BaSyTec Battery Test Systems	Application Note CAN(FD) for IXXAT	Abteilung: SW Bearbeiter: Martin Erstellt: 25.07.23 Aktualisiert: -

This application note gives an overview of all basic steps required to setup CAN communication. It contains a set of testplans and dll providing a demonstration of output and input of data via CAN.

For additional information refer to the software manual:
'**Open software interface (OSI)'** and '**Appendix: BaSyTec CAN driver (CAN_IXXAT.dll OSI driver dll)'**

1. Requirements

Ixxat VCI4 (tested using vci-v4.0.1133.0-windows-11-10)

Ixxat USB CAN(FD optional) compatible device

CanDefine_VCI4_FD.exe (to generate Can Definition File / *.cdf)

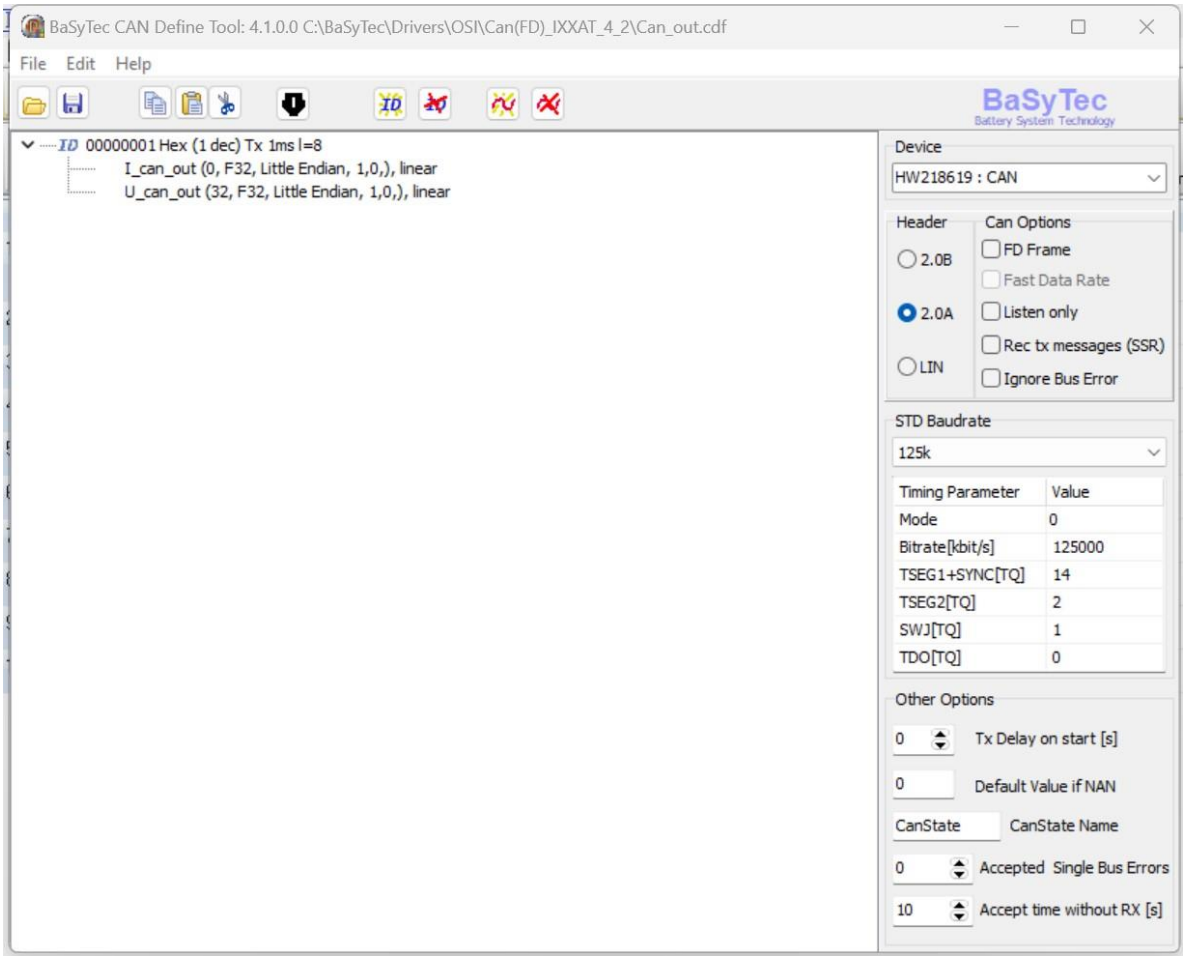
MyCan_IXXAT_VCI4_FD.dll (One DLL per CAN physical can interface/output)

MyCan_IXXAT_VCI4_FD.cdf (File must be located at same location and have the same Filename as the *.dll)

To carry out the demo completely 2 CAN Devices are required.

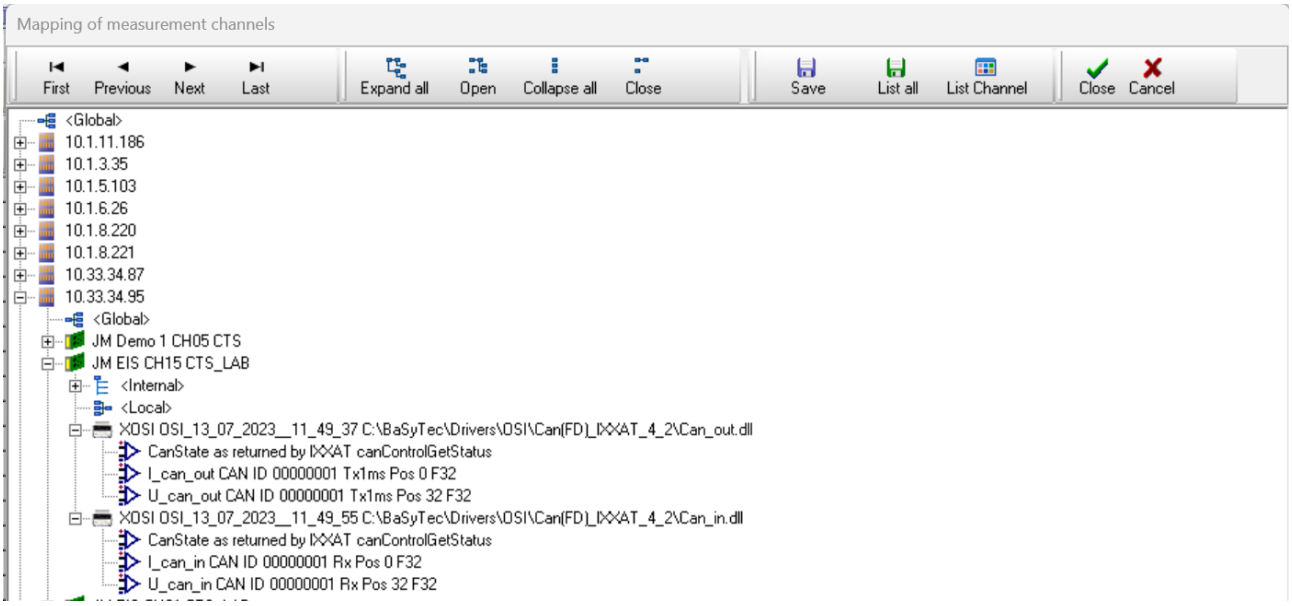
2. Can Definition File (CanDefine_VCI4_FD.exe)

The inifile defines all settings for the CAN-Bus and the variables available in Basytest Software.
For the demo change the Device for Can_out.cdf and Can_in.cdf



3. Mapping

For each channel the DLL must be added separately in mapping. Inputs will be listed according to the can definition file. This example shows both DLLs loaded for channel “JM EIS CH15CTS_LAB”

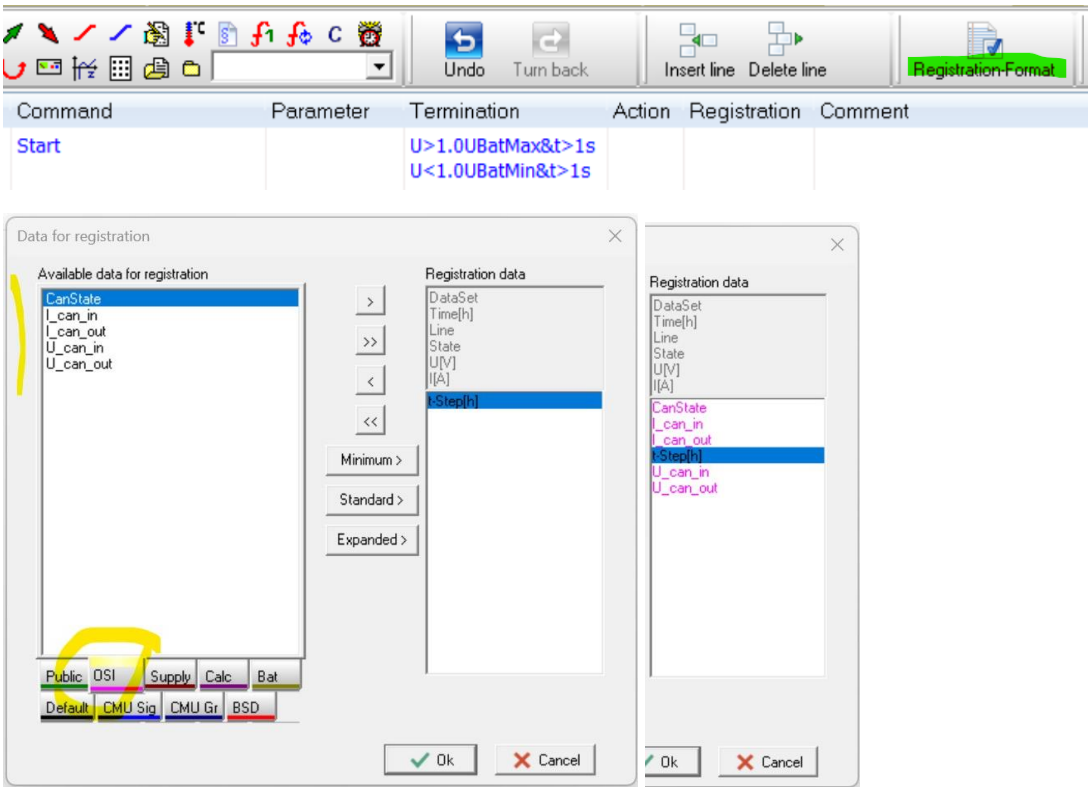


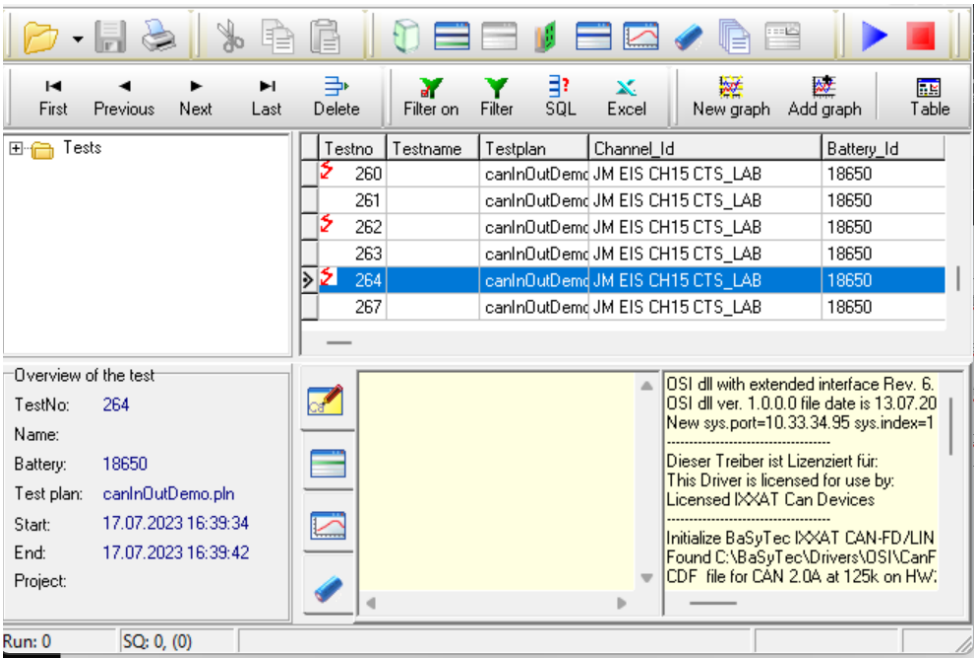
4. Test Plan

This Plan shows the assignment of can output variables with current data for current[I] and voltage[U].

	Level	Label	Command	Parameter	Termination	Action	Registration	Comment
1			Start		U>1.0UBatMax&t>1s U<1.0UBatMin&t>1s			
2			Calculate	I_can_out=I				Send Current to Can
3			Calculate	U_can_out=U				Send Voltage to Can
4			Pause		t>1s		t=1ms	
5			Cycle-start		t>180s			
6			Charge	I=0A	t>1s		t=1ms	
7			Charge	I=1A	t>1s		t=1ms	
8			Cycle-end	Count=0				
9			Pause		t>1s		t=1ms	
10			Stop					

All can signal used in calculation and all signals of interest must be added to registration.



5. Run the Test

Start the test as usual for a channel with DLLs loaded. All DLL-information (Settings, Errors,…) will be displayed in the information window of the database of tests.