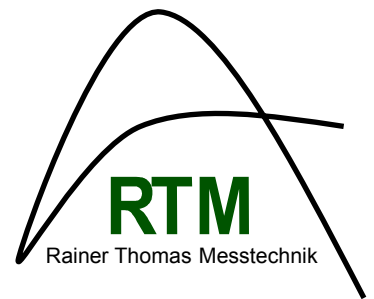


RTM USB-Driver Installation for DIADem



USB Driver Installation:

After connecting the RTM-USB module to the PC, you will be prompted for a suitable driver for the newly attached device. The appropriate driver can be found in the supplied software under "QuickUSB - Drivers".

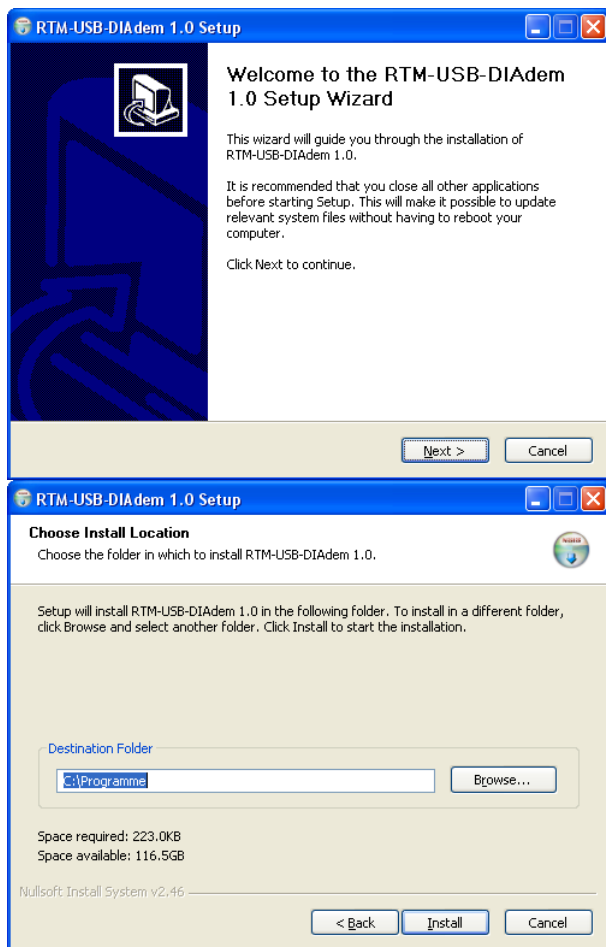
DIADem Driver Installation

(Requires an existing installation DIADem)

Run the installation program "RTM-USB-DIAdem-Setup.exe".

Here you will be prompted to specify the installation directory of DIADem to copy the necessary files for the operation of the USB module. After having the appropriate directory you can start with the schematic drawing.

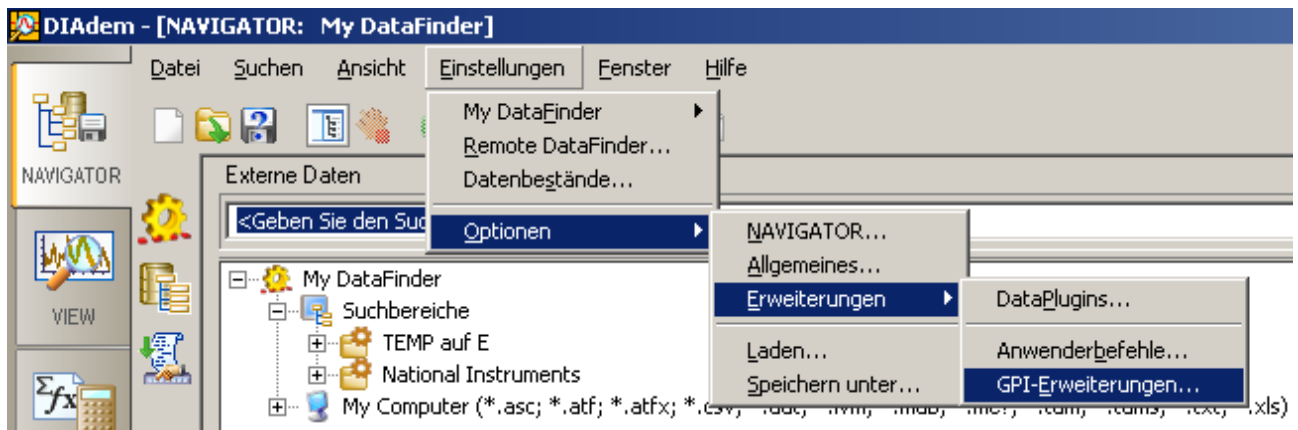
(Important: When installing DIADem on a PC several times, it is important to select the corresponding DIADem directory, otherwise DIADem will not be able to access the device).



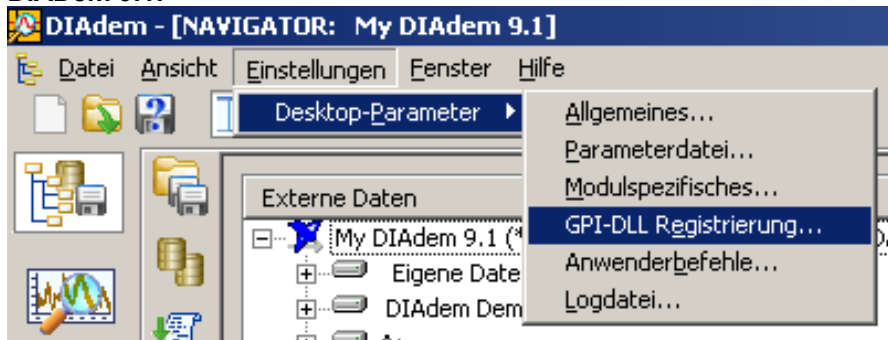
Register GPI driver in DIADem

After installation, the driver must be registered with DIADem.

DIADem 10.x:

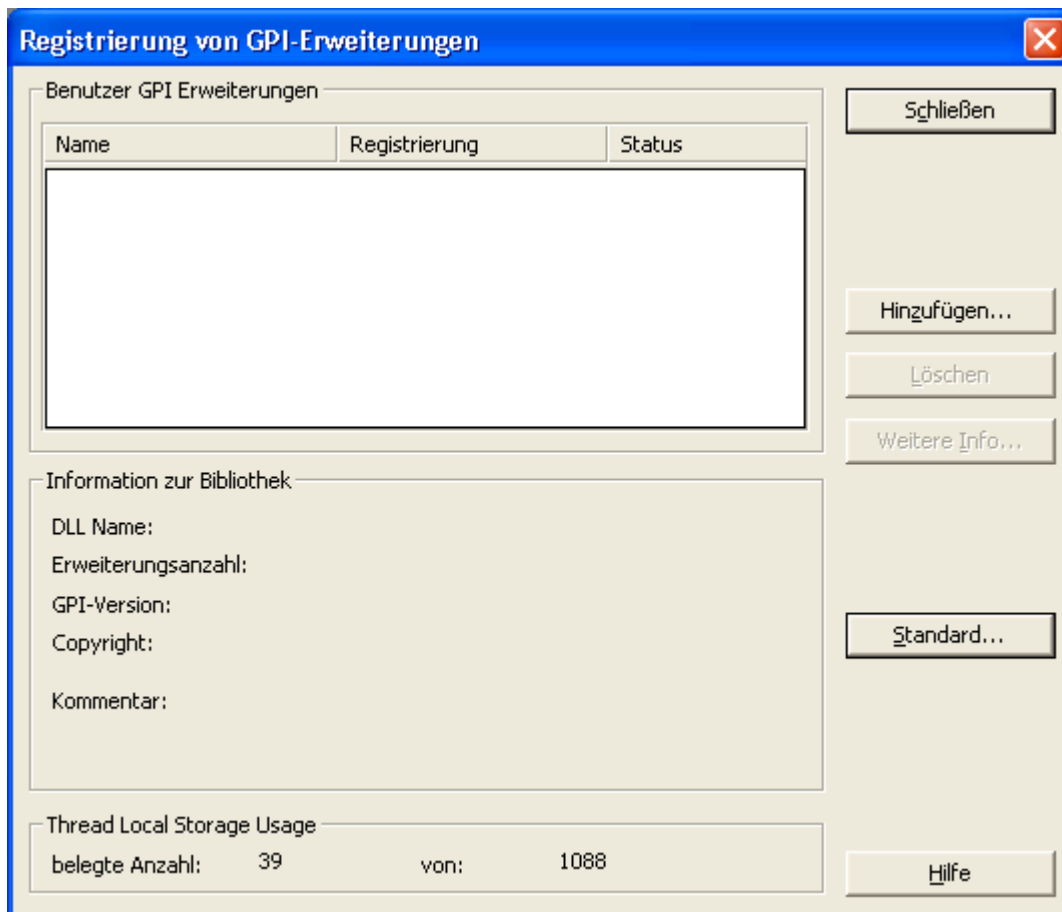


DIADem 9.1:

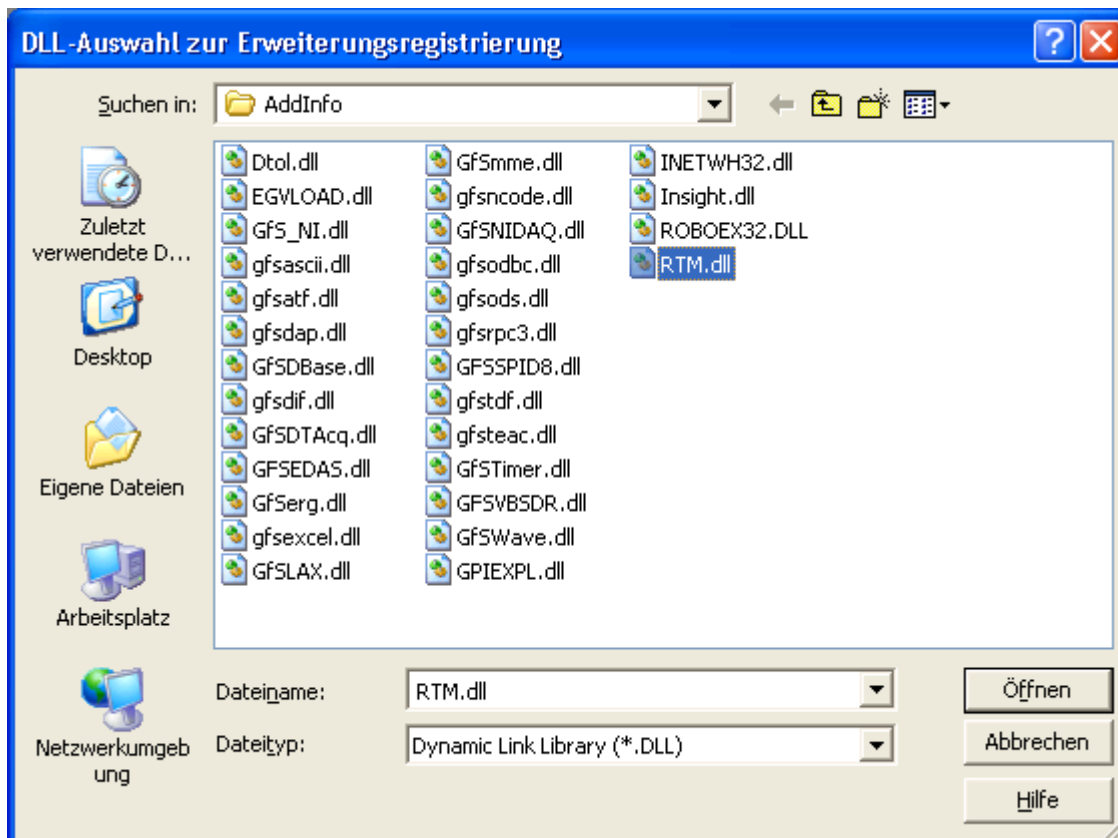


DIADem 8.1:

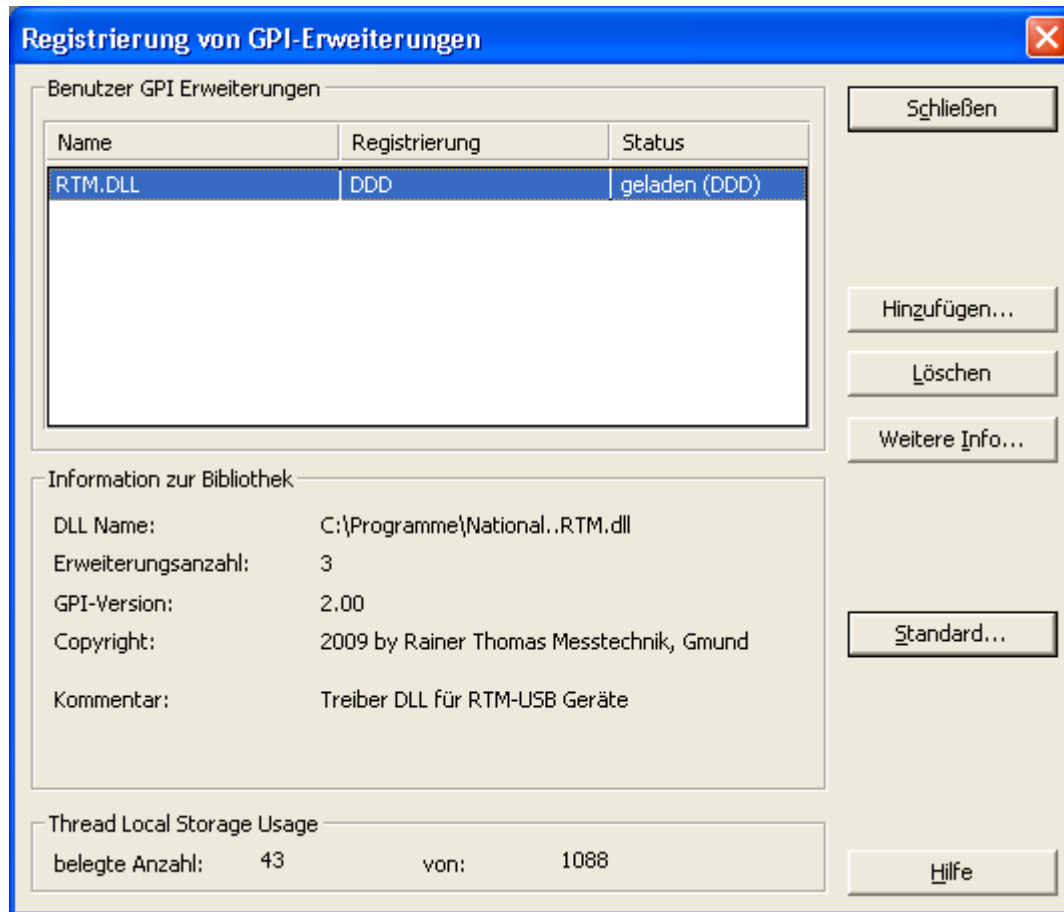




Click on "Add"

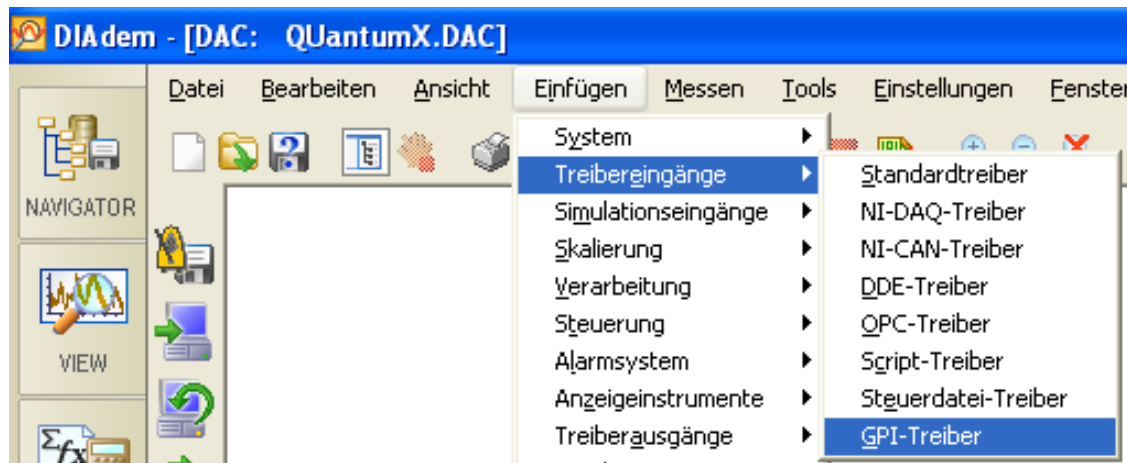


and select "RTM.dll".



Insert input block in circuit diagram

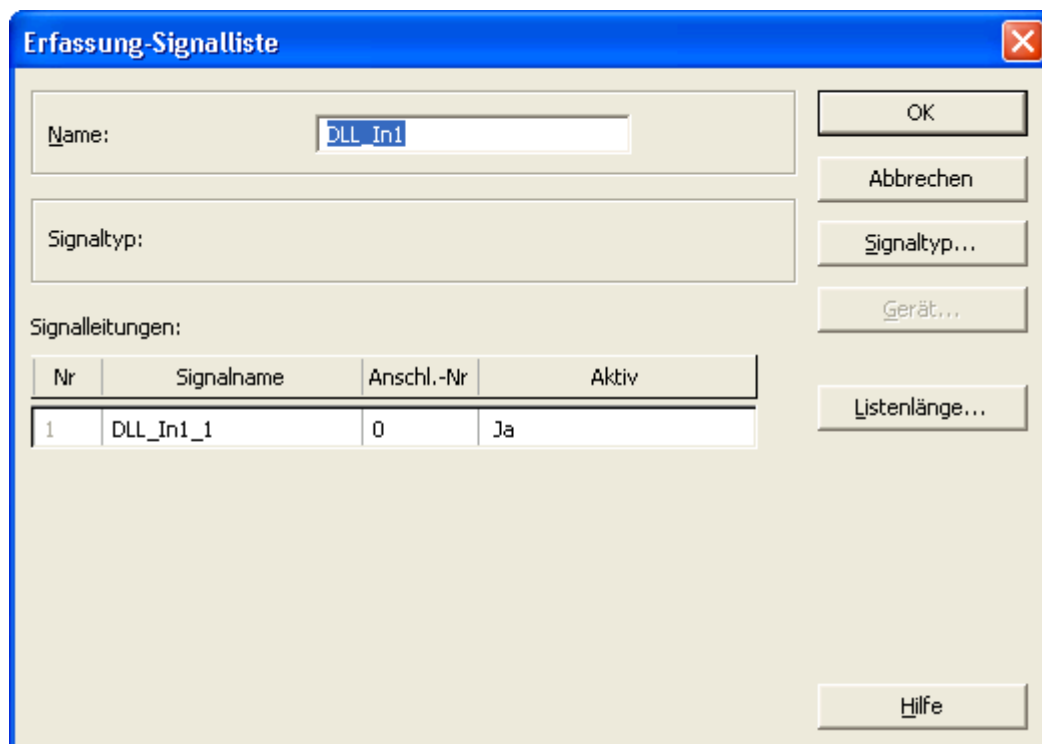
Under Insert - Driver Inputs - GPI Driver you can insert an input block.



DIADem 8.1:

Under Blocks - Inputs - Additional Driver

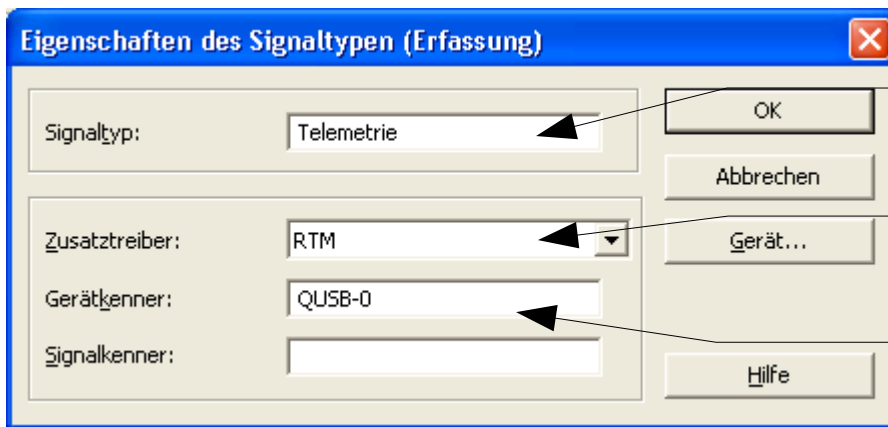
DIADem does not know which additional driver to use. After double-clicking on the input block, this dialog appears:



Click on "Signal type" and select the additional driver "RTM".

Enter under "Signal Type:" Telemetry and under "Device Identifier:" "QUSB-0" if only one module is connected to the computer to have.

For each additional module, QUSB-1, QUSB-2, etc. must be entered.

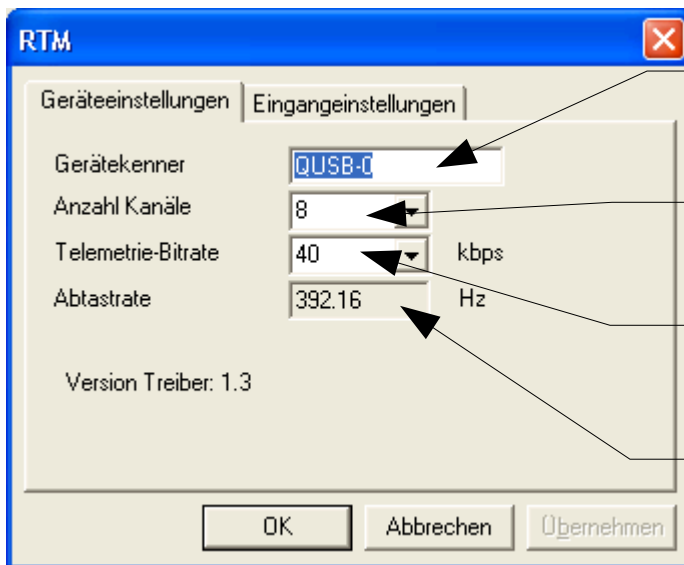


E.g. Telemetry

Zusatztreiber: RTM

Gerätekennung immer „QUSB-0“ oder „QUSB-1“

Klicken sie auf "Gerät"



Device ID always „QUSB-0“ or „QUSB-1“

Number of channels according to the telemetry used

Telemetry bit rate according to the telemetry used

The output sample rate must be the same as the value for the sample rate hardware clock.

In this window, select the parameters according to your connected telemetry system and click on "OK". Then they see the corresponding signals in the acquisition signal list.

Erfassung-Signalliste

Name:

OK

Abbrechen

Signaltyp: tele

Signaltyp...

Gerät...

Signalleitungen:

Nr	Signalname	Anschl.-Nr	Aktiv
1	QUSB-0_1	0	Ja
2	QUSB-0_2	1	Ja
3	QUSB-0_3	2	Ja
4	QUSB-0_4	3	Ja
5	QUSB-0_5	4	Ja
6	QUSB-0_6	5	Ja
7	QUSB-0_7	6	Ja
8	QUSB-0_8	7	Ja

Listenlänge...

Hilfe

confirm with OK

In the schematic they need a central clock. After inserting the clock block, select the properties.

Features Takt1

Systemtakt

Name:

OK

Abbrechen

Takt

☒ DAC-Kern

☐ Software-Takt

☒ Hardware-Takt

☐ Mess-Treiber

☐ Modus 1 (High Speed)

☐ Modus 2 (DMA)

☐ Modus 3 (Disk)

☐ externer Takt

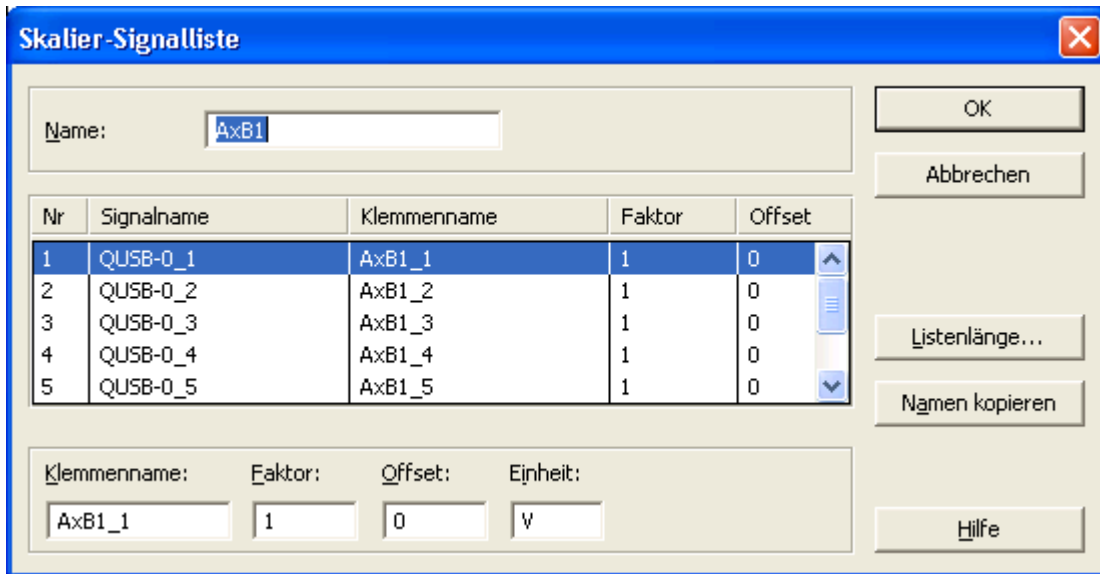
Abtastrate:

Einheit:

Hilfe

The sampling rate for the Hardware clock must match the value of telemetry.

Scaling signal list



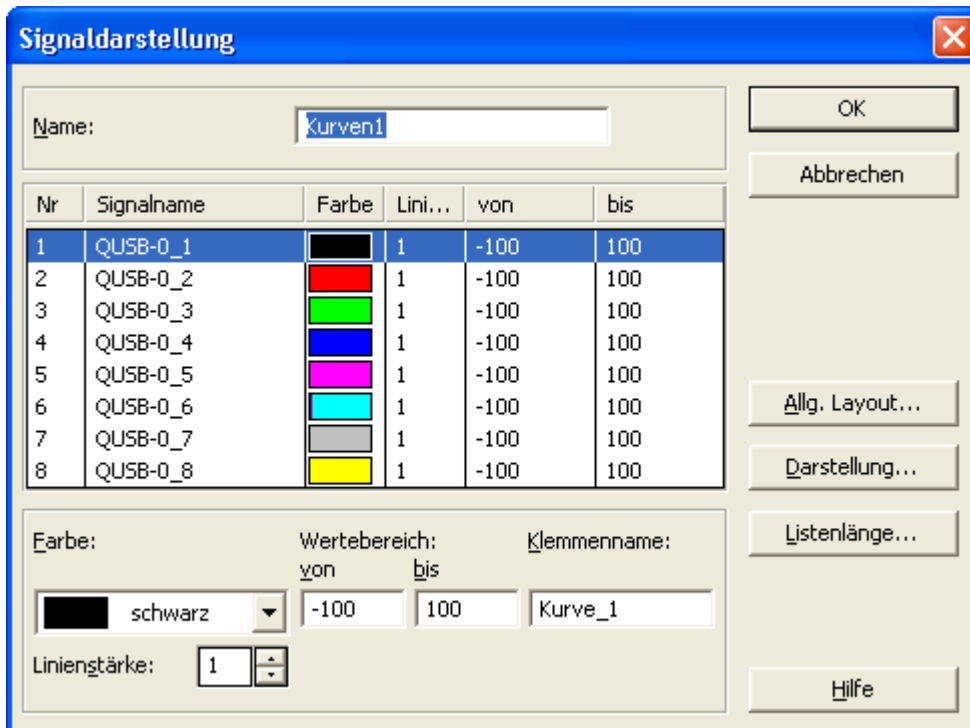
The 'Skalier-Signalliste' dialog box is used for scaling a list of signals. It features a 'Name' field set to 'AxB1'. Below it is a table with columns: Nr, Signalname, Klemmenname, Faktor, and Offset. The table contains five rows of data for signals QUSB-0_1 through QUSB-0_5, all with a factor of 1 and an offset of 0. To the right of the table are buttons for 'OK', 'Abbrechen', 'Listenlänge...', 'Namen kopieren', and 'Hilfe'. At the bottom, there are input fields for 'Klemmenname' (AxB1_1), 'Faktor' (1), 'Offset' (0), and 'Einheit' (V).

Nr	Signalname	Klemmenname	Faktor	Offset
1	QUSB-0_1	AxB1_1	1	0
2	QUSB-0_2	AxB1_2	1	0
3	QUSB-0_3	AxB1_3	1	0
4	QUSB-0_4	AxB1_4	1	0
5	QUSB-0_5	AxB1_5	1	0

The output of telemetry is set from -100 to +100.

If you want a different scaling of the measured values, you have to set a different factor here (for each channel individually).

Curves



The 'Signaldarstellung' dialog box is used for configuring the display of signals. The 'Name' field is set to 'Kurven1'. It contains a table with columns: Nr, Signalname, Farbe, Lini..., von, and bis. The table lists eight signals (QUSB-0_1 to QUSB-0_8) with various colors and a range from -100 to 100. To the right are buttons for 'OK', 'Abbrechen', 'Allg. Layout...', 'Darstellung...', 'Listenlänge...', and 'Hilfe'. At the bottom, there are input fields for 'Farbe' (schwarz), 'Wertebereich' (von -100, bis 100), 'Klemmenname' (Kurve_1), and 'Linienstärke' (1).

Nr	Signalname	Farbe	Lini...	von	bis
1	QUSB-0_1	Black	1	-100	100
2	QUSB-0_2	Red	1	-100	100
3	QUSB-0_3	Green	1	-100	100
4	QUSB-0_4	Blue	1	-100	100
5	QUSB-0_5	Magenta	1	-100	100
6	QUSB-0_6	Cyan	1	-100	100
7	QUSB-0_7	Grey	1	-100	100
8	QUSB-0_8	Yellow	1	-100	100

in the graph, you can set the display ranges of the measured values.

DIAdem DAC circuit diagram for an 8-channel system

