DEWETRON

SDK

OXYGEN SDK
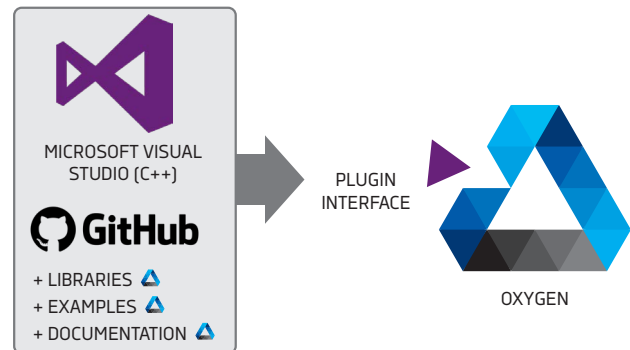## FOR PROGRAMMERS

Windows

Linux

Red Hat

Ubuntu

SOFTWARE DEVELOPMENT KIT FOR PROGRAMMERS

With OXYGEN SDK, you get an open platform to develop your own plugins or extensions for DEWETRON's measurement software OXYGEN. Depending on your requirements, you can choose between two software development kits: OXYGEN SDK and TRION SDK.

AVAILABLE FEATURES FOR THE PLUGIN

> Advanced calculations and data processing
> 3rd party data output
> Data output
> Special export formats
> Read and write data from/to numeric channels
> Create new channels
> Create config items for setup save/load and user config
> Numeric, text, channel list

This and much more allows you to extend OXYGEN with additional calculations and data I/O.

MICROSOFT VISUAL STUDIO (C++)

GitHub
+ LIBRARIES
+ EXAMPLES
+ DOCUMENTATION

PLUGIN INTERFACE

OXYGEN

AVAILABLE FUNCTIONALITY

> Custom QML-GUI for Add Channel dialog for easy user setup
> Custom QML-GUI for data export and special options
> User configuration elements
> Text and number inputs for all kinds of configuration
> Combo boxes (drop-down & custom input)
> File picker for selecting files
> Read data from any OXYGEN channel
> Create new OXYGEN channels and write data into

SUPPORTED OPERATING SYSTEMS

Following operating systems are supported by OXYGEN:
> Microsoft Windows
> Ubuntu LTS Linux (Focal Fossa)
> Red Hat Enterprise Linux (RHEL)

Compatible (and free) alternatives to RHEL:
> Rocky Linux
> Alm Linux
> Oracle Linux

If OXYGEN does not provide a certain function, create it on your own.
The SDK includes the framework, manual and examples to quickly get started using the Microsoft Visual Studio C++ toolchain.
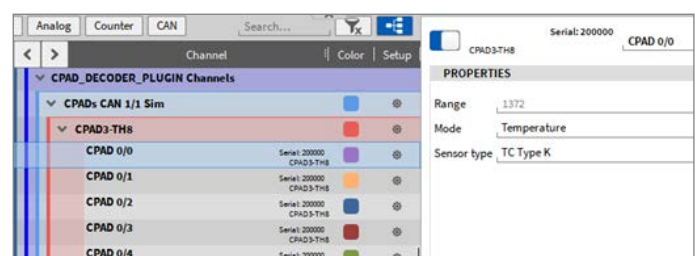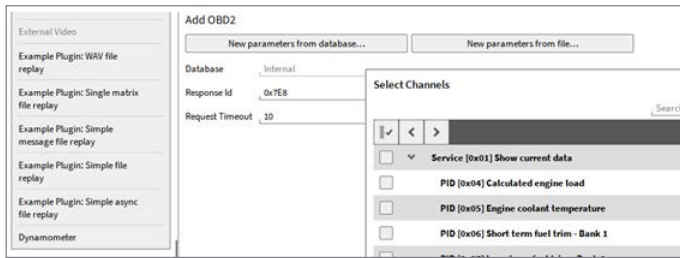
GitHub

Get started and visit
https://github.com/dewetron/OXYGEN-SDK

3 EXAMPLE PLUGIN FUNCTIONALITIES

1) XR/CPAD PLUGIN

> Use OXYGEN CAN channel as data source
> Process CAN messages and extract scalar channels
> Create and send CAN messages for configuration change of XR or CPAD modules
> Auto-detect attached modules and create channels dynamically

2) OBD2 PLUGIN

> Use OXYGEN CAN channel as data sink and source
> Query OBD-PIDs and process CAN messages, extract scalar channels
> Uses file picker for selecting a data description file

3) FREQUENCY MEASUREMENT

> Use OXYGEN scalar channel (synchronous) as data source
> Calculate frequency and output a synchronous channel per input channel
> Use 1-to-many input channels with channel picker
> Also working in Analysis/Offline mode
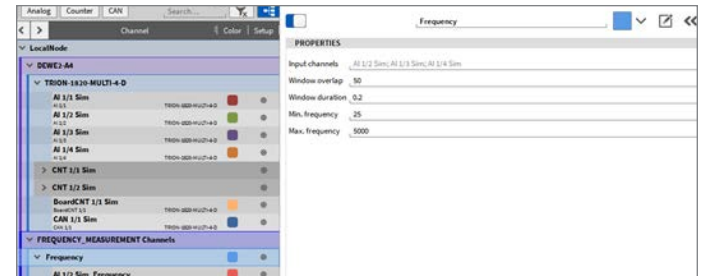
SPECIAL DATA SOURCES

SCPI QUERY PLUGIN

> Query data from SCPI enabled devices (via TCP/IP)
> Display acquired channels in OXYGEN
> User selectable INIT Command and cyclic Query Command
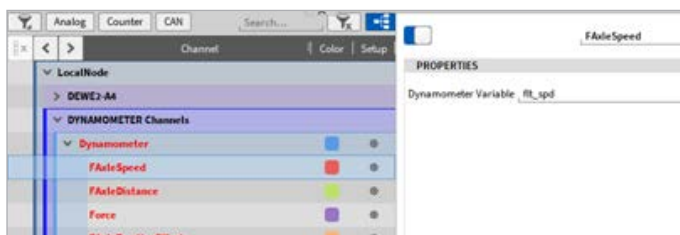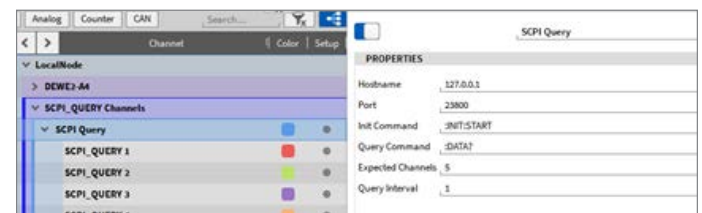
AK DYNO PLUGIN

> Query data from dynamometer via AK protocol via TCP/IP
> Display acquired channels in OXYGEN
> Modify acquired channels

MODBUS TCP/IP

> Query data from 1-to-many Modbus TCP endpoints
> Rich QML-GUI for adding the desired channels
> Read an XML description file for available channel and decoding information
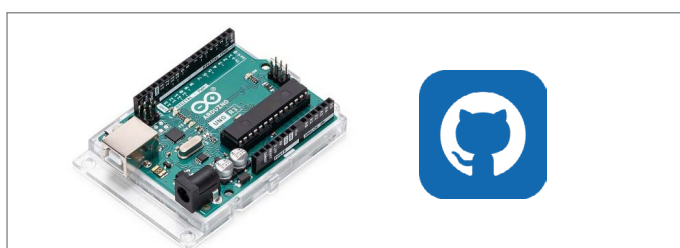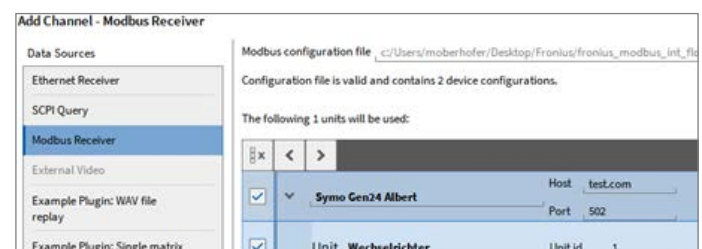

SERIAL CSV READER

> Use a serial port for data input
> Parsing of ASCII values
> Auto-detect number of channels

Fork us on GitHub and extend the functionality:
https://github.com/dewetron/OXYGEN-SDK-SerialCsv

SPECIAL DATA SINKS

ETHERNET SENDER

> Select 1-to-many channels to be sent
> Select an interval and transmission delay
> Convert data to Float and pack into UDP packet
> Send to selected destination
> Create an XML description file for data interpretation on destination
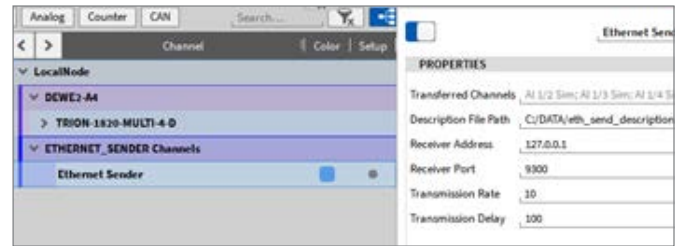
SPECIAL EXPORTER

DynaWorks

> Export acquired data (.dmd) to Dynaworks neutral file format
> Add meta data to exported file

DIAdem

> Export acquired data (.dmd) to DIAdem .dat file format
> Create an extra timeline for different sampling rates

TRION SDK

The TRION SDK helps you, to build your own measurement application based on the DEWE3 and TRION/TRION3 hardware platforms. It also supports the use of TRIONet3 and NEX[DAQ].

The API can be used by any programming language that is able to load a .dll and .call C style function.
Examples are provided for C, C++, C# and Python.
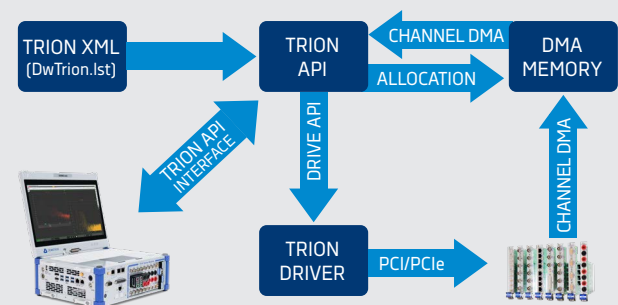
ABOUT DEWETRON

DEWETRON is a manufacturer of precision test & measurement systems designed to help our customers make the world more predictable, efficient and safe. Our strengths lie in customized solutions that are immediately ready for use while also being quickly adaptable to the changing needs of the test environment and sophisticated technology of the energy, automotive, transportation and aerospace industries.

With more than 35 years of experience and innovation, DEWETRON has earned the trust and respect of the global measurement technology market and employs more than 120 people across multiple locations.

There are more than 25,000 DEWETRON measurement systems and over 400,000 measurement channels in use in well-known companies worldwide.

DEWETRON's quality is certified in compliance with ISO 9001 and ISO 14001. The high integrity of the measurement data is guaranteed by our own accredited calibration lab according to ISO 17025.

Get to know our
GLOBAL OFFICES

THE MEASURABLE DIFFERENCE.

DEWETRON

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