THE MEASURABLE DIFFERENCE.



OXYGEN TRAINING > ETHERNET SENDER

DEWETRON

PUBLIC

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GENERAL

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If the system has been configured by the DEWETRON factory, the Ethernet sender plugin is already configured

If the Ethernet sender plugin was delivered separately from the measurement system (or in combination with a TRIONet), the Ethernet sender plugin needs to be added manually to the OXYGEN pro-gram directory after the installation is finished.

To do so, copy the file ethernet_sender.plugin to the program directory (typically C:\Program Files\DEWETRON\Oxygen\bin; Admin rights required).

Please note that the Ethernet sender plugin is compatible with OXYGEN R5.0 and above and incompatible with OXYGEN R3.7 and below.

<?xml version="1.0"?> E<Receiver> -DataStream name="TestStream" <UDPSource address="0.0.0.0" port="50000" /> Channels> <Channel name="Acceleration X" short name="Acceleration X" unit="m/s²" description="Acceleration in X-Direction" type="double"> <Sample> <NumericValue byte offset="0" bit offset="0" bit length="32" byte order="msb first" type="float" /> </Sample> </Channel> <Channel name="Acceleration Y" short name="Acceleration Y" unit="m/s?" description="Acceleration in Y-Direction" type="double"> <Sample> <NumericValue byte offset="4" bit offset="0" bit length="32" byte order="msb first" type="float" /> </Sample> </Channel: Sample> <NumericValue byte offset="8" bit offset="0" bit length="32" byte order="msb first" type="float" /> </Sample> </Channel: Channel name="Gravity X" short name="Gravity X" unit="g" description="Gravity in X-Direction" type="double"> Sample> <NumericValue byte offset="12" bit offset="0" bit length="32" byte order="msb first" type="float" /> </Sample> </Channel: Channel name="Gravity Y" short name="Gravity Y" unit="g" description="Gravity in Y-Direction" type="double"> d<Sample> <NumericValue byte offset="16" bit offset="0" bit length="32" byte order="msb first" type="float" /> </Sample> -</Channel:</pre> channel name="Gravity Z" short name="Gravity Z" unit="g" description="Gravity in Z-Direction" type="double"> Sample> <NumericValue byte offset="20" bit offset="0" bit length="32" byte order="msb first" type="float" /> </Sample> </Channel: -Camples

OXYGENs Ethernet sender plugin allows to send measurement data via UDP cyclically to another OXYGEN instance or other 3rd party application providing the following benefits:

- Automatic creation of xml-file for Oxygen Ethernet Receiver configuration on the client side
- Send actual (not averaged) data in intervals from 1 to 100 Hz
- Synchronized data transmission with timestamps

CONFIGURATION



Start OXYGEN and Open the Channel List
Select the channels that shall be

transferred via UDP by marking their respective check box on the left hand side

(3) Click on the + button

(4)

Click on Ethernet Sender in the Data Transfer group

5 Click on the Add button



CONFIGURATION



DEWETRON (1)An ETHERNET SENDER Channels section including the just created Ethernet 🍾 📲 Search. $\ll \gg X$ \sim Ethernet Sender Sender will be added to the Channel List 8× < > Channel : Color Setur PROPERTIES LocalNode (2)A click on the Setup button will open the := Transferred Channels Al 1/1@[RemoteNode]; Al 1/2@[RemoteNode]; Al 1/3@[RemoteNode]: Al 1/4@[RemoteNode] ETHERNET SENDER Channels Description File Pat d:/DATA/eth_send_description.xml Ethernet Sender **Ethernet Sender settings** Receiver Address 127.0.0.1 [RemoteNode] Receiver Port 9300 10 Hz Transmission Rate TRION-2402-MULTI-4-D 100 Transmission Delay Al 1/1@[RemoteNode] AI 1/1@ [RemoteNode] TRION-2402-MULTI-4-D Al 1/2@[RemoteNode] The UDP port can be The channels to be specified in the transferred can be **Receiver Port section** changed by clicking to the button right-hand to the The transmission rate transferred channels line. (data output rate) can After clicking, a popup will be set from 1 to 100 Hz open a list containing all channels that can be transferred. The location the xml-file is The IP port of the The data Transmission stored to is defined in the ethernet data receiver Delay (data output **Description File Path** delay) can be set up to (device on which the data section. The file path and 2000 msec is decoded), must be file name can be freely specified in the Receiver defined Address section

DATA SYNCHRONIZATION

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Data transferred by the Ethernet Sender is timestamped

The timestamp is a relative one and includes the milliseconds passed since midnight

The synchronization mapping base on the receiver side is the full second

<synchronization mapping_base="second"></synchronization>
<relativetimestampchannel base="midnight" unit="ms"></relativetimestampchannel>
<sample></sample>
<numericvalue bit_length="32" byte_offset="0" type="unsigned"></numericvalue>

EXERCISE



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Output data over Ethernet Sender and feed back via **Ethernet Receiver**

