

Morfeas WEB User Guide Configuration

1 License

Copyright (C) 12022 Sam Harry Tzavaras.

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.3 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts. A copy of the license is included in the section entitled "GNU Free Documentation License".

2 Change History

Jan 20,12022 : Sam Harry Tzavaras – Initial Work.

Contents

1	License	2
2	Change History	2
3	Introduction	4
4	Morfeas System Loggers	4
5	Morfeas ISO Channel Linker	5
5.1	Add a new ISO Channel	6
5.2	Edit an ISO Channel	7
5.3	Delete ISO Channel(s)	8
5.4	Export ISO Channels	8
5.5	Import ISO Channels	8
6	Morfeas System configuration	9
7	Network configuration	10

List of Figures


1	Morfeas System Loggers	4
2	Morfeas ISO Channel Linker Utility	5
3	ISOChannel's column menu	6
4	ISO Channel Link Creator	6
5	Device Search utility	7
6	ISO Channel Right Click menu	7
7	ISO Channel Edit Link Utility	7
8	ISO Channel Import Utility	8
9	Morfeas System configuration	9
10	Morfeas System add component	9
11	Morfeas System Up/DownLoad	9
12	Morfeas WEB Utility for Network Configuration	10

3 Introduction

This reference guide will introduce the utilities that are related to configuration of the Morfeas system and network.

The “Morfeas WEB” is published under the AGPLv3 or later.

4 Morfeas System Loggers

The Morfeas System Loggers utility is made to show information related to the Morfeas System’s components. It’s can be accessed for the Morfeas WEB front page by the button with this  symbol.

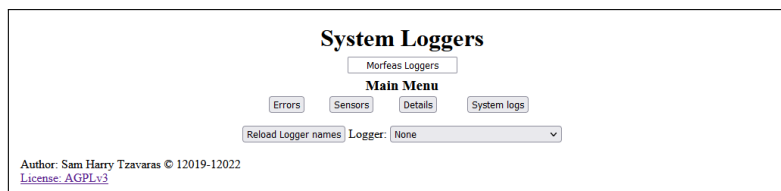


Figure 1: Morfeas System Loggers

At table 1 present the functionality of the utility’s tabs.

Tab Name	Purpose
Errors	Table with Sensors that reporting error.
Sensors	Table with all the available sensor.
Details	Table with report of component’s status.
System Logs	Loggers from Morfeas’ system components (Default).

Table 1: Morfeas System Loggers values

The “System logs” is the tab that shown by default at the opening of the utility. For the drop-down list at the bottom right it’s can be selected the logger of the component on interest. Each “Morfeas Component loggers”, is a human readable output (ASCII text) of the component. The “Reload Logger names” button refresh the list of components, by request from the device server. The Components of the “Morfeas system” configured from the “Morfeas System configuration” utility (section 6).

The “Details” tab shows all the status reports from the components. The “Sensors” tab present a list of the active sensors from all components. And the “Error” all the sensors that reporting error at status.

5 Morfeas ISO Channel Linker

The “Morfeas ISO Channel Linker” is an utility made to create ISO channels and link them with sensors. It’s can be accessed by the Morfeas WEB front page from the button with the anchor (🔗). At figure 2 shown an example of the “Morfeas ISO Channel Linker” utility.

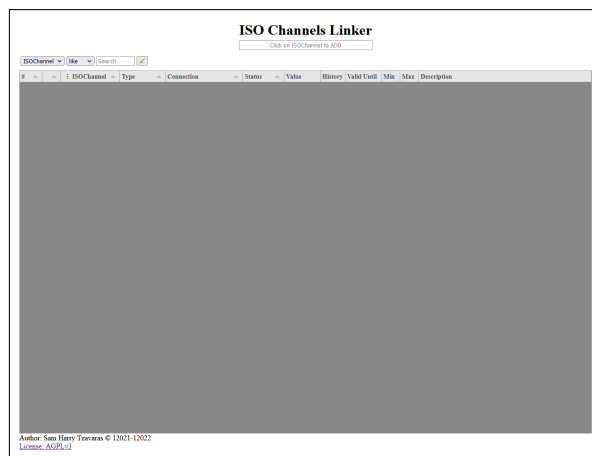


Figure 2: Morfeas ISO Channel Linker Utility

The utility window split in three sections: the status bar, the filters section, and the ISO Channels table.

The status bar show the last update date if at least one channel exist, or a message that informing the user to add channel(s).

The filter section, is filtering the ISO channels table, accordingly to the command from the user. The filtering command is specified from the two drop-down lists and the text input field. The first drop-down is selecting the column that the filtering will applied. The second drop-down select the filter type; for most of the columns (except “Min” and “Max”) is “like” and “regex”. The “Like” filter type is filter and show all the elements in the specified column, that contains the word in the search field, and similarly the “regex” the fields that agree with the regular expression phrase. For “Min” and “Max” the filter type change to a set of numerical comparing orders. The button with the broom clean the filter.

The ISO Channels table is the configuration and presentation tool of the “Morfeas ISO Channel Linker” utility. It consist by 12 columns, with data for each ISO Channel. The first column (from left) is show the order number of the ISO Channel. The second column show with a color (table 2) the status of each ISO Channel. The third column contain the ISO Channel’s name. The forth and fifth contains the Connection type and path of the sensor that anchored to the ISO Channel. Continue the sixth show the status of the anchored sensor, seventh the current value. The eighth (History) contains a historical graph of past values of the sensors value, this graph show two minutes in past. Next column show (if supported) the last valid date of the sensor. The last three columns is the attributes of the ISO Channel; “Min”, “Max” and ISO Channel’s description.

Columns up to sixth can be shorted using the arrow at column name. The shorting can be restored by clicking the filter clean button (broom).

Color	Explanation
Green	Okay
Orange	Calibration not valid
Red	Sensor warning
Black	OFF-Line/Disconnected

Table 2: Colors status

5.1 Add a new ISO Channel

To add a new ISO Channel the ISOChannels menu can be used (figure 3) or the shortcut **Ctrl+Alt+A**.

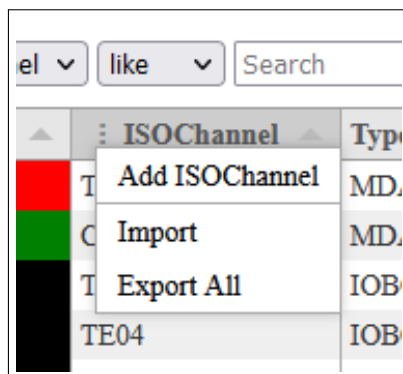


Figure 3: ISOChannel's column menu

By giving the “Add ISOChannel” command (from menu or shortcut) a new window with the “Link Creator” will appear (figure 4).

Figure 4: ISO Channel Link Creator

The “Link Creator” window request from the user to enter the information and attributes that related to the ISO Channel. That’s are: Type, Sensor’s Path, ISO Code, Description, Min, Max and Unit. The “Type” entry is determinate the type of the sensor. The “Sensor’s Path” is the logical path to the sensor, this determinated accordingly to the type of it. For example for SDAQ type the path is constructed like “CAN-f.Addr:XX.CH:XX”. In any case the “Link Creator” will provide a hint related to the “Type”, or a message in case that no devices are available. If the entry of “Sensor’s Path” is invalid will become red. Also at the right of the “Sensor’s Path” entry is a button with a magnification glass on, where if it clicked will open the “Device Search” utility window (figure 5). The “Device Search” utility provide a tree with the available sensors of the selected “Type”. Any valid selection from the “Device Search” utility will fill the “Sensor’s Path” entry.

The “ISO Code” entry is specified the name of the ISO Channel. The utility also hinting and autofill this and the following entries with values from the “ISO Standard”. However, in manual entry the user is responsible to fill all the entries.

The “Unit” entry is some of the values of the “Type” entry will autofilled with the value that the sensor reporting.

If all the entries is validly filled the “Send” button will become available, and on click will send and the ISOChannel.

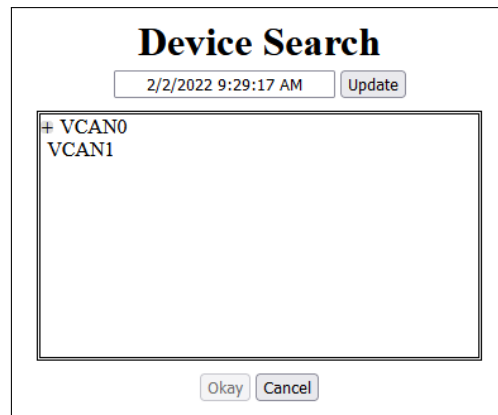


Figure 5: Device Search utility

5.2 Edit an ISO Channel

The request of edit for an ISO Channel can be done by two ways. Either by double click on the ISO Channel name, or by right click (figure 6) on the ISOChannel name and then click "Edit".

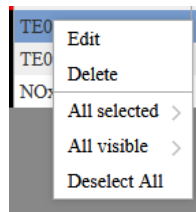


Figure 6: ISO Channel Right Click menu

After the request of ISO Channel Edit, a new window (figure 7) with the "Edit Link" utility will open. The field that are available for edit are: Description, Min, Max, and Calibration date, calibration period, unit, if are specified from sensor type. Also, if the ISO Channel that is under edit was in "OFF-Line/Disconnected" state the Sensor's Path will be also available.



Figure 7: ISO Channel Edit Link Utility

5.3 Delete ISO Channel(s)

The deletion of one ore more ISO Channel from the table done in two ways, by selection and as group. The by selection deletion done doing right click on the ISO Channel name that going to be deleted and select “Delete”.

The “As group” deletion, done in two ways, by selected group and by visible group. The selection of a group required first to make a selection group by clicking on the ISO Channel’s row. Then right click on any table’s row, click on “All selected” and then “Delete”. Un-selection done by hitting “**ESC**” key, or clicking on the filter clean button (broom).

The deletion of visible group have purpose to delete all the visible ISO Channel rows of the table. Suppose that some filter have been applied before, then right click on some row, click ”All visible” and then “Delete”.

In any case, before of a deletion request a verification message will appear.

5.4 Export ISO Channels

Exporting functionality of the Morfeas ISO Channel Linker Utility is the creation of an JSON file, that contains the ISO Channels of the table or a selection. This file will save in the local computer by the browser.

To export all the ISO channels, use the menu of the ISO Channel column (figure 3), and Click “Export All” or the shortcut **Ctrl+Alt+E**. To export a selection of ISO channel it can use either a the “All visible” (in combination with filtering), or the “All selected” (by had did a click selection) from the right click menu of the ISO Channel table (figure 6).

For each case the exported file will be named accordingly to the selected operation together with the created date.

5.5 Import ISO Channels


The import of JSON file with ISOChannels can be done either from the ISOChannels column menu (figure 3) or by the shortcut **Ctrl+Alt+I**. a new window with the import utility will be appeared (figure 8).



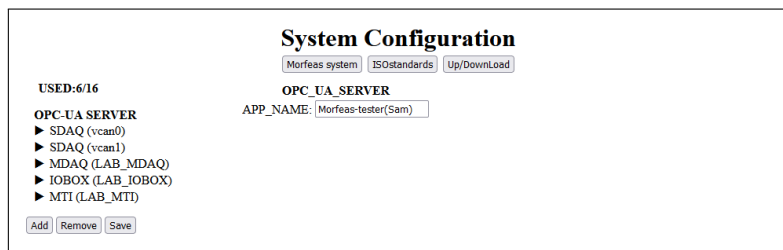
Figure 8: ISO Channel Import Utility

From the import utility you select the file to be import by the “Browse” button. After the user’s selection the validation procedure will start and the result of it will print in the logger. In case that the validation pass with success the “Upload” button will become available.

6 Morfeas System configuration

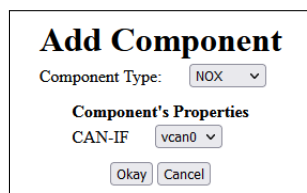
The “Morfeas System configuration” utility can be accessed from the Morfeas WEB front page from the button with the Morfeas core configuration logo ()

The



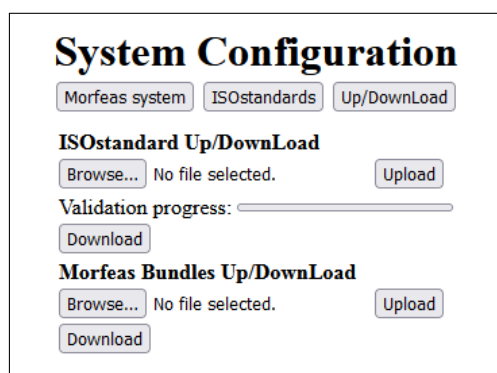
The screenshot shows the 'System Configuration' window. At the top, there are three tabs: 'Morfeas system' (selected), 'ISOstandards', and 'Up/DownLoad'. Below the tabs, on the left, it says 'USED:6/16' and 'OPC-UA SERVER'. Under 'OPC-UA SERVER', there is a list of components: SDAQ (vcan0), SDAQ (vcan1), MDAQ (LAB_MDAQ), IOBOX (LAB_IOBOX), and MTT (LAB_MTT). On the right, under 'OPC-UA_SERVER', there is a text field for 'APP_NAME' containing 'Morfeas-tester(Sam)'. At the bottom left, there are three buttons: 'Add', 'Remove', and 'Save'.

Figure 9: Morfeas System configuration



The screenshot shows the 'Add Component' dialog box. It has a title bar 'Add Component'. Inside, there is a 'Component Type:' label with a dropdown menu showing 'NOX'. Below that, there is a section titled 'Component's Properties' with a 'CAN-IF' label and a dropdown menu showing 'vcan0'. At the bottom, there are two buttons: 'Okay' and 'Cancel'.

Figure 10: Morfeas System add component



The screenshot shows the 'System Configuration' window with the 'Up/DownLoad' tab selected. At the top, there are three tabs: 'Morfeas system', 'ISOstandards', and 'Up/DownLoad' (selected). Below the tabs, there are two sections. The first section is titled 'ISOstandard Up/DownLoad' and contains a 'Browse...' button, the text 'No file selected.', and an 'Upload' button. Below this is a 'Validation progress:' label with a progress bar and a 'Download' button. The second section is titled 'Morfeas Bundles Up/DownLoad' and contains a 'Browse...' button, the text 'No file selected.', and an 'Upload' button. Below this is a 'Download' button.

Figure 11: Morfeas System Up/DownLoad

Listing 1: Structure of ISOstandard file

```
<?xml version="1.0" encoding="UTF-8"?>
<root>
  <points>
    <ISOStandard_name_tag>
      <description>Description of ISOStandard</description>
      <unit>Default Unit</unit>
      <max>Maximum value</max>
      <min>Minumum value</min>
    </ISOStandard_name_tag>
    ....
  </points>
</root>
```

7 Network configuration

The network configuration utility is accessed by the front page of the Morfeas WEB from the button with this ↔ symbol. At figure 12 shown an example of the network configuration utility.

Figure 12: Morfeas WEB Utility for Network Configuration

Value	Purpose
Hostname	Name for discovery services (avahi, samba, etc)
MAC Address	Identifier of the Ethernet interface
Mode	Internet address configuration mode (Static, DHCP)
Network IP	IP address and subnet range bits (In static mode only)
Gateway	Gateway's IP address (In static mode only)
NTP IP	IP address of the local network time protocol server
SDAQNet(CAN-ifs)	Configuration of the bitrate for each available native can-if

Table 3: Network configuration values

At table 3 present the values and purpose of the configuration fields of the utility. The two buttons at the bottom of the utility window(Load last, Set), have purpose to send the current configuration to the device (Set), and reload the last configuration from the device (Load Last).