

2011

K8055 Centrafuse Plugin for Velleman IO Card



DOCUMENTATION

© Copyright by Christian Hausmann

All rights reserved

20.09.2011

Table of Contents

Table of Contents	2
k8055 IO Card Plugin.....	3
Installation.....	3
k8055 Device.....	4
Using the Device Buttons	4
Outputs.....	4
Inputs.....	4
Event Editor	5
Actions.....	5
Custom Skin Design.....	6
Setup	7
Registration.....	7
Note to Software Developers.....	7
Changelog.....	8
Legal Information	10
Copyright.....	10
Single Copy License.....	10
Termination of this license.....	10
Disclaimer	10

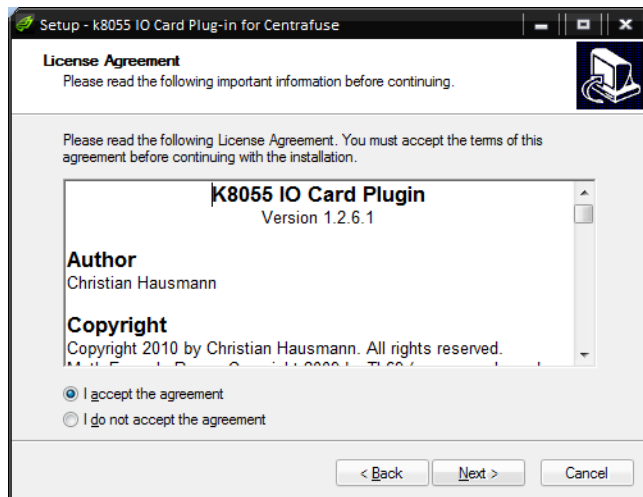
k8055 IO Card Plugin

K8055 is a Plug-in for Centrafuse. With this piece of software you can merge your Car with your CarPC seamless.

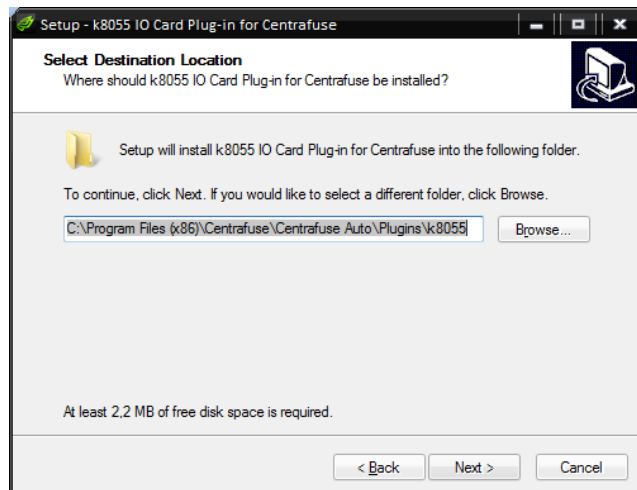
You can control any electric of your car and also connect your Wheel Remote, check if the Reverse Gear is put in (Automatic switching to your Rearcamera), control your Lights, ...

Installation

Install the k8055 IO Card Plug-in via the installation tool.



During installation you have to select the right path of your Centrafuse installation. If you installed Centrafuse to the default folder you should have nothing to change.

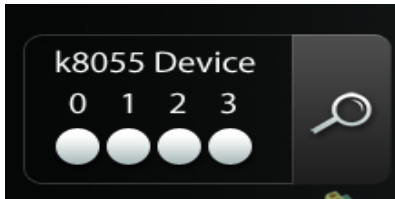


After you installed the plugin you can start Centrafuse again and assign the new plugin to a free button of your choice by pressing the button for some seconds. In the opening list select the k8055 Plugin.

k8055 Device

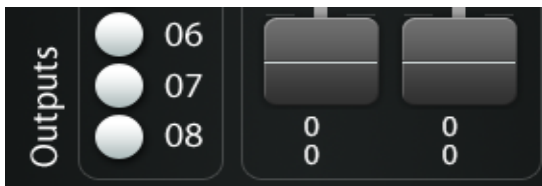
Using the Device Buttons

If you opened the k8055 Plugin you will see the k8055 Device Menu in the left upper corner. You can push the Search Button to search for connected k8055 IO Cards. The buttons 0,1,2,3 will activate and the first button will change to black if Search was successful. By pushing one of the buttons you can switch between your cards. If you set the Autoconnect Setting to true the plugin will search for your cards on each startup by itself.



Outputs

In the middle of the screen you will find the output controls. You can push one of the digital output buttons to activate it. It will change its color to red so you can see which output is currently active. If you use one of the Analog Output sliders you can see the current value (0-255) and the output in "V" below each slider.



Inputs

If you have connected some digital or analog inputs to your k8055 IO Card you can see their status within the plugin. Digital Inputs change its color to red if they are active. Analog Inputs change the sliders.

Event Editor

The Event Editor is a very powerful and useful tool which is also the main part of the plugin.

You can set Actions which will be made when one of the Digital or Analog Inputs Fires. So you could add an Action: "Next Track" when you press the button on your Wheel Remote or you could switch to your Cam Plugin if you put in the reverse gear.

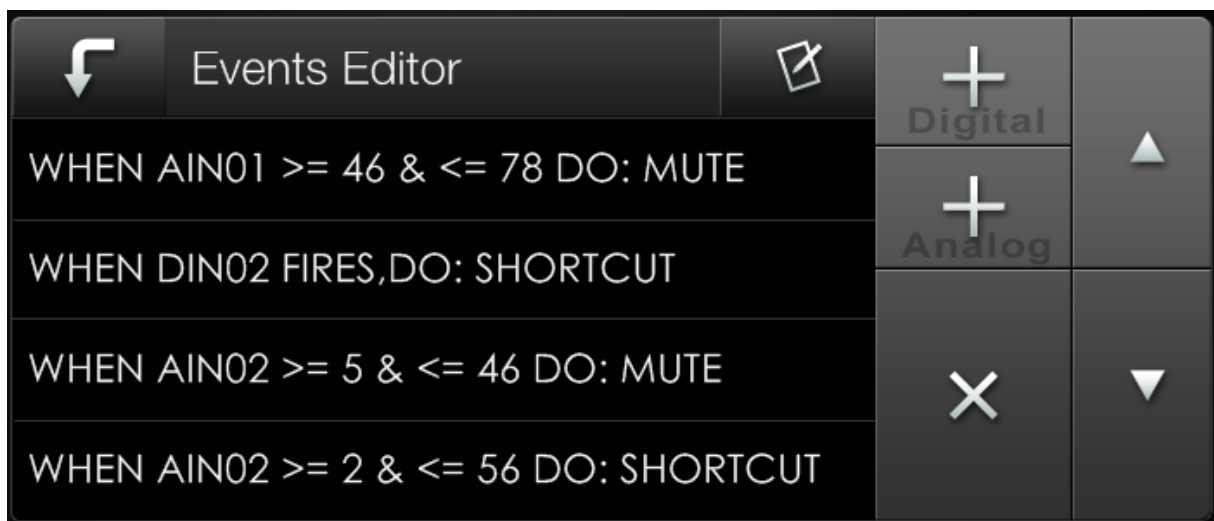
There are two buttons to add a new event. (Digital / Analog) Another Button to delete the selected event and one button to edit the existing events.

The button in the upper left corner closes the Events Editor.

Actions

You can choose of a set of actions which should be processed if your condition occurs.

- Next Track - Previous Track - Volume Up - Volume Down - Mute - Play / Pause
- Hibernate - Restart - Shutdown - Dim Screen
- Open any of your Plugins - Open DVD Menu - Main Menu - ...
- User defined Keystrokes (e.g. Strg + Alt + I)



Custom Skin Design

Most of the users probably want to integrate the k8055 Plugin seamless into their car environment. So its desirable if you have icons or text for your In- and Outputs instead of buttons which are numbered. But because space is limited you will need more space then one single page. To make the plugin more customizable I added a paging feature, which lets you create up to 4 pages which can be opened during back and next buttons.



The Clean Skin actually comes with a sample page for a custom design:



You can change the hole design as you want it.
Here are just some things you should know:

- You can create 4 Pages
- The pages need special names in the skin.xml file, otherwise the plugin wont recognize them!
Name of the page has to be: k8055_01, k8055_02, ...
Example: `<SECTION id="k8055_02" bounds="0;86;848;306" off="k8055_02Off" down="k8055_02Down">`
- The numbers have to be in a row 01, 02, 03, ...
- To switch between the pages you need a back and further button:
`<CONTROL type="Button" id="K8055_FORWARD" bounds="227;42;69;49" effect="" action="K8055_FORWARD" fontclass="MyButton" textenable="False" text="" tabindex="1" enabled="true" />`
`<CONTROL type="Button" id="K8055_BACK" bounds="227;92;69;49" effect="" action="K8055_BACK" fontclass="MyButton" textenable="False" text="" tabindex="2" enabled="true" />`

You also have to use the same names for In- and Output Buttons as in the standard Skin file, so the plugin knows which plugin has which function.
You can also use the same button on different pages!

Setup

Please note, that also advanced settings are available if you switch to the advanced settings within Centrafuse.

You can set the following data:

- Displayname
- LogFile – yes / no
- HardwareID
- Serialnumber
- Autoconnect – yes / no
- Reset on close – yes / no

Registration

If you like the plugin and want to unlock all features you can buy a hardware bounded serialnumber for your CarPC for 3,99€ on my homepage: www.stryder.6x.to

Don't forget to deliver your HardwareID which is located in the plugins settings. Otherwise I'm not able to create a serial for you.

Note to Software Developers

If you want to control digital or analog outputs or read data from the inputs you can use the `CF_pluginCommand / CF_getPluginData` functions of Centrafuse or my LogoDashboard Plugin.

Available commands (since version 1.3.2):

- **DOUTx** which controls the digital outputs (Replace x with a number from 1 – 5)
 - Use as Param **ON** or **OFF** here

Example code: `CF_pluginCommand(CF_Actions.PLUGIN, "k8055", "DOUT2", "ON");`

- **AOUTx** which controls the analog outputs (Replace x with a number from 1 – 2)
 - Use as Param **1 - 255** here

Example code: `CF_pluginCommand(CF_Actions.PLUGIN, "k8055", "AOUT1", "80");`

Available fields to readout:

- **DINx** which returns the status of a digital input. (returns **True** or **False**) (Replace x with a number from 1 – 5)

Example code: `CF_getPluginData("k8055", "DIN4", "");`

- **AINx** which returns the value of a analog input. (returns **0 - 255**) (Replace x with a number from 1 – 2)

Example code: `CF_getPluginData("k8055", "AIN2", "");`

- **AINxFORMULA** which returns the value of a analog input. (returns the parsed formula of the requested input) (Replace x with a number from 1 – 2)

Example code: `CF_getPluginData("k8055", "AIN1FORMULA", "");`

math is the parameter inside the skinfile which contains the math formula which should be applied to the value. Within this formular the character x is the value of the input.

The parameter decimalplaces sets the decimal places of the value.

The parameter datatype contains the string which should be added to the calculated value.

If the value is 5.4

`datatype="{DEG}C"` would add °C to the end of the value: 5.4°C

`datatype="{B}{DEG}C"` would add °C to the beginning: °C5.4

Please dont use any further special characters because this will break the skin file.

To see if you skin is working just open it with the Internet Explorer.

The parameters datatype and decimalplaces are not recognized if math is empty.

```
<CONTROL type="Label" id="AIn01Val" bounds="688;254;50;12"
math="(x/100)*30" decimalplaces="1" datatype="{DEG}C"
fontclass="Analog11" text="0" />
```

- **AOUTx** which returns the status of a digital input. (returns 0 - 255) (Replace x with a number from 1 – 2)

Example code: `CF_getPluginData("k8055", "AOUT1", "");`

Changelog

- 1.0.0.0 - First Release
- 1.2.1.0
 - Events can now be created for Analog Inputs
 - Shortcuts in Events can now be set via buttons so you dont need a keyboard in the car
 - Sometimes the k8055 failed to initialize (fixed)
- 1.2.2.0
 - Fixed: Analog Events repeated until the input value changed. (Now the plugin checks if the new value is in range of +/- 5 of the old value. If not the event is fired)
 - Fixed: Ok Button in Analog Shortcut Menu didn't work
- 1.2.4.0
 - Fixed: Digital Input Events didn't worked
 - New Feature: You can now create up to 4 Skin Pages so you can better customize your skin to fit your requirement. Back and Forward Buttons let you switch between your pages.
- 1.2.6.0
 - As requested the min max values of an analog event are now equals greater and equals smaller, so you can use zero as a value

- You can now also show any of your plugins if an event fires. (So you could open your rearview plugin if the reverse gear is put in)
- 1.2.6.1
 - As requested on the german Centrafuse board you can now add math formula to calculate real datatypes from the Analog Input Values. You can also specify the decimal places and the datatype string which should be added in front or at the end of the value.
- 1.2.7.0
 - Add actions for the event: Digital Input fires OFF
 - Added "switchback". Can be used to switchback to the Screen you were before. Used for Rearcamera
- 1.2.8
 - CF3.5 Compatibility Update
- 1.2.9
 - Fixed bug in CF3.5 installer
- 1.3.0
 - Added DelayOnResume Feature
 - Added k8055doc to the installer
- 1.3.2
 - Updated the documentation with Developer Notes
 - Added PluginCommand function to control the digital and analog outputs from outside
- 1.3.3
 - Added StartupStatus Feature
- 1.4.0
 - You can now activate Voice recognition
 - You can now activate or deactivate digital outputs with your k8055 when an input triggers
 - The Entries in the Events manager are now translated with the strings from the language file
 - Open Plugin and activate/deactivate digital output will show the pluginname / the output number in the events manager now
 - As requested the "xmlns: xsi ... stuff" from the events.xml is now removed. Just the clean xml file. Was a ugly workaround because it seems to be a bug, but it works.
 - If an digital input triggered off the event was executed too often sometimes
 - Edit Menu didnt opened in some case
- 1.4.1
 - Fixed a bug with plugin_data readout
 - Added AOUT and AINxFORMULA to plugin_data readout

Legal Information

Copyright

Copyright 2010 by Christian Hausmann. All rights reserved.

Single Copy License

The k8055 plug-in is copyrighted and any unauthorized use of any materials may violate copyright, trademark, and other laws. You may download one copy of the software on a single computer for your personal, non-commercial internal use only unless specifically licensed to do otherwise by Christian Hausmann in writing or as allowed by any license terms which accompany or are provided with individual Materials.

Termination of this license

Christian Hausmann may terminate this license at any time if you are in breach of the terms of this Agreement. Upon termination, you will immediately destroy the Materials.

Disclaimer

THE MATERIALS ARE PROVIDED "AS IS" WITHOUT ANY EXPRESS OR IMPLIED WARRANTY OF ANY KIND INCLUDING WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT OF INTELLECTUAL PROPERTY, OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT SHALL CHRISTIAN HAUSMANN OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION, LOSS OF INFORMATION) ARISING OUT OF THE USE OF OR INABILITY TO USE THE MATERIALS, EVEN IF CHRISTIAN HAUSMANN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. BECAUSE SOME JURISDICTIONS PROHIBIT THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.