeaSmart", and a handwritten "WIFI G3" in green. A navigation menu contains links for Home, Config, Status CAN, Status 0183, Files, and PGN Filters. The "Status 0183" link is highlighted in blue. Below the menu, the "DeviceID AC1518EF5FA0" is displayed, and the "Version 1.9.3.8.8" is highlighted with a red rectangular box. A table titled "Current Network:" lists various network parameters. Below the table is a list of expandable configuration sections. At the bottom, there are buttons for "Local Device Configuration" (Save Settings, Save XML, Reset) and "HelmSmart-Cloud firmware updates" (Firmware, WWW, Calibrations). The "Firmware" button is highlighted with a red rectangular box. Footer text includes website URLs and a copyright notice for 2025.

When the update starts – you will be reminded to have an active internet connection



The update will download the latest firmware from the HelmSmart-Cloud.com server.
This may take 60 – 120 seconds



The screenshot shows a web browser window with the URL `seagauge4-5fa0.local/conf.html`. The page header includes the SeaSmart logo and a handwritten "WIFI G5" note. A navigation menu contains links for Home, Config, Status CAN, Status 0183, Files, and PGN Filters. The main content area displays the following information:

- DeviceID: AC1518EF5FA0
- Version: 1.9.3.9.8

Below this is a table for "Current Network:"

IP Address	192.168.254.40	SSID = Winchuck Mesh
IP Mask	255.255.255.0	Net Type=Station
IP Gateway	192.168.254.254	DHCP ENABLED
BSSID	E0:63:DA:18:BC:FE	RSSI = -57
CELL DB	0	CELL AT=connected

A list of configuration categories is shown with expandable arrows:

- ▶ Boot Config
- ▶ Network Mode
- ▶ Network Configurations
- ▶ HelmSmart Configurations
- ▶ TCP/UDP Configurations
- ▶ SD logging Configurations
- ▶ Port Configurations
- ▶ Dimmer/Switch Configurations
- ▶ Pulse Input Configurations
- ▶ Analog Input Configurations
- ▶ Analog Alarms Configurations
- ▶ Timestamp Configurations

A semi-transparent grey box is overlaid on the "HelmSmart Configurations" section, containing the text:

Downloading firmware file from server...
please reset device when complete

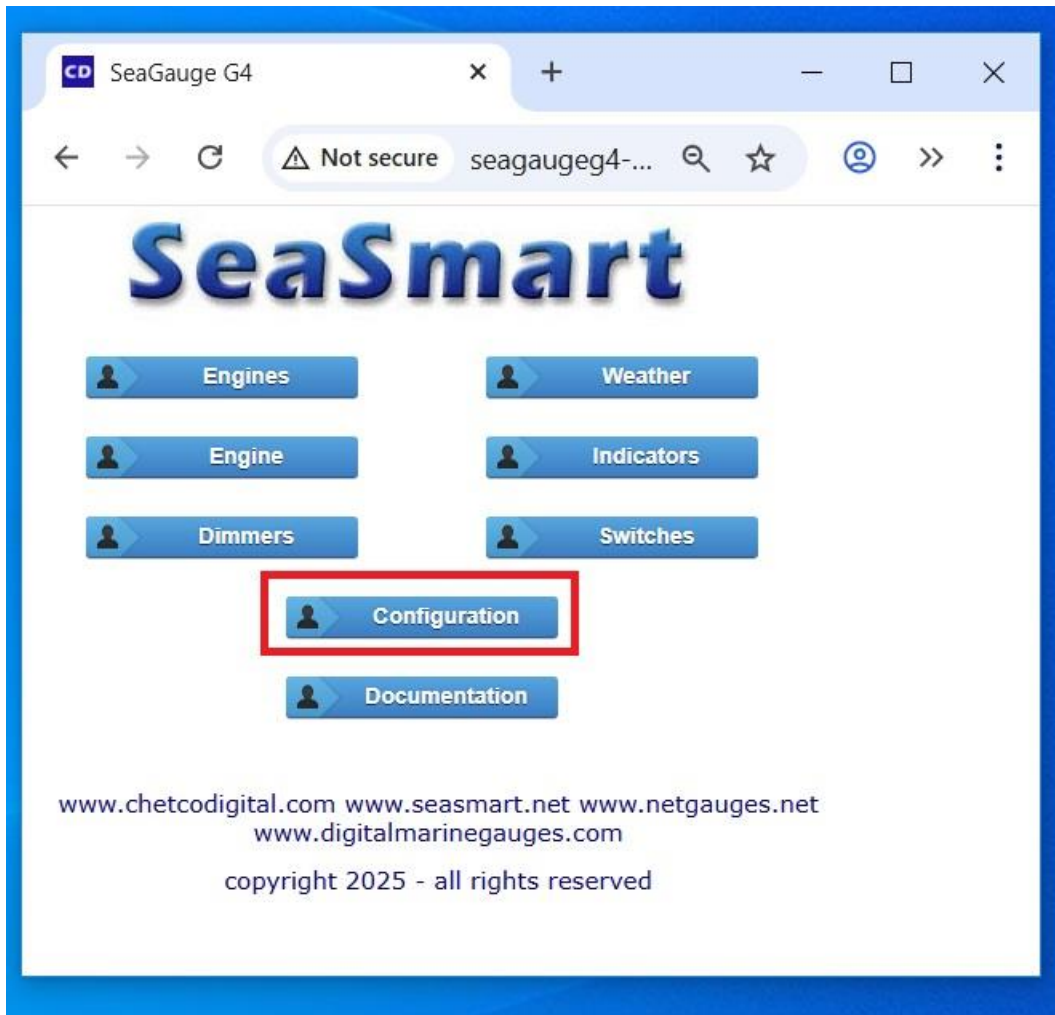
At the bottom, there are two sections of controls:

- Local Device Configuration:** Includes buttons for "Save Settings", "Save XML" (with a dropdown arrow), and "Reset".
- HelmSmart-Cloud firmware updates:** Includes buttons for "Firmware", "WWW", and "Calibrations".

Footer text includes: `www.chetcodigital.com - www.seasmart.net - www.netgauges.net - www.digitalmarinegauges.com` and "copyright 2025".

Once the download is complete – the device will return to the home page.

You must now reset the device to complete the update.



After rebooting device – verify the version update.

The screenshot shows a web browser window displaying the SeaSmart configuration interface. The browser address bar shows 'seaugueg4-5fa0.local/conf.html'. The page header includes the CID logo, 'SeaSmart' text, and a 'WIFI G3' logo. A navigation menu contains 'Home', 'Config', 'Status CAN', 'Status 0183', 'Files', and 'PGN Filters'. The 'Status 0183' menu item is selected, and the 'Version 1.9.3.9.8' is highlighted with a red rectangular box. Below this, the 'Current Network' section is expanded, showing a table of network settings:

IP Address	192.168.254.40	SSID =	Winchuck Mesh
IP Mask	255.255.255.0	Net Type=	Station
IP Gateway	192.168.254.254	DHCP	ENABLED
BSSID	E0:63:DA:18:BC:FE	RSSI =	-63
CELL DB	0	CELL AI=	connected

Below the network table is a list of expandable configuration sections: Boot Config, Network Mode, Network Configurations, HelmSmart Configurations, TCP/UDP Configurations, SD logging Configurations, Port Configurations, Dimmer/Switch Configurations, Pulse Input Configurations, Analog Input Configurations, Analog Alarms Configurations, and Timestamp Configurations. At the bottom, there are sections for 'Local Device Configuration' with 'Save Settings', 'Save XML', and 'Reset' buttons, and 'HelmSmart-Cloud firmware updates' with 'Firmware', 'WWW', and 'Calibrations' buttons. The footer contains website URLs and a copyright notice for 2025.

The procedure will be the same for updating both SPIFF files (WWW & Calibrations)

