DEWETRON

OXYGEN Training
OBD2 Plugin

Features

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On board diagnostics (**OBD**) is an automotive standard referring to a vehicle's self-diagnostic and reporting capability. **Over years the OBD specification has changed from OBD 1 to OBD 2.**

Modern OBD implementations use a standardized digital communications port. A basic OBD system consists of an **ECU** (Electronic Control Unit), which uses input from various **sensors** to control the **actuators.**

The ODB 2 Plugin for OXYGEN is an extension to the popular OXYGEN measurement software. The plugin uses a standard CAN communication port channel, to request specific OBD 2 parameters from OBD 2 services (also known as OBD 2 Modes). The response is stored in one or more OXYGEN data channels.

Features:
- Select OBD Parameters from database or user defined xml files.
- Support CAN Standard or CAN Extended requests and responses
- Support variable refresh rates per OBD parameter (from 0.01 to 10 Hz)
- Support additional scaling parameters if necessary

Getting started

	Start OXYGEN and open the Channel List
①	Select one CAN port, press + and go to *OBD2*
②	Select *New parameters from database..* to select channels from a predefined database or *New parameters from file..* to select channels from a user defined database
③	Select one or more channels from the channel list and press *Ok*
④	Add or change predefined CAN response ids
⑤	Change the request timeout if necessary. This specifies the minimum time span msec for requesting different OBD2 Parameters
⑥	Change the preset frequency if necessary
⑦	Press *Add* when finished
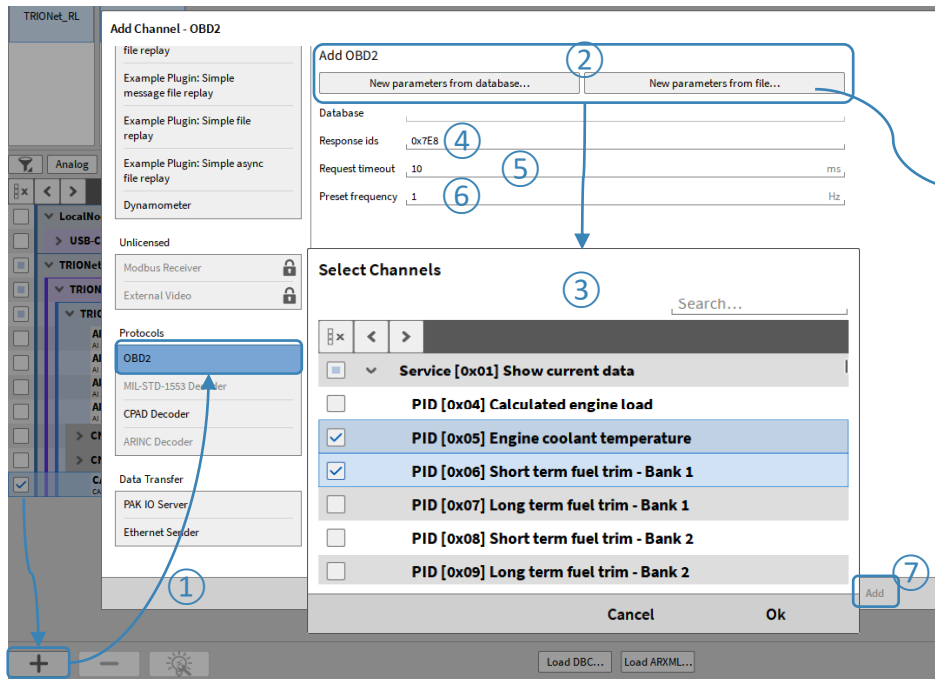
Information about the structure of user defined config diles can be found in the OXYGEN OBD2 manual

④
The default parameter for the response id is "0x7E8", which is the standard response identification of a standard CAN OBD communication (11 bit). Different ECU's can communicate with another response id. For a CAN extended communication port use a valid CAN extended response id (e.g. "0x18DAF110").

OBD 2 allows the communication with multiple ECU's to the same OBD 2 request. For this multiple response ids are allowed ("0x7E8 0x7E9"). A mix of CAN standard and extended response ids is illegal

Channel Settings

① All channels for a selected CAN port are summed up in a channel group.

② The assigned CAN channel and the timeout can be configured in the properties of the *OBD2 channels* group

③ The OBD2 signals store the values from the OBD parameter response.

④ Scaling and Frequency can be changed in the signal properties