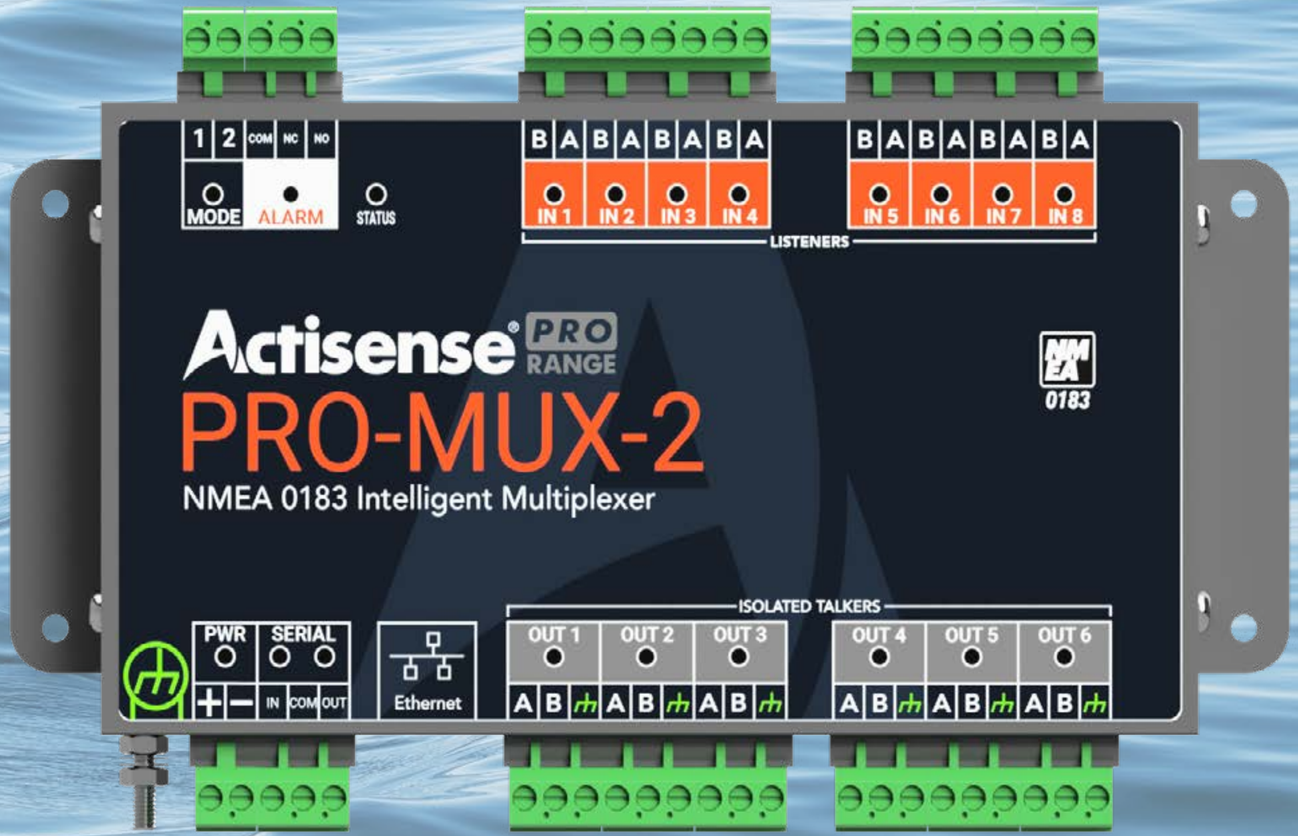
PRO-MUX-2 CONFIGURATION GUIDE



Actisense®
Connect without limits

PRO-MUX-2 CONFIGURATION GUIDE

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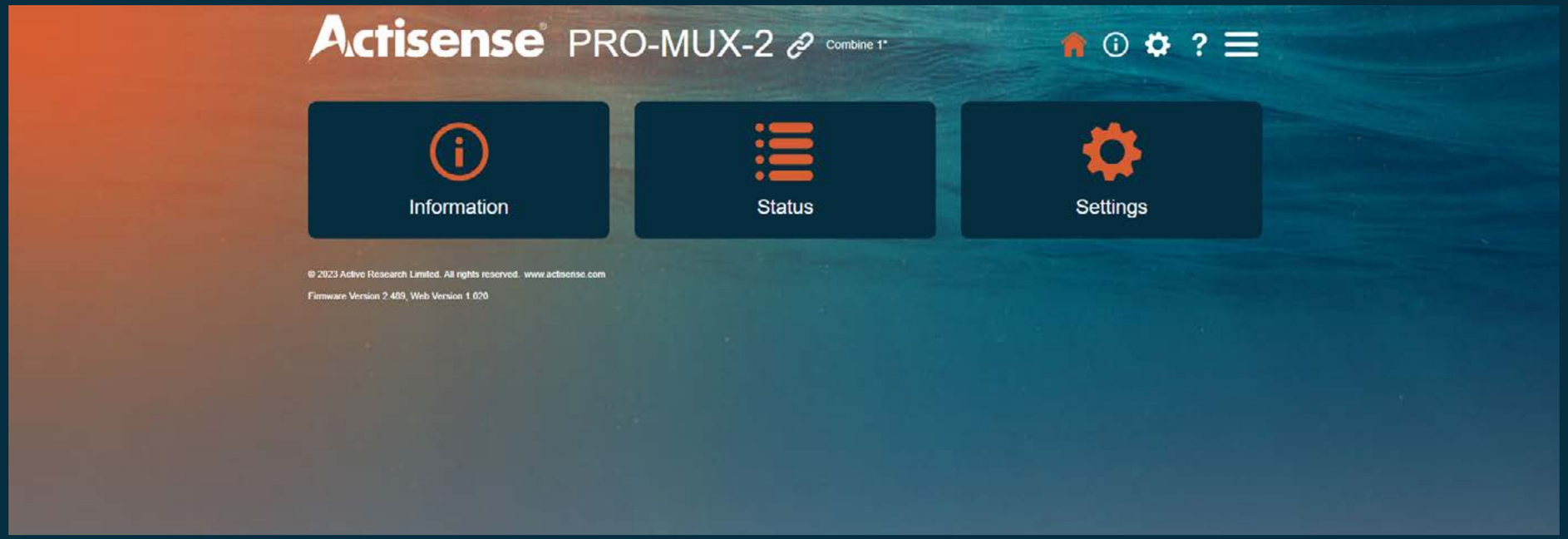
HOME PAGE & INTRO

Guide to configuring PRO-MUX-2

The Actisense PRO-MUX-2 is a very powerful multiplexer / router, capable of filtering, advanced filtering, directing sentences to specific connected listeners, and auto bauding. With this guide, the user will be able to better understand the power and capability of the PRO-MUX-2 within an NMEA 0183 network.

Connecting to the device

Full details on connecting to the web interface on the product are found within the PRO-MUX-2 User Manual, which is downloadable from our website. For the example used here, the device is connected to a DHCP network router via an Ethernet cable.
To connect to the device, enter 'http://promux-xxxxxx' into any web browser (xxxxxx is replaced by the serial number, e.g. promux-123456). Once the device has been connected to, the following web page will appear:



Please note: if this is the first time using the device, or the web cache has been cleared, then the username and password and required. UN = Admin, PW = Admin.

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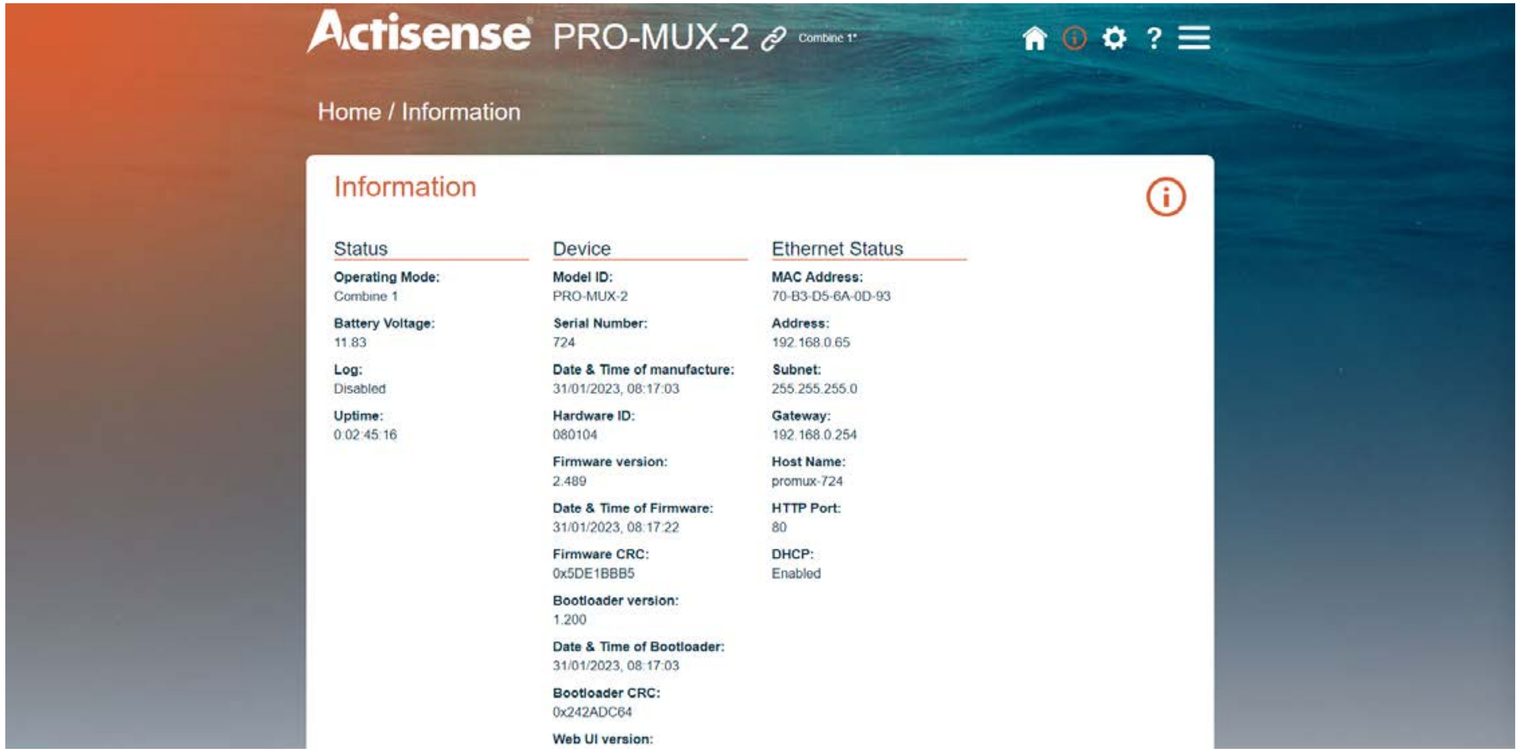
INFO PAGE



The Information page is a quick overview of the product info.

Status

- Details the current operating mode of the PRO-MUX
- Current battery / power supply voltage levels connected to the device
- Log (future feature)
- Uptime displays how long the device has been running for

Device

- Model ID indicates what the product is
- Serial Number of device
- The rest of the info on here is designed for tech support and engineers to use

Ethernet Status

- MAC Address assigned to the device (fixed)
- IP Address assigned to the device (fixed or dynamic depending on setup)
- Subnet and Gateway are detailed, but only important if a static IP is being used
- DHCP highlights whether the connection has been made using DHCP enabled

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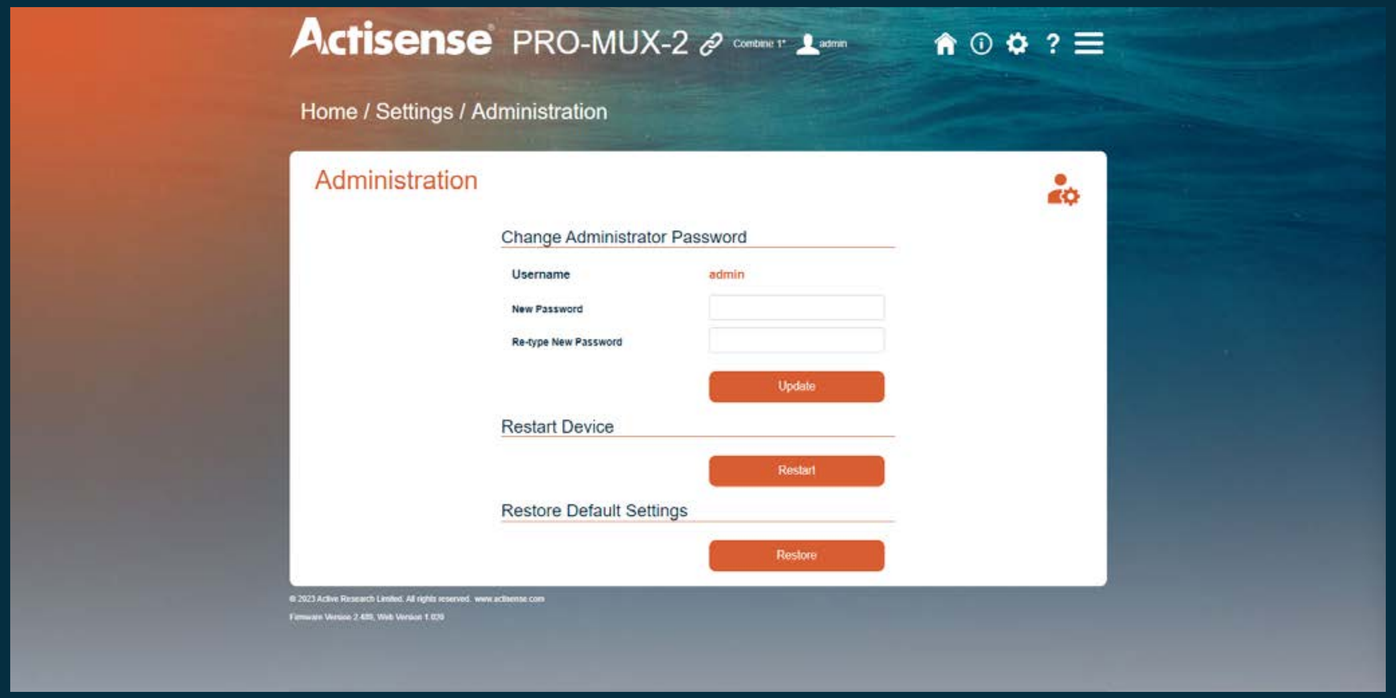
ADMIN SETTINGS

Password

The default user name and password for the device to log in is ‘admin’, but this can be changed to a user defined password. This is very useful for installers who can install the device with a unique password, knowing that nobody else can then log in and change it.

There’s also the options to restart the device from the web page, and to restore the device to default settings. Whilst these won’t be used often (if at all), the option to restore to default is nice if the device is misconfigured.



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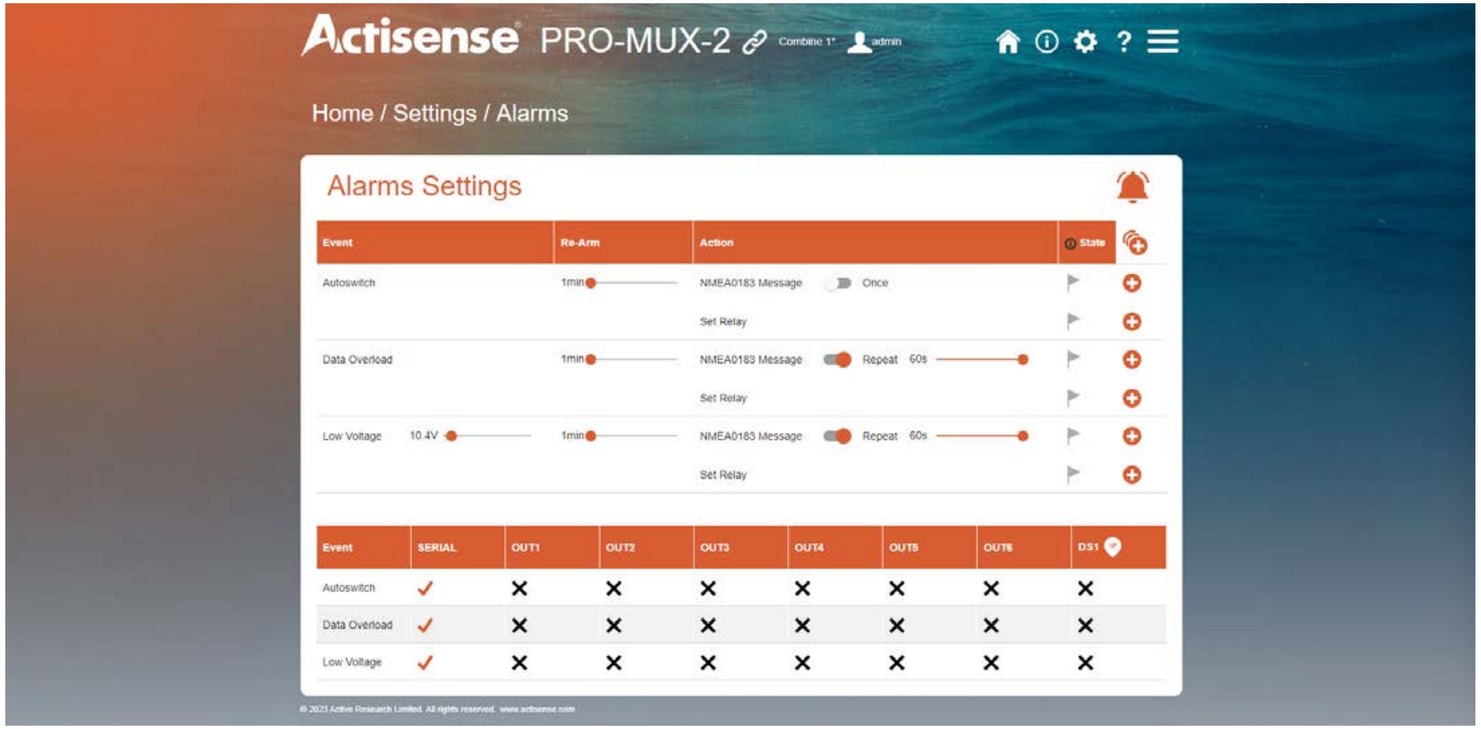
ALARM SETTINGS



The alarms are a powerful feature of the PRO-MUX-2. It allows the user to identify various states and have a message sent by the PRO-MUX-2 to identify what Alarm has trigged. (Message must be enabled by ticking 'Action: Send Message' option for each alarm):

• Autoswitch: PRO-MUX-2 will Autoswitch (if enabled) between one or more inputs, and will output the following message if Autoswitch is performed:
$MXALR,hhmmss,004,PRO-MUX-2|206221|Autoswitch

• Data Overload: PRO-MUX-2 will determine if too much data is being sent at one time to a port, and will output the following message if enabled:
$MXALR,hhmmss,002,PRO-MUX-2|206221|Combine: Data overload

• Low Voltage: PRO-MUX-2 will notify if the voltage level is too low for the device, and will output the following message:
$MXALR,hhmmss,003,PRO-MUX-2|206221|Voltage Alert: PWR <Measured Voltage>

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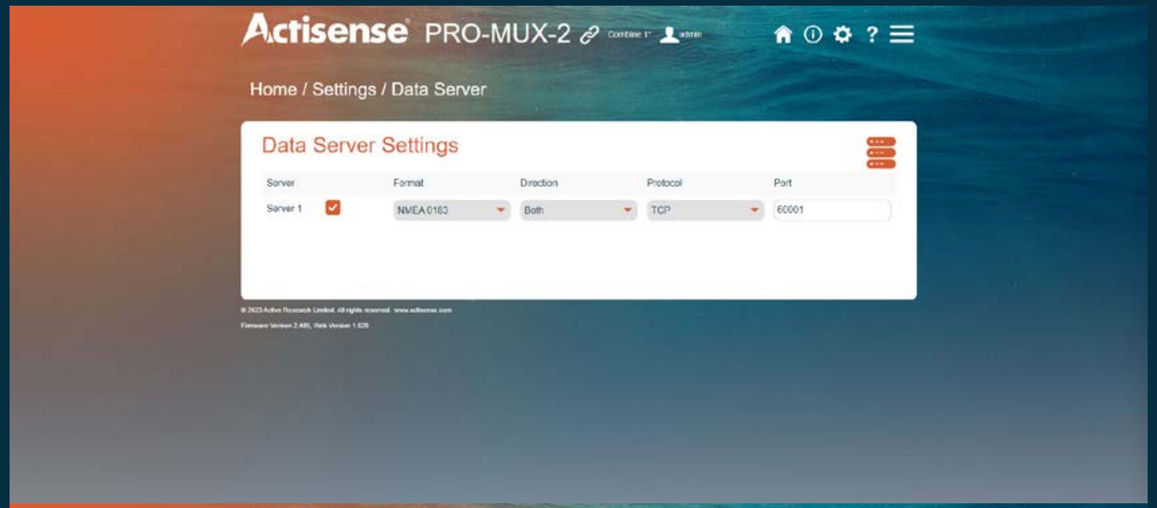
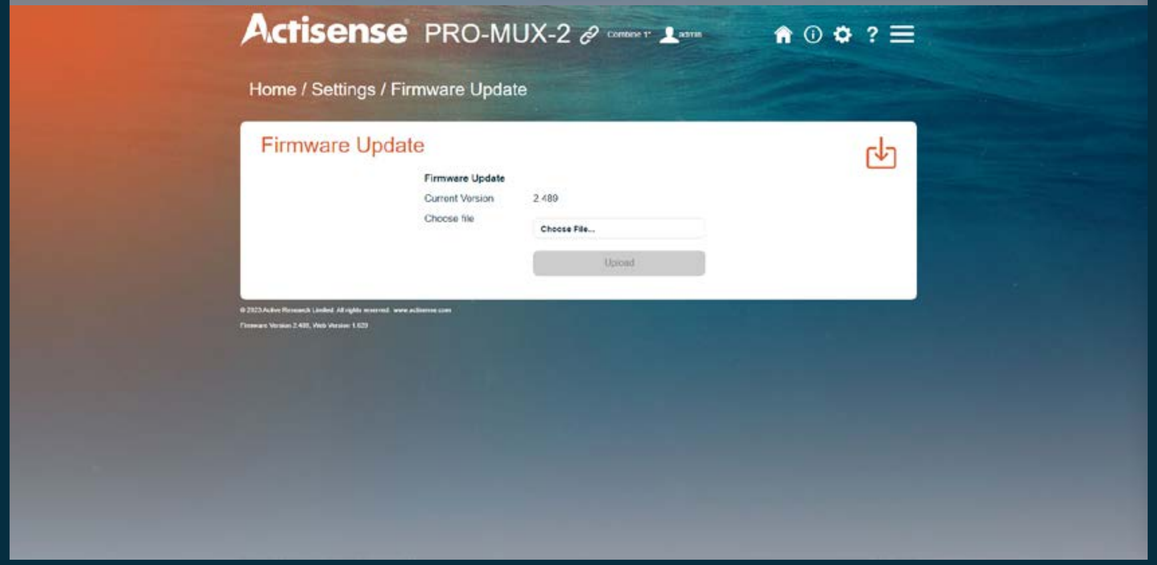
DATA SERVER SETTINGS & FIRMWARE UPDATES



The data server settings are for defining the Ethernet port streaming.

By enabling the data server, the device can send and recieve NMEA 0183 data via Ethernet connection. This allows for extremely high speed streaming of data.



Firmware updates can be done by uploading the .zip file which can be downloaded from the Actisense website whenever it is available.

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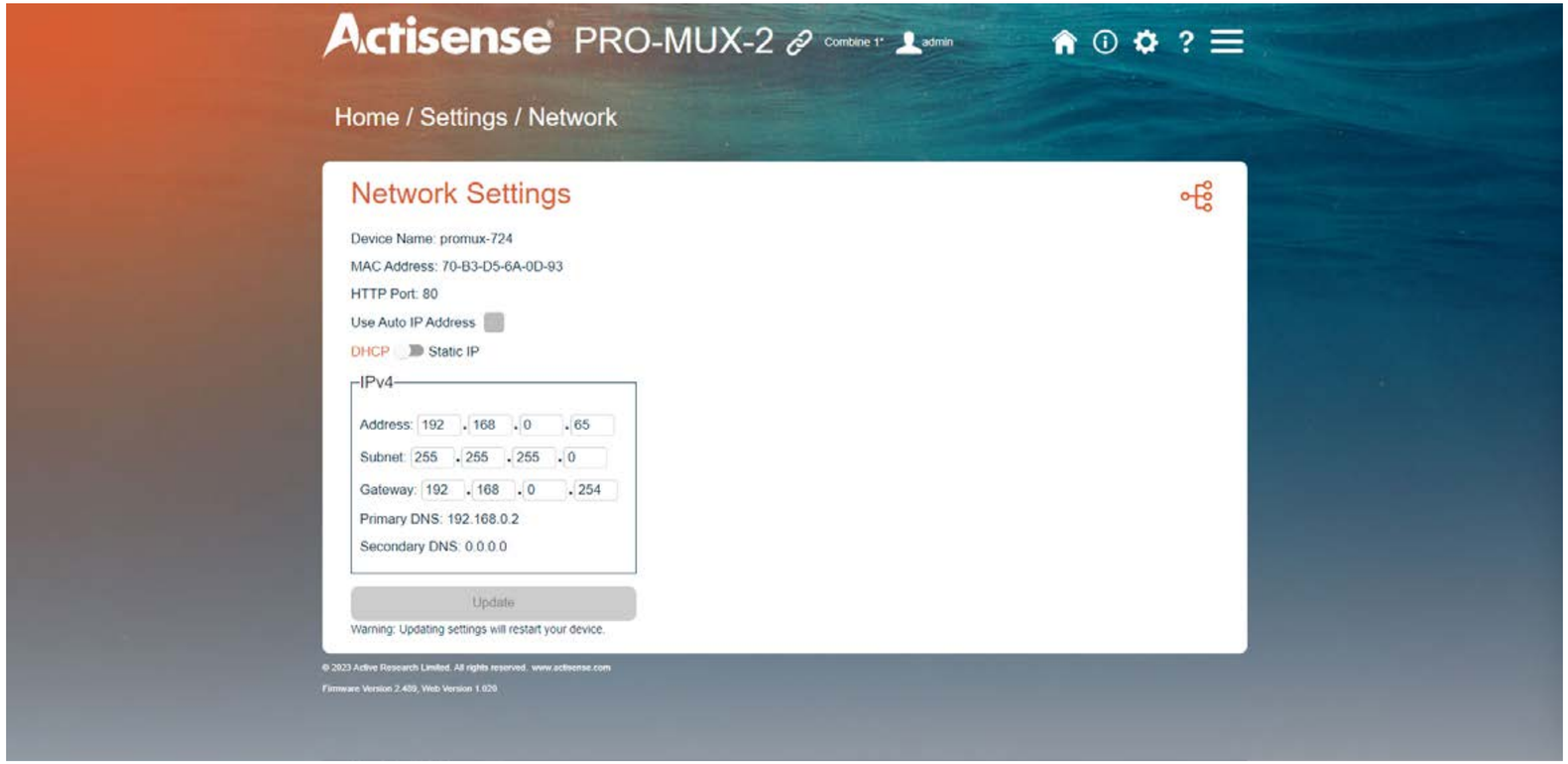
NETWORK SETTINGS

The network settings are used to set-up or change between auto IP with DHCP, or assigning a fixed, static IP address. Most installations use DHCP and the PRO-MUX is assigned an IP Addresses from the router which every other device connected to the network can see.

However, on busy networks or networks where security + device configuration is important, static IP addresses can be set-up through your router and given to the device, meaning this is always going to be the claimed address anytime the PRO-MUX is connected.



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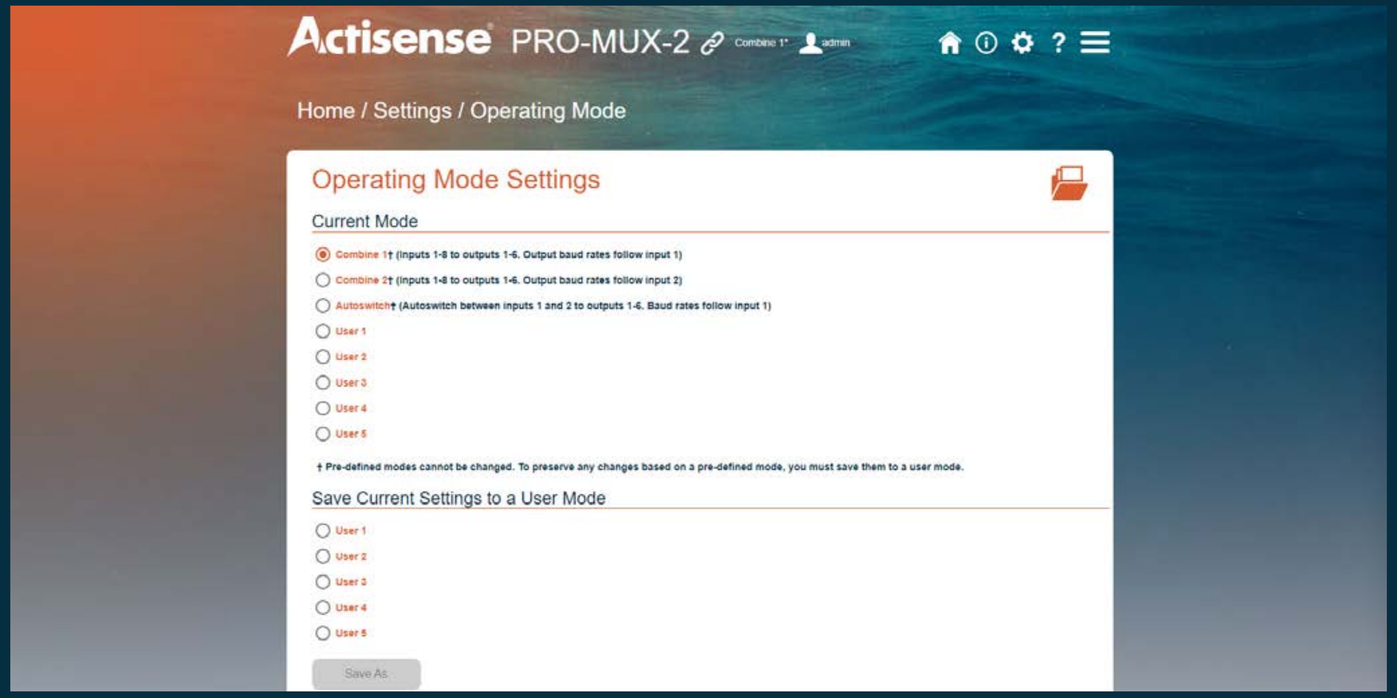
OPERATING MODE SETTINGS



There's options for both a pre-configured operating mode, and custom, self created ones.

It is important to note that the default, pre-defined modes cannot be changed, and they must be saved to a 'user mode' if any changes are required.

The idea of the default combine and autoswitch modes are for the product to work 'out of the box' with no requirement for configuration, making it an ideal product for easy installs.

User modes are for fully customised configurations to be saved to.

The current operating mode of the device is shown at the top of the screen, next to the linked symbol.

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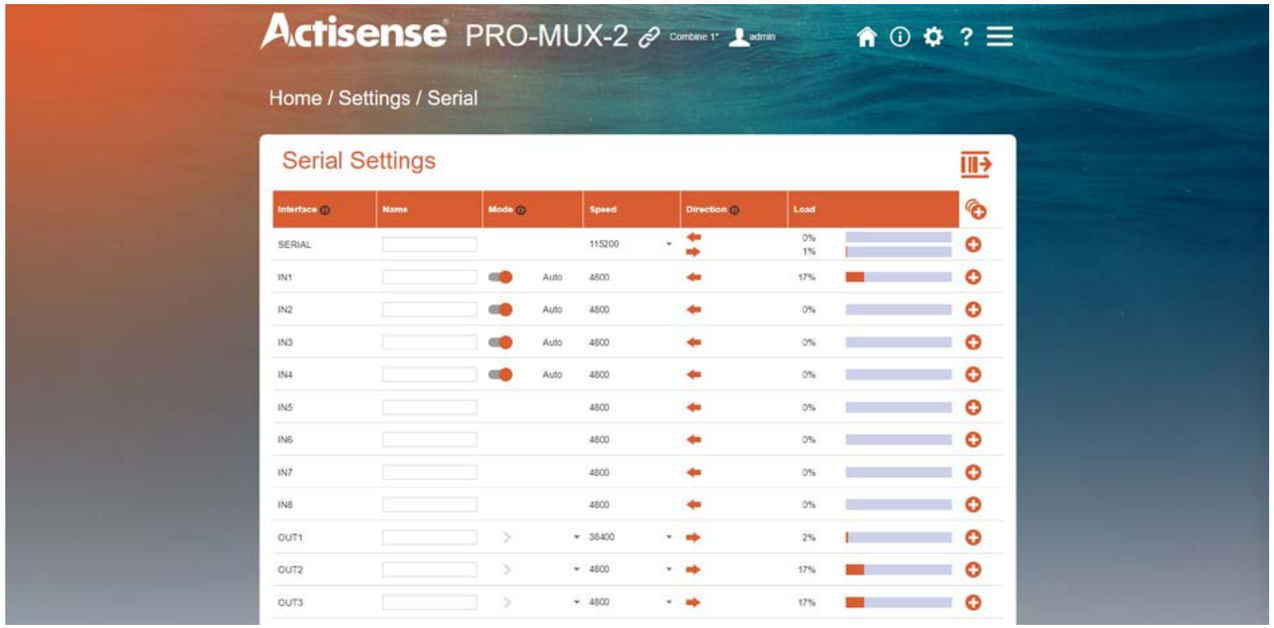
SERIAL SETTINGS



The serial settings are where the baud rate is individually configurable for each input port and output port, and a ‘friendly name’ can be given to each port. There are two routes that can be taken here for talker devices connected to the inputs:

1. The device is left on the autobaud configuration, meaning that the PRO-MUX-2 will adjust the baud rate on each input port dependant on the baud rate of the talker device connected to it. (Autobaud is only available on Ports 1-4. 5-8 are fixed to 4800 baud).

2. The device can be configured for each port manually, giving the user more control over the configuration if the autobaud feature is not preferred.

After configuring the Input ports, the Output ports can be configured. The Output ports can be set up to either follow the baud rate on the chosen Input or set to a manually selected value.

It is important to highlight that only Output 1 can be set to 115200 baud, whilst the rest of the ports have a maximum baud rate of 38400.

Warning: Manually setting the output baud rate slower than the input baud rate may result in the loss of data due to limited bandwidth. Consult the Stats page to view the output loading.

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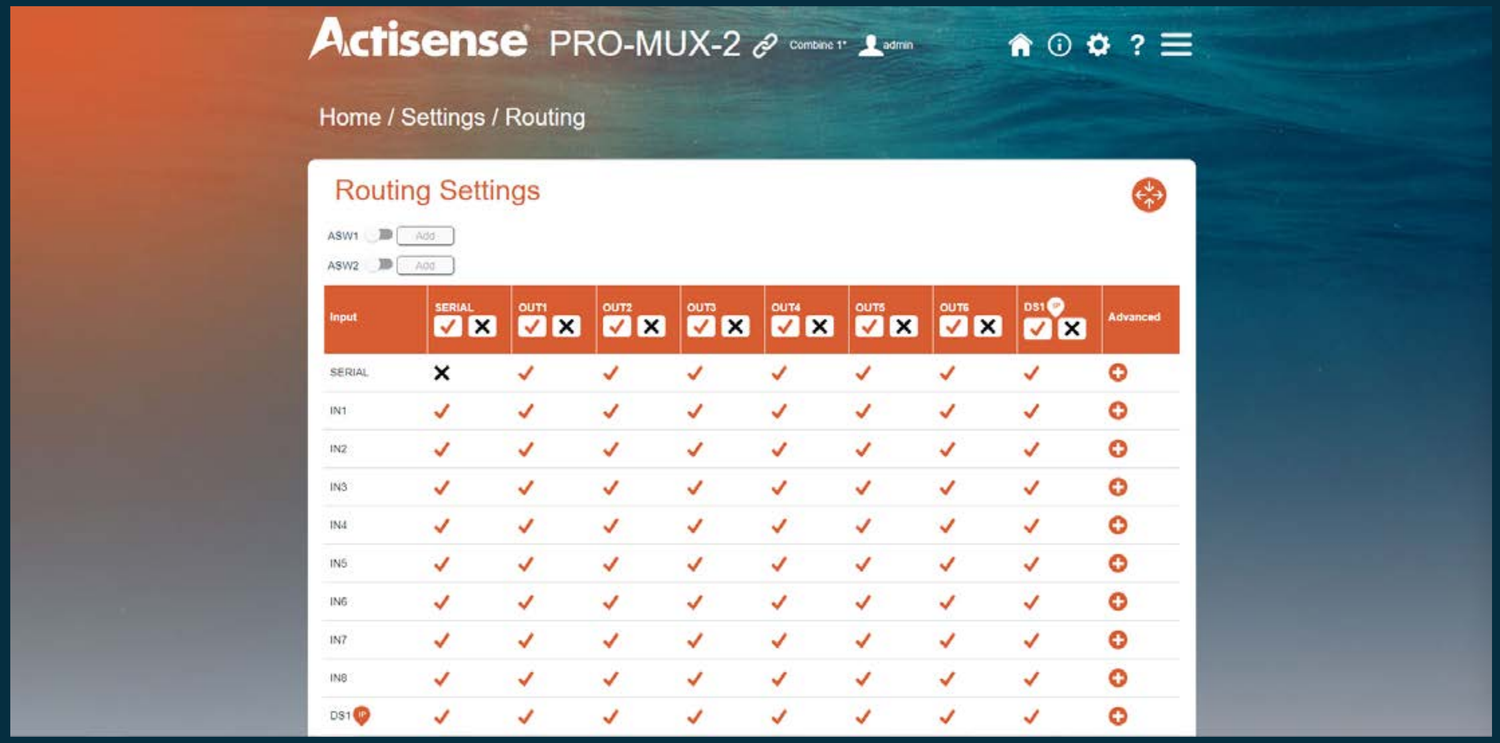
ROUTING SETTINGS



For example, if a USG-2 on IN 4 is sending 7 messages, but only 3 of these are required for the NGW-1 connected OUT 2 then the advanced routing can be used to filter out unnecessary sentences.
Advanced routing is an extremely powerful tool which can be used to reduce the amount of ‘traffic’ from messages going to a certain Listener, which can be especially useful if the device connected to the output has a lower baud rate (lower bandwidth).

Basic routing functions on the PRO-MUX are designed to give the user control over which Outputs receive sentences from the Inputs. The purpose of routing is to essentially dismiss messages that are not required for certain devices

Note that the **friendly names** can be used here to provide easy identification of the device on each input. This is extremely useful for an installer who may be visiting the vessel for the first time, as it saves a large amount of time which would otherwise be spent tracing wires back to understand what device is connected to each I/O Port.

Rather than having the I/O labelled as IN1, OUT1 etc, we can edit the names to show the connected device. i.e. change IN1 to GPS.

Basic routing here gives a good amount of control over the Inputs and Outputs, however sometimes it is required to go further into the connections and define what messages specifically from each Input device are sent to each Output. This is where advanced routing comes in.