



OceanView 4 - Basic

Software to configure and remotely operate SubCtech sensors and to display measured values



operation manual

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1. General information

1.1. About this document

Warning:



Note:



• Practical tips

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1.3. Liability

This manual has been developed with the highest due diligence. Nevertheless, we cannot provide any warranty whatsoever for absence of errors and accuracy of the given information. We disclaim any liability for damage that might, directly or indirectly, result of using this manual, as long as they have not been caused intentionally or through gross negligence.

Please note: in view of our continual improvement policy, the design and specifications of our products may vary from those illustrated in this brochure.

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1.5. Support

We encourage exchange of information and cooperation! If any queries or problems occur, please contact us. To evaluate your concern, we need as much detailed information as possible, for example:

- Hardware and software configuration of your PC or laptop
- Program version
- Description of problem(s)
- Data logs
- Can the equipment be returned to SubCtech or an authorized dealer if required?



All SubCtech manuals are available as PDF downloads from our FTP-Server subject to a special username and password – allocated on application.



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1.6. Safety

This Software has to be operated by experienced and trained personnel only. All procedures, operations and measures must be approved by the supplier prior to operate the system.

1.7. Manufactory Contact

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support:	support@	subCtech.com

1.8. Abbreviations

ΑΡΙ	Application Programming Interface.
CRC	Cyclic Redundancy Check.
FTP	File Transfer Protocol
GSM	Global System for Mobile Communication.
HDLC	High Level Data Link Control. IEEE binary protocol
HTML	Hypertext Mark-up Language.
IEEE	Institute of Electrical and Electronics Engineers.
LAN	Local Area Network
NetDI	Network Data Interface, SubCtech's high-performance data logger
NMEA	The N ational M arine E lectronics A ssociation (NMEA) is the unifying force behind the entire marine electronics industry, bringing together all aspects of the industry for the betterment of all in our business. SubCtech is member of the NMEA.
ODAS	Oceanographic Data Acquisition System.
PLC	Programmable logic Controller. In German SPS: Speicherprogrammierbare Steuerung, IEC61131-3
RS-232, RS-485	IEEE physical layers 1 of the ISO-communication model, later changed to EIA RS-232, RS-485
SmartDI	Smart Data Interface, SubCtech's former data logger
UNESCO	United Nations Educational, Scientific and Cultural Organization.



2. Installation

2.1. Preface

In the past OceanView only received data from the OceanPack via RS232 or RS485 interface. Since these hardware interfaces become more and more obsolete, different solutions for the data transfer are used.

1. USB to RS232/485 converter

These converters extend a local PC with an RS232 port, so the OceanPack can be connected almost directly to a PC located close to the OceanPack. For longer distances RS485 converters are recommended.

These transmission interfaces need exclusive additional cabling.

2. RS232 to ethernet converter

These converters use a local area network (LAN) to transmit the measured data which is nowadays available on most research vessels. The DataServer is connected to this LAN.

Both converter types use virtual comports to emulate the serial interface.



2.2. The installation

 Depending on the used converter different configuration methods should be conducted: In case of a USB converter there is nothing special to do after it is detected by Windows[©] because OceanView will configure the serial port. In case of an ethernet converter the configuration is described in chapter <u>Installation of Moxa NPort</u> <u>Serial-Ethernet-Converter</u>.



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- 2. Install the Microsoft[®].NET runtime environmental Version 4.5 or later only if not already installed.
- 3. Start the OceanView installer and follow the instructions of the installer program.



• You DO NOT NEED to change the COM port settings in Windows[©] !



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2.2.1. Installation of the OceanView Software

In this chapter you learn how to install OceanView. Your actual Version could be slight different, but has to be version 4. The OceanView Software will be delivered in a setup file style which needs **administrator rights** to be installed correctly. After successful installation process no administrator rights are needed to run OceanView Software.



Since the user of should only have administrator during installation processes, the SubCtech program data folder must be given write access for the default user group to store application data in this folder.

The OceanView installer should do this on Windows7 and newer systems.

2.2.2. Update preparation

In case of updating OceanView

- copy the content of the folder "C:\programdata\subCtech" to a backup destination, or use the "Export Sensor Configuration" function in the sensor configuration menu for every installed sensor, and "Save as new screenset" in the Screenset Menu to save the current settings.
- 2. Uninstall the OceanView via Windows[©] Control Panel \rightarrow Software \rightarrow OceanView
- 3. Install new OceanView version according to the following chapter

2.2.3. Installation

- 1. Start the OceanView installer "OceanView.Setup.msi"
- 2. Following the welcome dialog, the installer asks to accept the end-user licence agreement.
- 3. After that different installation configurations can be chosen.

波 OceanView 4 Setup	
Choose S CubCtech Choose	etup Type the setup type that best suite your neede
ß	<u>Typical</u> Installs the most common program features. Recommended for most users.
	Custom Allows users to choose which program features will be installed and where they will be installed. Recommended for advanced users.
No.	Complete All program features will be installed. (Requires most disk space)
	<back mext=""> Cancel</back>

4. Choosing Typical or Complete installation leads the same result of a complete installation.



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on the icons in the tree below to chang	e the way features will be installed.
	The complete package.
2 Description	This feature requires 0KB on your hard drive. It has 1 of 2 subfeatures selected. The subfeatures require 3322KB on y

🛃 OceanView 4 Setup	x
Ready to Install CubCtech The Setup Wizard is ready to begin the Typical installation	
Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	
< <u>B</u> ack Install Cancel	

Choosing Custom installation opens another dialog where the installation path and the extent of the OceanView installation can be set.

After confirming the chosen installation method the Windows[®] operating system requests - in case the current user has no administration rights - if OceanView really should be installed.

5. In the last dialog there are activities listed that will be started after closing the dialog.



"Launch OceanView 4" means that application just now installed will be started.

"Show Manual" opens a pdf-reader in case the OceanView manual was part of the installation.

"Visit <u>http://www.subctech.com</u>" opens the website in an internet browser.



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2.3. Removing

With the OceanView installation software you have some options to remove the software:

- 1. Use the START → Windows[©] Control Panel → Software → OceanView (recommended for Versions of OceanView older than 4.0.16.37)
- 2. Start OceanView.Setup.msi
- 3. choose "Remove"

😥 OceanView 4 Setup	B OceanView 4 Setup
Modify, Repair or Remove installation	Remove OceanView 4
SubCtech Select the operation you wish to perform.	SubCtech You have chosen to remove the program from years computer.
Remove	Click Remove to remove OceanView 4 from your computer. If you want to review or
Removes OceanView 4 from your computer.	change any of your installation settings, click Back. Click Cancel to exit the wizard.
< <u>B</u> ack <u>N</u> ext > Cancel	< Back Remove Cancel

- 4. confirm the Windows[©] operating system request if dialog appears
- 5. confirm the installer completeness message.



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3. Operation

The main purpose of OceanView software is to collect and log data generated by the connected sensors, and to visualize these values.

OceanView gives the opportunity to show single measurement in a numerical display or a random number of different measurements in a graph assigned over a time interval.

Furthermore, it is possible to log measurements in user-defined files and to program alerts depending on user-defined thresholds controlling signal lamps or something like that.

On the other side, it is possible to control OceanView and connected sensors remotely with the aid of external buttons.

3.1. About OceanView's data transfer

OceanView only receives and sends data in NMEA-0183 format. This format consists of the start delimiter "\$", the talker id describing the data source and the used protocol, several comma separated data fields, an optional checksum (marked by "*", in hexadecimal format) and the string delimiter " r^n " (aka <CR><LF>).

The NMEA protocols generated by SubCtech sensors are described in a separate document.



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3.2. First Start

Ports	Baudrates
COM48	☑ 115200
COM61	▼ 57600
COM1	☑ 38400
COM5	☑ 19200
	9600
	☑ 4800
	Q Search

At the very first start OceanView prompts a dialog to search for connected sensors.

This dialog shows all available serial ports on the PC and supported baud rates.

If the port and baud rate of the connected sensor is known all other parameters can be unchecked what speeds up the search. Clicking the Search button starts the search.

arch Sensors	
Sensors found	
COM48 - 4800baud - GPS-Sensor-1	
COM61 - 38400baud - SDI-20170221	
COM1 - 115200baud - CO2-DLZEGAMK2-DEMO-0-1605-01	
r	
	and the second sec
	Connect
	Connect
	Connect
	Connect

After a while the dialog either shows the found sensors

or a message that no sensors were found.



Close

In the first case clicking the Connect button populates all checked sensors to the Sensor management system of OceanView for further use.

The second case requires troubleshooting described in chapter <u>Troubleshooting</u>.



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3.2.1. Connections state box



After the successful search the known sensor names and parameters like comport, baud rate and connection stability were shown in the connections status field in the upper right corner of the main screen.

At first for SubCtech sensors the serial number is used as the sensor's name. It can be changed to a more user friendly name.

Sensors which are not compatible to SubCtech sensors make OceanView prompt a dialog in which an

unchangeable sensor name must be given.

The connection stability display is triggered by every data set received by OceanView from the belonging sensor. OceanView requests in regular intervals data from the sensors if they do not send data by themselves. If there is no data received for a while the status changes from "Connection stable" over "Possible connection loss - timeout 1/3", "timeout 2/3", "timeout 3/3" to "Connection lost". Any valid data frame received from the sensor changes the state back to "Connection stable".

3.3. Configuration

3.3.1. Sensor data configuration

At first the received data fields only contain numbers or text. This information is less meaningful since there is missing an appropriate name and the physical scale. Both of them and more parameter can be set in the configuration dialog.

To get access to the configuration dialog the operator has to log in.

🔎 Operator Login

After typing in the right password, an additional menu item appears and the operator's login menu item changes to Logout.

💽 Configure 🛛 🔑 Logout



• After one hour, the operator will be logged off automatically.



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Clicking the Configure menu opens the sensor configuration dialog.



This dialog shows on the left side the names of the connected sensors. Choosing one of the names changes the content of the right panel to a tab view.



• Depending on the NMEA protocols supported by the chosen sensor more or less tabs are available.

3.3.1.1. The Basic Config tab

GPS-Sensor-1	Settings for GPS-Sensor-1
L SMM-20170221	Basic Config Device Clock Setup Timer Settings Device Service State Datafields
	Sensor Information GPS Sensor Device Connected on COM48 Transmitting at 4800 Average time between transmissions is 0,00 seconds Export Sens Configuratio
	Sensor Settings Custom Name GPS-Sensor-1

shows information about the sensor like the sort of sensor, serial number, hardware version, software version, comport, baud rate and average time between two data transmissions.

In the custom name text box the sensor can be given a more user friendly name. In case the selected sensor contains a power management module a "Device power off" button is shown. A click on this button sets the sensor to its standby mode after confirming the shutdown dialog.

In case the selected sensor is a battery management system an "Edit

Configuration" button is shown. A click on this button opens a dialog where the battery parameters can be set or edited.

The save and close button saves the changes to the local database and closes the configuration dialog. The save button does the same but keeps the dialog open for further changes made to other tabs.

The refresh button requests a new version of parameter list from the sensor.

The disconnect button disconnects the sensor from the software after confirming.

It can be reconnected by starting the sensor search.

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OceanView allows to export the current sensor's configuration data so it can be copied to another PC. Configuration data exported earlier can be imported into OceanView.

To *export the current sensor's configuration data* press the associated button. A dialog opens where the destination directory can be chosen. OceanView saves the configuration data in XML formatted file named after the sensor's factory name in case of a SubCtech sensor. Files of generic sensors are named with the custom name given by the user. OceanView asks if it should overwrite an already existing file.



• Change the destination directory in case you want to keep different configurations of one sensor.

To *import existing configuration data* e.g. provided by SubCtech support, press the associated button. A dialog opens where an XML file can be chosen. OceanView checks if the data fits for the currently selected sensor. In case of a successful import, OceanView prompts a message box the save the new configuration data to the system.



The current configuration will be overwritten without any notification when OceanView is shut down regularly.

3.3.1.2.The Device Clock Setup tab

CO2-DLZEGAMK2-DEMO-0-1605 SDI-20170221	Settings for CO2-DLZEG	GAMK2-DEMO-0-1605-	01		
	Basic Config Device C	ce State Datafields			
GPS-Sensor-1	Time Settings (updates	s every 5 Seconds)			
	Sensor Time	2017-06-13 0	8:06:59,171		
	Set Manual Time	13.06.2017	10:06:46 🚖 [Set Manual Time	
	Current PC-Time	2017-06-13	Transmit PC Time		
	Current PC UTC	2017-06-13	Transmit PC UTC Time		
	Current UTC	2017-06-13	08:06:55	Transmit UTC Time	
	NOTE: Settin	ng the real time	clock will caus	e the sensor	
	to restart.				

shows the current sensor time.

This time can be set depending on different clock sources and formats.

Selecting date and time and clicking "set manual time" sets the sensor clock to the selected date and time.

Clicking "Transmit PC time" uses the clock of the host PC and sets the sensor clock to the local date and time.

Clicking "Transmit PC UTC time" uses the clock of the host PC and sets the sensor clock to the calculated UTC ("Coordinated Universal Time") (recommended if no GPS time is available). If a GPS receiver is connected to OceanView its time

information can be used best.

Clicking the "transmit UTC time" button transmits the next received UTC timestamp to the sensor.



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3.3.1.3.The Timer Settings tab

CO2-DLZEGAMK2-DEMO-0-1605	Settings for CO2-DLZEGAMK2-DEMO-0-1605-01							
SDI-20170221	Basic Config	Device Clock Setup	Timer Settings	Device Service State	e Datafields			
	Powertin	mer						
				yyyy-mm-dd	hh.mm:ss			
				[seconds]	[seconds]			
				6				
				r.				
					Set new power timer parameters			
	Alarm tim	ar.						
	0 s	0 ms		0	s 🗌 🗆 ON			
					ON			
					Set new alarm interval			

3.3.1.4.The Device Service State tab

CO2-DLZEGAMK2-DEMO-0-1605	Settings for CO	D2-DLZEGAMK2-DEM	10-0-1605-01		2		
	Basic Config	Device Clock Setup	Timer Settings	Device Service State	Datafields		
	Ĺ	DN 55					
	c	Current Sensor state	e Operate				
		alid since	2017-08-	18	07:44:44		
	١	lew Sensor state					
	1	Set new state					
	c	urrent Sensor configu	ration				
	Default Configuration						
	S						
	1	Default Configruation					
		appear configuration fil	Edi	configurations list	Edit description		
	-			10			
		C. ODI DATA MILECC	20 041120020.1	66			
				Set	new configuration		
				Save	Save and Clo		

be available on the local operating system of the sensor.

shows textboxes to control the wakeup timer and uptime intervals of the selected sensor if the sensor supports this function.

shows in the top section the LDN ("logical device number", default: 55). The next line shows the current operating state of a SubCtech data logger and the date since the state is valid.

Below this, a new state can be set by selecting one from the option box and clicking the button.

The state display will be updated constantly.

Software version V6.14 and upper of the SubCtech data logger firmware supports a remote control of the sensors' configuration.

As before the different configuration files must

The list of configuration file names and their descriptions is stored in a local data base on the host PC.

OceanView requests the file name of the current sensor configuration running and receives its file name.

known Sensor co	nfiguration	
Add received conf	figuration ID to configurati	on ID list?
	(-

In case of a known configuration OceanView displays the description in the corresponding text box.

In case of an empty data base or an unknown configuration file name, a dialog opens asking the user for adding the name to the list. Closing this dialog without adding the name to the list makes OceanView prompt this dialog again only after reopening the sensor configuration dialog.



It is recommended to add the configuration file name and description to the data base.

In Order to do this a dialog opens with two text boxes. In the upper box OceanView filled in the received file name.

In the lower box the user can type in a meaningful description of the configuration, e.g. like in this

example the working interval of the sensor. Clicking OK adds the file name and description to the data base. The configuration list can be edited by clicking the corresponding button.

onfigurations		
Filename	Description	
C:\SDI\DATA\MK2CO2C\MK2CO2C.PLC	Default Configuation	
< [m	,

Double clicking on a list entry, a dialog opens in which the file name and the description can be edited equivalent to the dialog for adding a new configuration description combination.

It is also possible to add a new combination to the list by double clicking the empty line below the last entry or in case of an empty list the first line.

Clicking the save button or the save and close button, OceanView applies the new values to the data base.

The sensor configuration is changed by typing in the new configuration file name or selecting the new configuration from the dropdown list and clicking the set new configuration button.

Then OceanView sends the new file name to the sensor.

If this file name is a no valid configuration file name (e.g. wrong typed name) the sensor sends an error message which will be displayed by OceanView and must be confirmed by the user.

If the file name is valid, the sensor changes the configuration and needs to be restarted by altering the device service state from operate to standby and back to operate.



3.3.1.5.The Datafields tab

CO2-DLZEGAMK2-DEMO-0-1605	Settings for CO2-DLZEGAMK2-DEMO-0-1605-01							
SDI-20170221	Basic Config	Device Clock Se	tup T	mer Settings	Device Service State	Datafields		
GPS-Sensor-1	CO2-DL	ZEGAMK2-DEM	Index	Datafield Na	ames	Sample Value		
			1	Field 1		\$PSDS1		
			2	Field 2		1		
			3	Field 3		2		
			4	Field 4		D		
			5	Field 5		1		
			6	Field 6		0		
			7	Field 7		2017-06-13		
			8	Field 8		08:08:11		
			9	Field 9		828		
			10	Field 10		100		
			11	Field 11		374,2		
			12	Field 12		23,99		
			13	Field 13		22,9		
			14	Field 14		51,48		
			15	Field 15		1003,56		
			16	Field 16		12,31		
			17	Field 17		374,2		
			18	Field 18		374,2		
			19	Field 19		1		
	۰ III	•	•		m		F.	
	And a second sec							

is divided into two panels. The left panel shows a tree view of the chosen sensor and its supported NMEA protocols if there are more than one available. The right panel shows four columns: one for an index, one for the data field name, one for the data field value and one for the measurement unit of the selected sensor.

The default name of the data fields is Field and a numerical index starting at 1.

Enter new nam	ne for: Field 11	
field 11		
Edit measurem	ent-unit text:	
		C 1

Clicking a line opens a dialog where the name and the measurement unit can be set.

These two parameters will be used in further operations.

Clicking the Save button or the Save and Close button applies

the new values to the data base.

3.3.2. Set up Satellite Modem

Part of OceanView "Expert".

3.3.3. Workspaces

Part of OceanView "Expert".



3.3.4. GPIO

🖳 GPIO Test				
Output name	Output state	Alias		
COM2.Dtr	ON	COM2.Dtr	Apply	Reset
COM2.Rts	ON	COM2.Rts	Apply	Reset
COM3.Dtr	ON	COM3.Dtr	Apply	Reset
COM3.Rts	ON	COM3.Rts	Apply	Reset
COM6.Dtr	ON	COM6.Dtr	Apply	Reset
COM6.Rts	ON	COM6.Rts	Apply	Reset
Input name	Input state	Alias		
COM2.Cts		COM2.Cts	Apply	Reset
COM2.Dcd		COM2.Dcd	Apply	Reset
COM2.Dsr		COM2.Dsr	Apply	Reset
COM2.Ri		COM2.Ri	Apply	Reset
COM3.Cts		COM3.Cts	Apply	Reset
COM3.Dcd		COM3.Dcd	Apply	Reset
COM3.Dsr		COM3.Dsr	Apply	Reset
COM3.Ri		COM3.Ri	Apply	Reset
COM6.Cts	Key pressed	COM6.Cts	Apply	Reset
COM6.Dcd		COM6.Dcd	Apply	Reset
COM6.Dsr		COM6.Dsr	Apply	Reset
COM6.Ri		COM6.Ri	Apply	Reset

This dialog can be used to test input controls like push buttons or output controls like lamps connected to the flow control lines of the serial ports of the data server. It shows all available control lines.

In the upper part of the dialog the output lines can be set on or off by pressing the appropriate button. The button's caption shows the next output state ("ON" means the output is switched off - press to switch on).

The lower part of the dialog shows the state of the input lines. In case an external push button is pressed, the corresponding field shows "Key pressed".

The three rows on the right side allow the operator to rename the lines with more understandable names.



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3.4. Display of sensor measurements

The different methods of displaying values can be accessed through the Windows menu.



3.4.1. Search Sensors

This menu item starts the sensor search known from the <u>first start</u> chapter. It makes it possible to search for sensors newly attached to the system. The search can be accessed through the search toolstrip , too.

3.4.2. Realtime Dataviewer



The Realtime Dataviewer shows a graph of a random number of measurements over a time interval.

The measurements to be displayed can be selected by clicking the configuration icon in the upper right corner of the window.

This changes the Dataviewer window's appearance into a tab view with two tabs.

The other icon changes the Dataviewer window's appearance into a numerical display of the selected measurements.

This dialog can be accessed through the

toolstrip 🕍, too.





In the *realtime dataviewer settings tab* the graph can be configured by giving a custom title, by setting the visible time interval, by setting all graphs synchronic, by setting the Y-axis limits manually and by adding alert limits.

ttinge Signals						
GPS-Sensor-1	Channel	Visible	Color	Last Value	Unit	
Battery-Simulator	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 1	1		\$PSDS1		
COLDELEGRANE DEMONTRODU	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 2	回		1		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 3	10		0		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 4	10		D		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 5			1		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Field 6	0		0		
	CO2-DLZEGAMK2-DEMO-0-1605-01.Date	10		2017-09-07		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Time	12		08:27:55		
	C02-DLZEGAMK2-DEMO-0-1605-01 Field 9	10		954		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 10	10		196		
	CO2-DLZEGAMK2-DEMO-0-1605-01.Reld 11	10		372,8		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 12	10		26,17		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 13	10		22.9		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 14	10		51,59		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 15	V		1003,27		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 16	10		11,97		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 17	10		372.8		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 18	12		372.8		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 19			1		
	CO2-DLZEGAMK2-DEMO-0-1605-01 Reld 20	10		0		
Return to Graph	C02-DLZEGAMK2-DEMO-0-1605-01 Reld 21	1		0		
	002 DI 250 MW2 DEMO 0 1605 01 D-44 22	100		0		

The "Return to graph" button changes the view back to the graph including all settings made. In the *realtime dataviewer signals tab* the data fields of the sensors that shall be displayed in the graph can be selected.

First, one of the sensors need to be selected.

In case this sensor supports more than one NMEA-protocol one has to be selected.

On the right side, the available data fields will be shown in a list with four columns.

The first column shows the data field name combined the sensor's name. The

data field name can only be set in Sensor configuration dialog.

The second column named "visible" contains checkboxes. If the checkbox is checked the data field will be displayed as a curve in the graph. The third column shows the colour of the curve. A double click on the coloured field opens a dialog where another colour for the curve can be chosen.

The last two columns show the last received values and the measurement scales of the data fields given in the Sensor config dialog.

Any channel of any sensor can be chosen and combined with others to be displayed in the graph. A random number of realtime dataviewer windows can be opened.



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3.4.3. Value Display



The value display shows a single data field of an NMEA data frame sent by a sensor.

Depending on the format of the value to be displayed, there are further information.

In case of a numerical value OceanView averages the time between the incoming updates of the field, averages the last values, and determines the value drift. Text fields will be displayed without any interpretation.

Buffer Viewe GPS-Sensor-1 - \$GPGGA Index Field 1 Field 2 Field 3 Field 4 Field 5 Field 6 Date Time Field 9 \$PSDS1 2017-09. 08:27:48 37 SGPGSA \$PSDS1 D 2017-09 08:27:49 961 SGPGSV 2017-09.. SGPRMC 2 sPSDS1 0 08:27:50 29 3 SPSDS1 D 2017-09 08:27:51 950 n **\$PSDSG** 08:27:52 SPSDS1 D 2017-09 980 SPGRMT Batte ttery-Simula BCD 5 SPSDS1 D 2017-09. 08:27:53 6 SPSDS1 D 2017-09 08:27:54 2017-09... 954 BPC \$PSDS1 0 08:27:55 8 SPSDS1 D 2017-09 08:27:56 978 08:27:57 SPSDS1 D 2017-09. 10 SPSDS1 D 2017-09. 08:27:58 27 2017-09 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 SPSDS1 08:27:59 951 D 2017-09. \$PSDS1 08:28:00 29 SPSDS1 D 2017-09 08-28-01 951 2017-09. 08:28:02 SPSDS1 D 973 SPSDS1 D 2017-09 08-28-03 2017-09. \$PSDS1 08:28:04 D 2017-09.. \$PSDS1 08:28:05 952 SPSDS1 D 2017-09 08-28-06 976 2017-09. \$PSDS1 D 08:28:07 sPSDS1 D 2017-09 08:28:08 29 2017-09. \$PSDS1 08:28:09 950 2017-09... \$PSDS1 D 08:28:10 978 SPSDS1 D 2017-09 08:28:11 6 \$PSDS1 2017-09. 08:28:12 sPSDS1 D 2017-09... 08:28:13 953 2

3.4.4. Buffer Viewer

The Buffer Viewer shows all received data of the selected sensor and the selected NMEA-Protocol since the last program start.

3.4.5. Communication Viewer



The Communication Viewer shows the data traffic of the serial interfaces between OceanView and the sensors.

3.4.6. Alert Log

The Alert Log shows a list of occurrences of alerts. These alerts can be configured in the setting menu.

The alert log can be accessed through the toolstrip \triangle , too.



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3.4.7. Notepad

🥖 Notepad	-
1+-15	-
	 (
This is a note.	-
	I
	1

The Notepad is an editor to take notes.

To add a note the plus-sign must be clicked.

Clicking the hook confirms the end of editing.

To remove a note the desired note must be selected and then the minus-sign must be clicked.

		+-12	_
Inte		Note This is a note	
Name			

These notes will be available at the next program start until they will be removed. The alert log can be accessed through the toolstrip *log*, too.



3.4.8. Battery General Data Display

📮 Battery General Data		
Battery-Simulator 👻		
Main Voltage	28,222	V
Main Current	16,881	Α
State of Charge	51	%
Charge	48,095	Ah
Maximum Cellvoltage Minimum Cellvoltage	3,529 3,526	V V
Maximum Temperature Minimum Temperature	25,0 25,0	°C °C
Errors 0x0000 Warnings 0x0001	Extended Errors Oxi Extended Warnings Oxi	0000
V High charge current High discharge current Low State of Charge High cell voltage Low cell voltage High charge temperature Low charge temperature High discharge temperature Low discharge temperature SPB communication failure High voltage difference High temperature difference Temperature probe failure	Image: Constraint of the sector of the se	

The Battery General Data Display dialog shows the general data like main voltage, main current, the charge as percental and absolute value, the minimum and maximum values of the cell voltages and the temperature and the warning and error information of a connected battery management system.

In case of an unknown battery configuration theses parameters will be requested from the user before the Battery General Display dialog is opened. The necessary parameters for the general data display are listed in the upper half of the dialog.

Parameters entered in this dialog will only be valid until OceanView is closed.

They can be saved using the sensor config dialog. The Battery General Display dialog allows to show the general battery data for more than one battery.

Battery Configuration Parameter			x
Unknown Battery Configuration			
Please enter the parameters for Battery-Simula	ator		
Cells per Layer	1		
Layers per Block		-	
Batteries per Block			
Number of Blocks		- Ď	
Number of Temperature Sensors per Battery			
Nominal Cell Capacity		1	mAh
Maximum Charge Current			A
Maximum Discharge Current			А
Maximum Cellvoltage			V
			V
Minimum Celivoledge			
			_



• If OceanView finds multiple batteries during the sensor search, their names will be listed in the drop-down list. Selecting another battery may open the parameter request dialog, since the battery parameters are unknown. This will only happen once for every newly selected device.

3.4.9. Arrange Windows

The related menu items arrange the open windows in an automatic way known from the windows operating system.



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3.5. Settings

ø s	ettings	The settings menu gives access to different configuration dialogs.
00	Configure Alerts Configure UserLogs	
•	System Configuration	
	Toolbars	
~	Show connections panel	

3.5.1. Configure Alerts

OceanView provides the ability to set limits for different measurements and to set signals if these limits were exceeded.

Alert Overview							
Add Condition 🗙 Remove	Condition						
GPS-Sensor-1 PP-20170221	Name	Dataldentifier	Datafield	CompareMethod Method	Target Value	Target Value 2	Pin
CO2-DLZEGAMK2-DEMO-0-160							
۰ m •							

To add a new condition, click on the appropriate menu item in the dialog. Another dialog opens:

Generate a new alert message named	Default	if	
lease select one 👻			
Target Value		Sets Pin	
			Ok Cancel

The new condition should be given an appropriate name.

Generate a new alert message named New Condition



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Then a value source, the equation, the compare value and the action must be set:

Co	onfigure new alert o	condi	ition								×
	Generate a new	aler	tmessaq	ge named	New Condition			if			
	Battery-Simulator		•	BCD	•	Batten	y-Simulator.Ce	llvoltage 1			•
	> (is greater than)	•	4,2					V Sets Pin	COM48.Dtr	✓ High	-
										Ok	Cancel
										Ok	Cancel

The value source is the descriptive combination of names of the sensor, the protocol and the data field.

In case of exceeded limits a message is written to the log file, and if the "set pin"-checkbox is checked a hardware output can be set.

OceanView can control the control output lines DTR and RTS of the serial interfaces available on the system. If there is any alarm equipment (e.g. Lamps, flash lights etc.) connected to these line, OceanView can control its states.

3.5.2. UserLogs



In this dialog, the user can set the appearance and the destination-folder of user-defined log files.

Since not all data fields or NMEA-Frames are interesting for later use, the user can reduce the data to be logged.

This can be made by checking or unchecking the desired data fields of the sensors and their protocols in the tree view on the right side.

Checking the root checkbox of a sensor branch makes OceanView log all data of all protocols of this sensor.

Checking the root checkbox of a protocol branch makes OceanView log all data of this protocol.

The default log folder can be changed clicking the "browse" button. This opens a folder dialog where a new folder can be chosen.

There are two drop-down menus containing different timespans. The file interval describes the timespan of a log file. After the chosen timespan elapsed a new file is written. If a timespan greater than 12 hours is chosen, a checkbox is shown with what a file split at midnight can be programmed. This is used to synchronize several measurement systems.



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The Data interval describes how often received data is written to the log file, to minimize file access. This could lead to data loss in case of an instable power supply.

In case the "separated Logfiles" checkbox is checked, a separate log file is written for every chosen sensor.

3.5.3. Triggers

	T IF I	
ngger	Inggered Event	

On the one hand OceanView can switch the output control lines of the available serial interfaces, on the other hand it can react on the input control lines (CTS, DCD, DSR and RI) of the available serial interfaces and trigger an NMEA-message dispatch to the sensors. These triggers e.g. can be used to change remotely the operation state of SubCtech's data logger.

To add a new trigger the plus-sign must be clicked.

Trigger Trigger Source	Response Message Target	
Select source pin	✓ Select a target	¥
Trigger State	Message	
	Ok	Cancel

In the opened dialog, the drop-down list on the left side shows all available inputs. One trigger source must be chosen. The other drop-down list shows the available destinations. One of them must be chosen. The message box must contain an

NMEA-frame, which the selected sensor understands.

Clicking OK adds the new trigger to the list.

Existing triggers can be edited by marking the desired line and clicking the edit menu item or just double-click the desired line. The workflow is equivalent to adding a new trigger. To remove a trigger mark the desired line, click the remove trigger menu item and confirm the following dialog.

3.5.4. System configuration

OceanView can export and import its system configuration for backup or migration purpose. This comprises all data that is permanently available for the current system, like workspace and sensor settings.



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3.6. File menu

F	ile 👩 Settings 📑 Windows	The File menu gives access to the log directories by opening the folder in a
	Open Logs Folder	Windows Explorer instance.
	Open UserLogs Folder Open Downloads Folder	The first sort of log files contains all data from the sensors as a backup.
	Quit	The user-defined log files contain a user-defined (maybe reduced) scope of
		sensor data heids. The conhiguration of these files is described in chapter

<u>UserLogs</u>.

The Downloads folder contains the database dumps from SmartDI data loggers sorted by their custom name.

📰 Data transfer	Screensets	🔎 Operator
Download f	iles from	400
CO2-DLZEG	AMK2-DEMO-0-:	1605-01

The Quit menu item ends the program after confirmation. Then OceanView saves the windows arrangement to the local hard drive for the next program start. Other changes will be discarded if not saved before ending program.

3.7. Screensets



Sometimes the measurement purpose of OceanView changes temporarily, so there is a need of more than one display layout of OceanView. The current windows arrangement of the OceanView desktop can be exported as a screenset.

Existing screensets can be imported, overwritten, renamed or deleted.

A Screenset is composed of different windows like <u>realtime dataviewer</u> or <u>value display</u> displaying the desired data of connected sensors. This setup can be saved for later use in case another data display setup is needed. So it is possible to switch between different display setups. Screensets have no effect to the <u>UserLog's</u> configuration.

3.8. Data transfer

This menu shows a list of the connected sensors which support data transfer between their internal flash memory and the host PC. This means that there is no need to open the sensor's housing and to remove the CompactFlash-Card from the sensor to copy the data to the local file system. At the moment only SmartDi data loggers with firmware version 6.14 and newer support the remote data transfer from the sensor's database to the local file system.

It is recommended not to download data during data recording by OceanView since data loss can occur.

After selecting a sensor by clicking the corresponding menu entry, a new dialog opens. In this dialog the sort of data transfer can be chosen by selecting one of the different tabs.



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3.9. File transfer

🚽 Transfer Data from Sensor			
Sensor: CO2-DLZEGAMK2-DEMO-0-16	05-01		
Data transfer Hie transfer			
Files			
	add >>		
	add all		
	remove <<		
	remove all		
Target directory			
C:\Users\SubCtech\Documents\Oce	an View_Downloads		Browse
Change for all sensors			
Remove File		Start Dov	vnload

means to manipulate the sensor's file system. Here single or multiple files can be copied from or to, or can be removed from sensor's file system.

This function is for further use e.g. to copy new configuration files to the sensors operating system.



3.9.1. Data Transfer

🖳 Transfer Dat	a from Sensor	
Sensor: CO2-D	LZEGAMK2-DEMO-0-1605-01	
Data transfer	File transfer	
Retrieve o	lata from database	
Pasaiva	d data	
Tieceive	u vata	
Target directo	ny Mech\Documents\Docean\Vew_Downloads	Browse
Change fr	n all sensors	
C	lear Database Start	Download

means to manipulate the sensor's database. SubCtech's data logger compatible sensors record their measured values opposite to older systems in a single data file. This file is filled with data depending on the parameters set in the currently selected configuration file.

Target directory describes the path to the root folder on the local storage where the data will be written to. OceanView creates a sub-folder below the root folder with the sensor's custom name and writes the data file to this folder. The root folder path can be changed by clicking the Browse button and selecting another one in the folder-dialog. This path is also valid for the next OceanView sessions.

The database can be cleared by clicking the

corresponding button (not implemented yet).

By clicking **Start Download** OceanView sends the data base request string to the sensor. Then the sensor sends the current data file name, which OceanView also uses for the local copy. If the file name already exists, OceanView appends the received data to the file without requesting of deletion or renaming either of them.

The data sets received from the sensor are shown in the list box

After a successful data transfer, OceanView opens a dialog to notify the user. If the transfer suspends for more than five seconds, OceanView asks the user, whether to restart, or to terminate the download.

The data received by now is written to the local file.

The target directory where the database copy is located, can be accessed via the file menu.



4. Battery Data Display

4.1. Display General Battery data

🖶 Battery General Data		
PP-LI-50.4-74-GL-6000-1708-01 -		
Main Voltage	26,23	V
Main Current	4,610	Α
State of Charge	59	%
Charge	160,29	Ah
Maximum Cellvoltage Minimum Cellvoltage	3,873 3,100	v v
Maximum Temperature Minimum Temperature	31,7 28,7	°C °C
Errors 0x03CB Warnings 0x001D	Extended Errors Ox Extended Warnings Ox)122)122
Image: Second connect Image: Second connect <td< th=""><th>Image: Constraint of the sector of the se</th><th></th></td<>	Image: Constraint of the sector of the se	
Depth of Discharge	100	%
	Set 80%	

In case a battery management system ("BMS ", smartBMS[™] or PowerPack[™]) was found its general data can be displayed by choosing "Battery General Data Display" from the "Windows" menu.

If the BMS supports the Battery Parameter Configuration NMEA protocol ("\$PSBPC") a dialog opens where the general data of the battery are shown.

Depending on the connected type of BMS the data of the Battery General Data NMEA protocol ("\$PSBGD") is shown or the converted data of the Battery Cell Data NMEA protocol is shown.

If the BMS does not support the \$PSBPC protocol OceanView inquires the necessary configuration parameters in a dialog before opening the display dialog.

On the one hand theses configuration parameters can be delivered by SubCtech on request, on the other hand, SubCtech delivers predefined configuration data files to import into OceanView.



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4.2. Import sensor configuration files

SubCtech provides predefined configuration files for the batteries and sensors manufactured by SubCtech. These files contain named data fields for the NMEA protocol(s) supported by the sensor.

ar p-pensor- r	Settings for GPS-Sensor-1
SMM-20170221	Basic Config Device Clock Setup Timer Settings Device Service State Datafields
	Sensor Information GPS Sensor Device Connected on COM48 Transmitting at 4800 Average time between transmissions is 0,00 seconds Export Sense Configuration
	Sensor Settings Custom Name GPS-Sensor-1
	Befreeh

To import a configuration file an operator must be logged in and the Configure menu shall be displayed.

By choosing "Sensors" from the configure menu a dialog opens where the names of the connected sensors are shown in a list on the left side. Selecting one of the sensors' names shows different tabs containing information about the sensor and parameters to be set.

Clicking the Import Sensor

Configuration button opens a file dialog where the configuration file in XML format can be selected.

Import Sensor Configuration The new configuration data can be checked by switching through the tabs. In Order to keep the new configuration the "Save" or "Save and Close" Button must be

pressed.

Closing the dialog without saving discards the changes.

4.3. Export sensor configuration files

It is also possible to distribute or backup the current configuration data. To do so, OceanView provides the Export Sensor Configuration button.

Export Sensor Configuration Clicking this button opens a dialog where the destination folder can be chosen. OceanView then copies the configuration data of the currently selected sensor to an XML

file named after the sensor's system name / the SubCtech serial number.

This file can be copied and distributed to systems where the sensor may be used.



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5. Troubleshooting

OceanView is designed easy to use. But some circumstances lead to error messages or faulty states, which will be described and solutions will be presented here. Please feel free to contact SubCtech in case there is no solution for your problem described. Contact data is available in chapter <u>Manufactory Contact</u>.

5.1. No sensor found

If there is no sensor found during the sensor search, make sure that

- the sensor is switched on

- in case of a USB-RS232-converter, it is found in the Windows Device Manager and the driver is installed correctly

- the cabling is not faulty, respectively not null-modem like (e.g. TXD and RXD interchanged)

- in case of an Ethernet converter open the NPort administration tool to find the connected converter.

5.2. Error Message at program start or shutdown

OceanView tries to write a file to a program data folder to store configuration data in it.

If this folder is unavailable due to missing access rights, OceanView prompts an error message. The folder "C:\ProgramData\SubCtech" needs write access for every user group who works with OceanView on this PC.

5.3. OceanView shuts down immediately after program start

OceanView tries to open previous log data which might be faulty.

Move the older logs from the OceanView <u>Logs folder</u> (**not the user logs!**) to some other storage location in case they are needed or just delete them. See appendix for the exact storage location

If this does not work rename, move or delete the folders below the SubCtech folder mentioned in the appendix.



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6. Appendix

6.1. Configuration data order

OceanView stores its configuration data in files and folders below the system folder "C:\ProgramData". All configuration data is stored in XML data formatted textfiles.

Path [.]	C\ProgramData\cubCtech	
r atri.	C. (Flogialibata/subcrech	

Folder's structure:



Folder name	Content
Sensors	XML coded description of the sensors' data fields and units
Workspaces	"LastLoaded.xml" contains the name of the workspace saved at the last proper program shutdown. Today (November 2018) only the default workspace can be used.
Default	Folders "Config" and "Logs"
Config	 "Main.xml" describes the appearance (position and size on screen) of the OceanView desktop "Connections.xml" contains the assignments between sensors and communication interfaces (serial port / IP address)
Screensets	Contains screen sets created by OceanView users for different measurement purposes.
Logs	Log files of all sensors connected to the DataServer / OceanView. Accessible through the file menu item "Open Log Folder" of OceanView.



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6.2. Installation of the USB to Serial RS232 Converter

You will find a converter (if ordered or necessary) in the SubCtech Transport Box.

Most RS232/485 USB converters are supported by Windows[©] originally.

Please refer to the installation manual of your USB RS232 converter if any problems occur.



- The SubCtech Software Package supports USB RS232 converter and virtual COM ports from COM1 to COM256.
- You do not have to set the configuration for the COM port, the program will configure all COM ports for the user.



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6.3. Installation of the Moxa NPort Serial to Ethernet Converter

6.3.1. Getting started

- Consult the Moxa's manual for hardware installation.
- Install the NPort Administrator software on the DataServer and maybe on up to seven further OceanPack data sinks depending on the converter device.

6.3.2. Configuration

Start the NPort Administrator software

骸 NPort Administrator-Co	onfiguration				- 🗆	×	
<u>File Function Configuratio</u>	n <u>V</u> iew <u>H</u> e	lp					Clicking Search opens a
📑 🚅 💁 Exit Search Search	t i≊ hIP Locate	En Configure					charge with an automatic
Function			Configuration	- 0 NPort(s)			devices connected to the
NPort Configuration Monitor Port Monitor Of Configuration Of Monitor Of Monitor Of Mapping N IP Address Report	No A	Model	MAC Address	IP Address	Server Name	Status	local area network.
	<					>	
Message Log - 0 Monitor Log	g·0						
Now: 02.08.2018 13:41:02							
Searching			×				
Searching for NPort Found 1 NPort(s), rema No Model 1 NPort 521	ain timeout = MAI DA OO:9	: 3 second(s) C Address	P Address 192.168.178.5	A Dialog the local	jue opens w area netwo	/hich li: rk.	sts the NPort devices found in
,							



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		r Eilen III.				
Exit Search Search		Lonfigure Wet	Configuration -	1 NPort(s)		
- 🔊 NPort	No 🛆	Model	MAC Address	IP Address	Server Name	Status
Configuration Monitor COM Mapping COM Mapping	1	NPort 5210A	00:90:E8:52:6E:58	192.168.178.5	NP5210A_2849	
essage Log - 1 Monitor Log	<					>
	1.01	D 14				
ww: 02.08.2018 13:50:56						
ww: 02.08.2018 13:50:56 NPort Administrator-Co <u>File Function Config</u> uration <u>Exit</u> Search Search	onfiguration n_⊻iew ∐elj 坐 P_Locate	p Configure Web			- 0	×
ww: 02.08.2018 13:50:56 NPort Administrator-Co Elle Eunction Configuration Exit Search Search 1 Function	onfiguration h ⊻iew <u>H</u> elp 坐 P Locate	P E Configure Web	Configuration -	1 NPort(s)	- 0	×
w: 02.08.2018 13:50:56 NPort Administrator-Co Elle Eunction Configuration Exit Search Search I Function NPort Configuration	nfiguration h ⊻iew <u>H</u> elp P Locate	P Configure Web Model NPort 5210A	Configuration - MAC Address 00:90:E8:52:6E:58	• 1 NPort(s) IP Address 192.168.178.5		X
w: 02.08.2018 13:50:56 NPort Administrator-Co File Eunction Configuration Exit Search Search 1 Function NPort Configuration Monitor COM Mapping PAddress Report	nfiguration <u>View Hel</u> P Locate	P Configure Web	Configuration - MAC Address 00:90:E8:52:6E:58	INPort(s) IP Address 192.168.178.5	-	X Status
w: 02.08.2018 13:50:56 NPort Administrator-Co File Function Configuration Exit Search Search I Function NPort Configuration Monitor Monitor COM Mapping VI Address Report	nfiguration <u>View Help</u> Locate	P Configure Web	Configuration - MAC Address 00:90:E8:52:6E:58	1 NPort(s) IP Address 192.168.178.5		X Status
Afessage Log - 1 Monitor Log	nfiguration <u>View Hel</u> P Locate No / 1 - - - - - - - - - - - - -	P Configure Web	Configuration - MAC Address 00:90:E8:52:6E:58	INPort(s) IP Address 192.168.178.5	Server Name NP5210A_2849	X Status

This list is copied to the start screen after the search is completed.

Selecting a row of the list enables the three disabled outtons

Clicking the configure icon opens the configuration dialogue



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Configuration	×
Information Model Name NPort 5210A	Accessible IPs Auto Warning IP Address Report Password Basic Network Serial Operating Mode
MAC Address 00:90:E8:52:6E:5B	Server Name NP5210A_2849
Serial Number 2849	Time Zone (GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna 💌
Firmware Version Ver 1.2	Local Date 02.08.2018 ▼ Local Time 14:03:24 ▼
System Uptime 0 days, 05h:56m:27s	Modify
	 Enable Web Console Enable Teinet Console
	Click the "Modify" check box to modify configuration

In the Basic tab the network name of the converter und its clock can be changed.



• The settings are only editable when the related checkbox is ticked off.



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Configuration Information Model Name NPort 5210A MAC Address 00:90:E8:52:6E:58 Serial Number 2849 Firmware Version Ver 1.2 System Uptime 0 days, 05h:58m:12s Dick the "Modify" Enable SNMP Community Name Location Contract	Password ing Mode	 In the Netward address of device can 	work tab the IP the converter be changed.

|--|

 It is highly recommended to use a static IP address since the converter device hence the OceanPack would not be found when the address is change and this configuration procedure must be run through again.



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Configuration					×	In the Serial tab the serial
Information Model Name NPort 5210A	Accessible IPs Basic	: Auto War Network	ning IP Address Re Serial	port P Operating	assword Mode	ports and their current settings are shown.
MAC Address 00:90:E8:52:6E:5B Serial Number 2849 Firmware Version Ver 1.2 System Uptime 0 days, 05h:58m:12s	Click the "Modify"	ify Port1 Port2 check box to modif	Settings 4800,N,8,1,No flowetrl 19200,N,8,1,No flowetrl View Settin	gs Setting	35	
Serial Settings				×		
1 Port(s) Selected. 1 st port is Apply port alias to all st Port Alias Po	s Port 1 elected ports.	Flow Control FIFO Interface	None Enable RS-232	Her dep con	e the sett bending o inected se	ings have to be set n the setting of the ensor.
		~	OK X Cancel			



- These settings cannot be changed by use of the serial port settings of the operating system! It is only possible through this administration tool, the web console or the serial console.
- These settings must match to the settings of the OceanPack (e.g Baudrate or Flow Control "None")



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Configuration	×
Information Model Name NPort 5210A	Accessible IPs Auto Warning IP Address Report Password Basic Network Serial Operating Mode
NPort 5210A MAC Address 00:90:E8:52:6E:5B Serial Number 2849 Firmware Version Ver 1.2 System Uptime 0 days, 06h:47m:55s	Modify Port Alias OP Mode 1 Port1 Real COM Mode 2 Port2 Real COM Mode 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	Click the "Modify" check box to modify configuration
Operating Mode	×
-1 Port(s) Selected. 1st p Operating Mode Real COM	ort is Port 1 Real COM Mode
Max. Connection	4
Misc (Optional) TCP Alive Check 7 Allow Driver C Ignore Jamme	Timeout (0-99 min) ontrol d IP
Data Packing (Optio	nal)
Delimiter 1	00 (0-ff, Hex) Force Tx Timeout 0 (0-65535 ms) 00 (0-ff, Hex) Packing Length 0 (0-1024 bytes)
Delimiter Process	Do Nothing
	✓ OK X Cancel

The **Operating Mode** defines which method is used to transfer serial data over ethernet.

RealCOM Mode uses virtual com port (VCP) drivers which are well-known from USB-serial-converters.

Max. Connection defines the number simultaneous ethernet connections to the serial port.



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In case of permitting more than one connection **Ignore Jammed IP** should be ticked off to prevent jammed data messages to the OceanPack.

The remaining tabs are not relevant for the basic configuration.



• Leaving the Configuration dialogue by clicking OK applies the changes to the converter device and opens a message box informing the operator about changing success.



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6.3.3. COM mapping

So far the converter device is configured. Now the driver on PC site needs configuration. The serial ports of the converter device have to be introduced to the operating system.

🐝 NPort Administrator-CO	OM Mappin	g				- 🗆	×	Choosing COM Mapping in
Eile Eunction COM Mappi	ng <u>V</u> iew <u>H</u>	<u>l</u> elp						the Function tree shows a
Exit Add Remov	e Apply	Configure						list of serial ports of
Function			СОМ Маррі	ing - 0	сом			mapped to the operating
NPort Configuration Monitor Port Monitor ON Manping	No A	Model	IP Address	Port	COM Port	Mode		system.
IP Address Report	<						>	Clicking Add to add serial ports opens a dialogue where the converter device can be chosen which has been found before or a rescan can be done.
Message Log - 3 Monitor Log								-
No Time	, -1	Description						
1 02.08.2018 13 2 02.08.2018 14 3 02.08.2018 15	:50:49 :02:43 :18:45	Found NPort(s): 1 Configuration Chan Configuration Chan	ged: NPort 5210A (00 ged: NPort 5210A (00	:90:E8:52: :90:E8:52:	6E:5B) 6E:5B)			
Now: 02.08.2018 15:32:56								
Add NPort				×				
Select From List	Res	can Select	All Clear All		Clicking	OK copi	ies the	available ports to the COM
No Model		MAC Address	IP Address	[wapping	g list.		
I NPort 5	2104	00:90:E8:52:6E:58	192.168.178.5					
C Input Manually	IP Ac Mode Ports	Idress NPort 5	i110 <u>-</u>	I				

🗸 ок

🗶 Cancel



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File Function COM		ing				_	
- 0	1apping ⊻iew	Help					
🖳 🖀 Exit Add R	emove Apply	Configure					
Function			COM Mappi	ng - 2	сом		
NPort	No A	Model	IP Address	Port	COM Port	Mode	
Configuration Monitor Ort Monitor Ort Monitor Off COM Mappin Off IP Address Ri	1 2 aport	NPort 5210A NPort 5210A	192.168.178.5 192.168.178.5	1 2	COM3 + COM4 +	Hi-Performance Hi-Performance	, FIFO , FIFO
1essage Log - 3 Monil	or Log - 0]				_		3
No Time		Description					
2 02.08.20 3 02.08.20	18 14:02:43 18 15:18:45	Configuration Chang Configuration Chang	ged: NPort 5210A (00; ged: NPort 5210A (00;	90:E8:52:1 90:E8:52:1	6E:5B) 6E:5B)		
5w: 02.08.2018 15:42:3	5				~		
Port Number:	1 Port(s) Selected. 1st po	ort is Port 1				
COM N	Advanced lumber	Settings Serial P OM3 (current) (in ng COM number fr ed port(s) togethe	'arameters COP	M Group	ing		

Choosing one of the listed ports by double-clicking opens a dialogue where the COM number and other parameters can be set.

These parameters are not necessary for a basic setup.

Clicking **Apply** registers new comports to the operating system.

