AIRMAR® TECHNOLOGY CORPORATION

SmartFlex™ System

SmartBoat® Module

SignalK Feature Package

Copyright © 2022 Airmar Technology Corp. All rights reserved.

All rights reserved. Except as expressly provided herein, no part of this manual may be reproduced, copied, transmitted, disseminated, downloaded, or stored in any storage medium, for any purpose without prior written consent of Airmar. Airmar hereby grants permission to download a single copy of this manual and of any revision of this manual onto a hard drive or other electronic storage medium to be viewed and to print one copy of this manual or any revision hereto, provided that such electronic or printed copy of this manual or revision must contain the complete text of this copyright notice and provided further that any unauthorized commercial distribution of this manual or any revision hereto is strictly prohibited. Information in this manual is subject to change without notice. Airmar 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. Visit the Airmar website at www.airmar.com for current updates and supplemental information concerning the use and operation of this and other Airmar products.

1 Contents

2 Introduction 4
3 Installation 5
4 Configuration 6
4.1 Configuration options 6
4.2 Configuration actions 7
5 SignalK Server 8
5.1 SignalK Server dashboard 8
5.2 Security and user management 9
5.3 Server configuration 10
5.4 NMEA 2000 network 10
5.5 NMEA 0183 network 10
5.6 SignalK Server plugins and webapps 10

2 Introduction

Airmar's SmartFlex™ system products support multiple network standards and are highly configurable for a wide range of applications. They share a common set of features including built-in wireless networking support and browser-based configuration and management.

This Feature Package adds support for the SignalK Server, an open-source implementation of the SignalK marine data exchange format. Information about SignalK may be found at:

https://signalk.org/.

The complete SignalK Server may be found at:

https://github.com/SignalK/signalk-server#readme

THE SOFTWARE IS PROVIDED "AS IS" THROUGH AN INSTALLABLE FEATURE PACKAGE FOR AIRMAR SMARTBOAT MODULES, WITHOUT WARRANTY OF ANY KIND.

3 Installation

The SignalK Feature Package may be installed from your connected computer or mobile device from the Administration page of your SmartBoat module. Select the Feature Package file using the "Choose File" button, and then select "Update Firmware".

After confirming the installation the SmartBoat module will restart. You may need to reconnect to the SmartBoat module following this step.

Firmware upgrades including Feature Packages can be large, and may take several minutes to transfer and install. Please be patient.

4 Configuration

The SignalK Server configuration page may be found under "Configuration" in the sidebar.

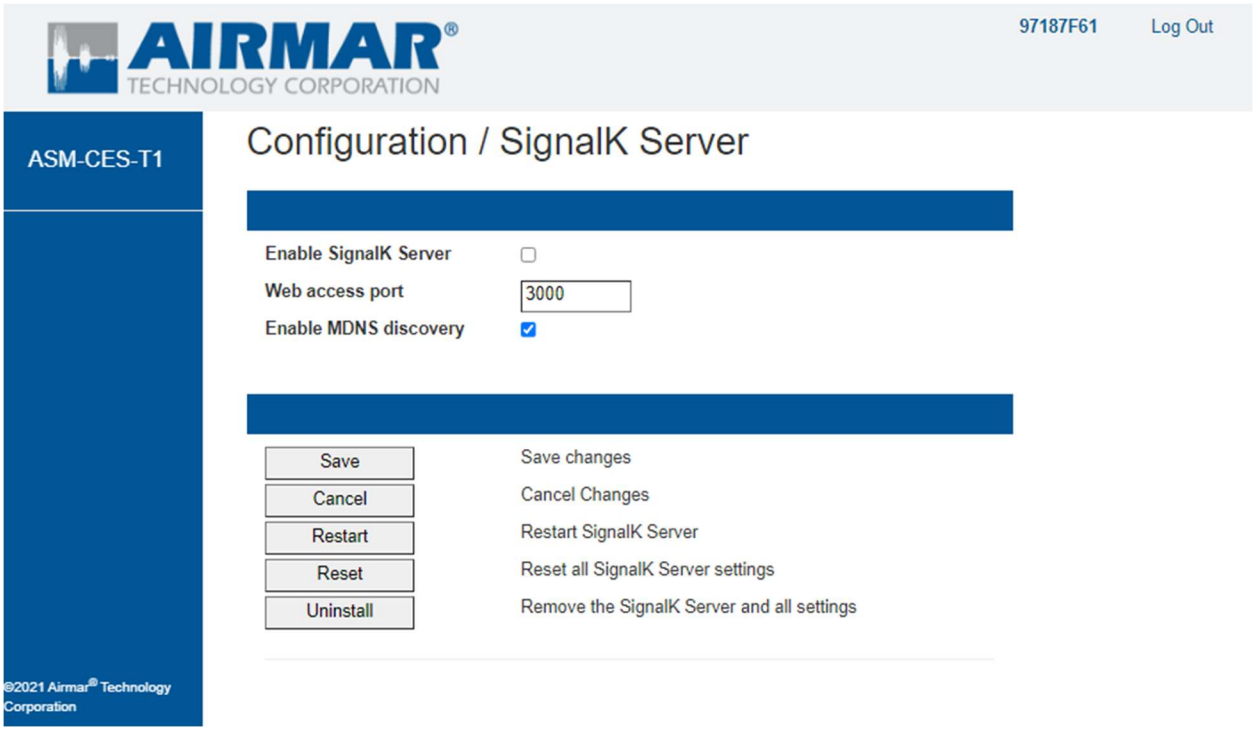

Figure 4-1 SignalK Server Configuration

4.1 Configuration options

There are only three configuration options for the SignalK Server Feature Package:

- **Enable SignalK Server:** This box must be checked to enable operation of the server
- **Web access port:** This is the TCP/IP port number used to access the SignalK Server. The default is port 3000, but this may be changed to any unused port.
- **Enable MDNS discovery**: Allows the SignalK server to "advertise" its availability on the TCP/IP network.

Any changes to these options take effect when the "Save" button is selected.

4.2 Configuration actions

The SignalK Server configuration page provides three additional actions:

- **Restart:** Restart the SignalK Server. The server will automatically restart when configuration changes have been made.
- **Reset:** Completely reset the SignalK Server, removing all settings that were changed using the SignalK Server dashboard.
- **Uninstall**: Remove the SignalK Feature Package from the SmartBoat module.

5 SignalK Server

5.1 SignalK Server dashboard

When the SignalK Server is enabled and running, it may be accessed through the "SignalK Dashboard" option on the sidebar.

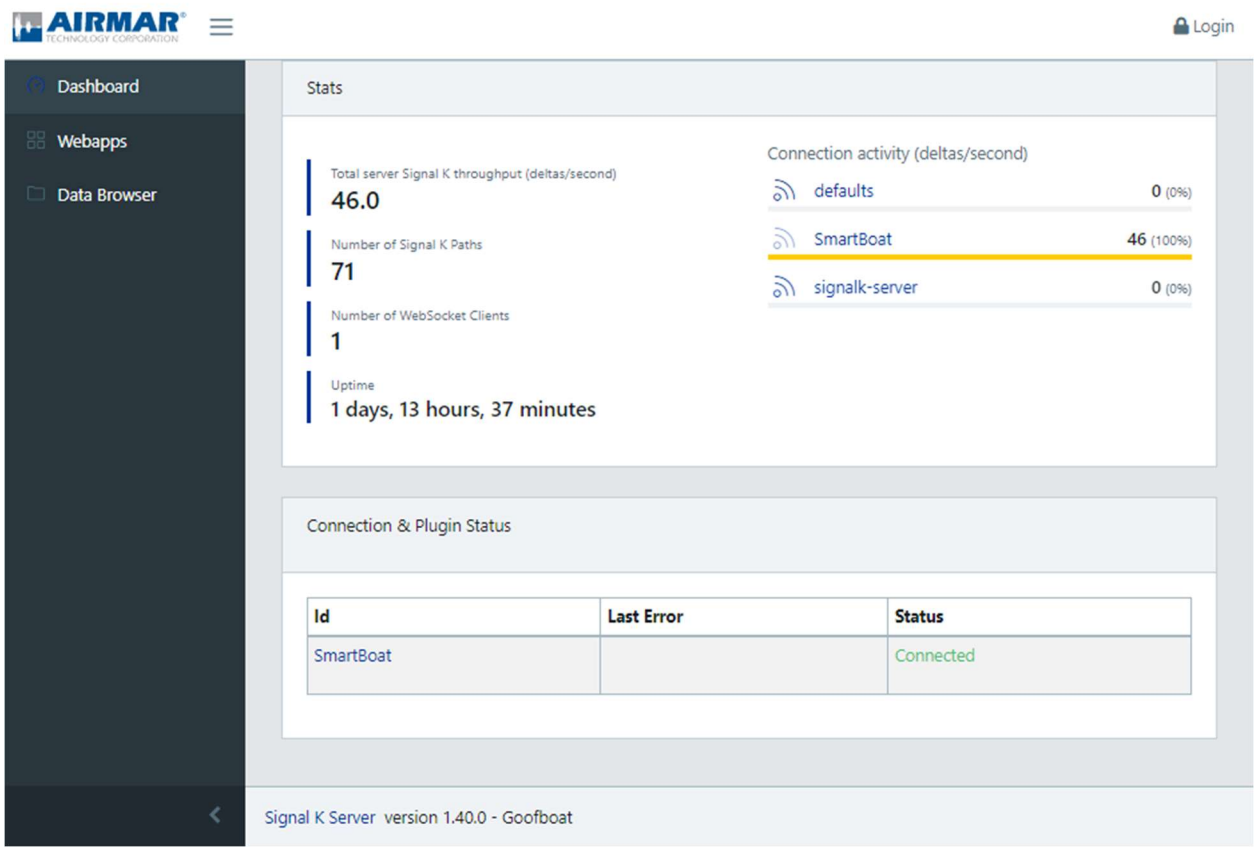

Figure 5-1 SignalK Server Dashboard

The SignalK Dashboard will open in a new browser window.

5.2 Security and user management

The SignalK Server manages users and passwords independently of the SmartBoat module. The "login" button in the upper-right corner of the screen is used to enter user credentials.

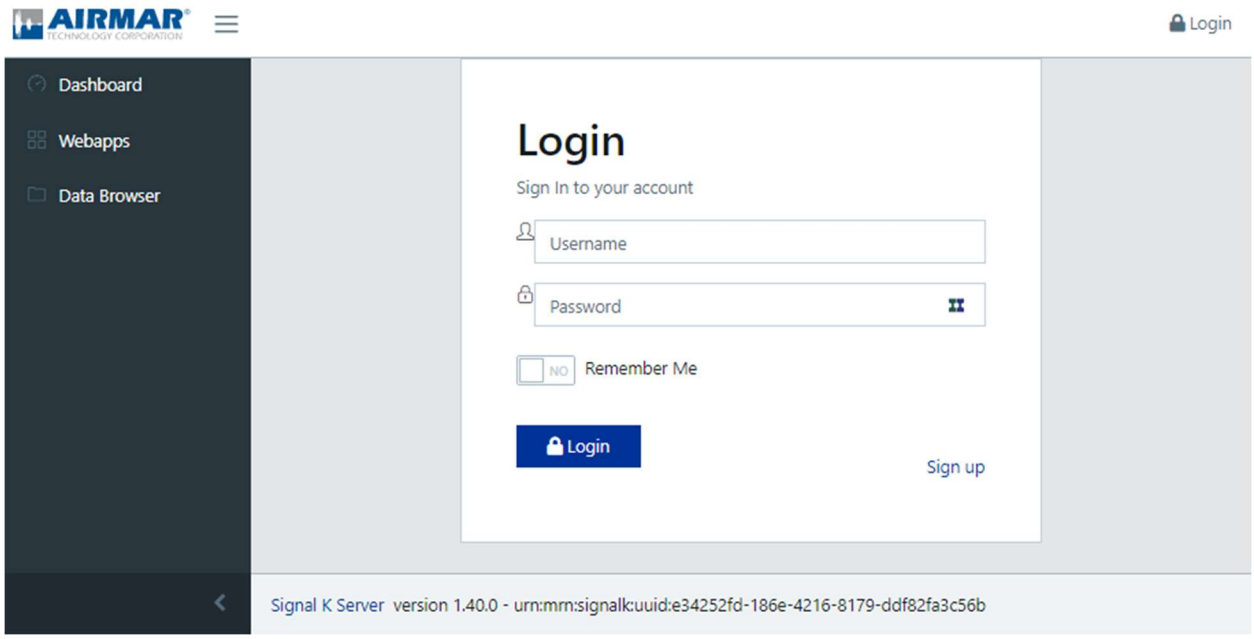

Figure 5-1 SignalK Server Login

When the SignalK Server is first enabled, there are no users defined. An administrative user must be created to secure the server. Additional users may be added as needed.

If user credentials are lost, the SmartBoat SignalK configuration page may be used to reset the SignalK Server settings.

After an administrative user is created, there are additional security settings available through the dashboard. Please refer to the SignalK Server documentation.

Adding an administrative user is strongly recommended. The SignalK server is not secured until this step is complete.

5.3 Server configuration

The SignalK Server is pre-configured to receive NMEA 2000 data from the primary network of the SmartBoat module. There are no additional steps to access these messages. Please refer to the SignalK Server documentation for other settings.

Some settings available through the SignalK Server dashboard will have no effect. The web access port and SmartBoat data connection settings are managed only through the SmartBoat software.

It is possible to configure the SignalK Server to send messages using paths that conflict with other SmartBoat features or network devices, causing unpredictable behavior. Please use care when configuring the SignalK Server.

5.4 NMEA 2000 network

The SignalK Server will appear on the NMEA 2000 network as a separate device. The "View Network" screen may be used to view this device and any transmitted NMEA 2000 messages.

5.5 NMEA 0183 network

The NMEA 0183 network interface is not enabled by default in the SignalK Feature Package. The SmartBoat NMEA 0183 gateway is the recommended interface for NMEA 0183 networks. If desired, SignalK NMEA 0183 data sources may be configured over TCP/IP. It may be necessary to disable the SmartBoat NMEA 0183 gateway function or change the SmartBoat NMEA 0183 TCP/UDP server ports to prevent conflicts.

5.6 SignalK Server plugins and webapps

Server plugins and webapps may be accessed through the SignalK Server dashboard. Access to the SignalK Appstore requires an internet connection.