

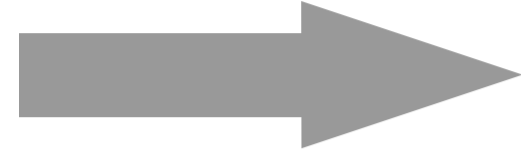
A Device Specific Library for the USB-Board K8055

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The Problem !



The Experimental USB Board Velleman **K8055** has got no Device Driver support for eComStation / OS/2 !
How can this problem be solved ? Is it possible to use a **K8055** with eCS anyway ? [1]

Fundamentals

- Writing a K8055 Device Driver is the classic way to solve the problem, but
- A generic USB driver can be used for K8055 to overcome the difficulties.

- Wim Brul's generic device driver is perfectly suited,
- It is downloadable from his homepage <http://home.hccnet.nl/w.m.brul/usbprobe/index.html>

- Add a line to the Config.sys file as
- ```
device = usbecd.sys /D::10CF:5500:0000
/N:K8055_$
/S
/V
```
- and eComStation (OS/2) will be able to make use of it !



Photo: Björn Hennig

The K8055 Board  
aka P8055-1  
aka VM110

## The Solution ... a DLL with 16 exported functions

```
K8055_Open ,
K8055_Init ,
K8055_Read ,
K8055_Write ,
K8055_Close ,
K8055_DummyFnc ,
K8055_DummyFnc1 ,
K8055_ReadAllInputs ,
K8055_DecodeDigitalInputs ,
K8055_CheckDigitalInput ,
K8055_SetAllOutputs ,
K8055_PrepareDigitalOut ,
K8055_PrepareDACxOut ,
K8055_CheckIxCOUNTER ,
K8055_GetInfoStr ,
K8055_GetInfoByte.
```

Hardware related functionality is covered by this K8055DD.DLL - it is the driver replacement !

### How to import the K8055DD.dll functions ?

#### PYTHON style import:

A Code Wrapper like Pyrex is needed to create a Python Module [1]

#### C style import:

An import library has to be created and linked following the rules of the C / C++ Compiler Tools ...

#### PASCAL style import ( Sibyl, WDSibyl source code example ):

```
Imports Function K8055_Read(Var pDevHndl: HFILE;
bNumOfBytes: BYTE;
Var pbyaData: BYTE);
APIRET; APIENTRY; 'K8055DD' Index 3;
```

## Examples

... used in Python

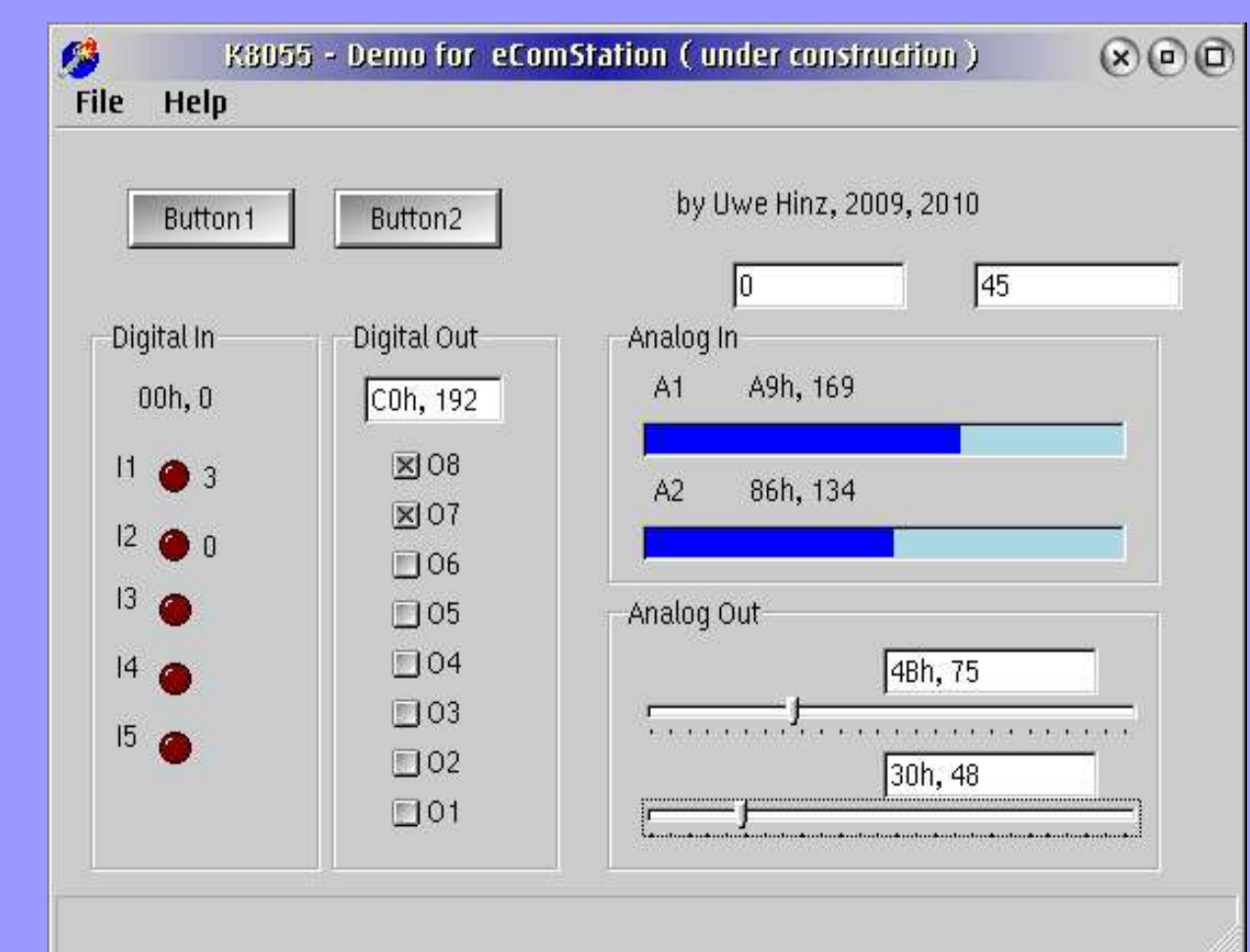
```
python.exe
[G:\Projekte\svn_nyneu\svnroot\os2\usb\k8055\pyexample]python Testk8055.py
cinit
03
F0
0xF1,0x40,130
('read_data1 ', 0, 1, 106, 140)
0x42,0x80,200
('read_data2 ', 0, 1, 106, 139)
03
F0
0xF1,0x40,130
('read_data1 ', 0, 1, 106, 139)
0x42,0x80,200
('read_data2 ', 0, 1, 107, 212)
03
F0
0xF1,0x40,130
('read_data1 ', 0, 1, 20, 212)
0x42,0x80,200
('read_data2 ', 0, 1, 20, 212)
03
```

```
Command prompt (window)
This is a Demo Application for the
USB-Interface Board VELLEMAN K8055
Test -Read- selected, USB Device Name: 'K8055_$'
Showing table 5 / 5 Speed: app. 1 line per second
Digital Inputs | Analog Inputs
Ix: raw, decoded (binary) | A1: A2:

0x10, 0x01 (000001) | 047 200
0x10, 0x01 (000001) | 047 200
0x10, 0x01 (000001) | 047 200
0x10, 0x01 (000001) | 047 200
0x10, 0x01 (000001) | 046 200
0x10, 0x01 (000001) | 047 200
Impulses counted on I1 = 000001
Impulses counted on I2 = 000000
Device 'K8055_$' closed.
Test -Read- completed !
Press -e,- to exit program !
```

... for a Console Application in C

... with Sibyl



[1] Warpstock 2010, Waterloo, Canada ; "K8055 with eCS, USB accessed from Python / Pyrex"