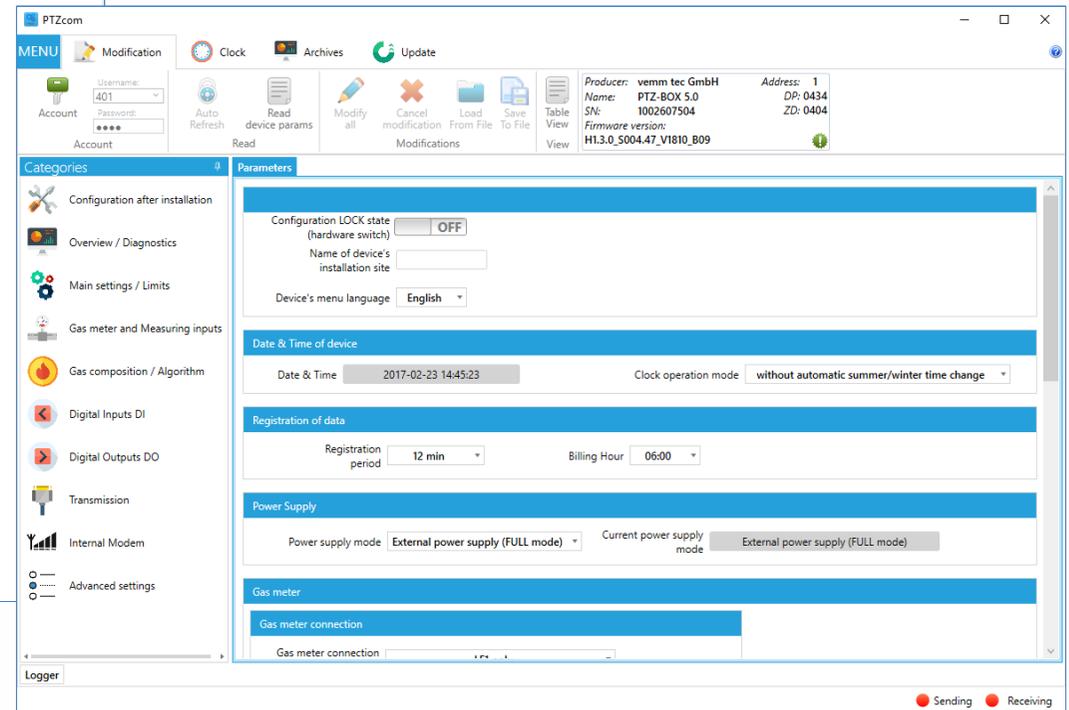
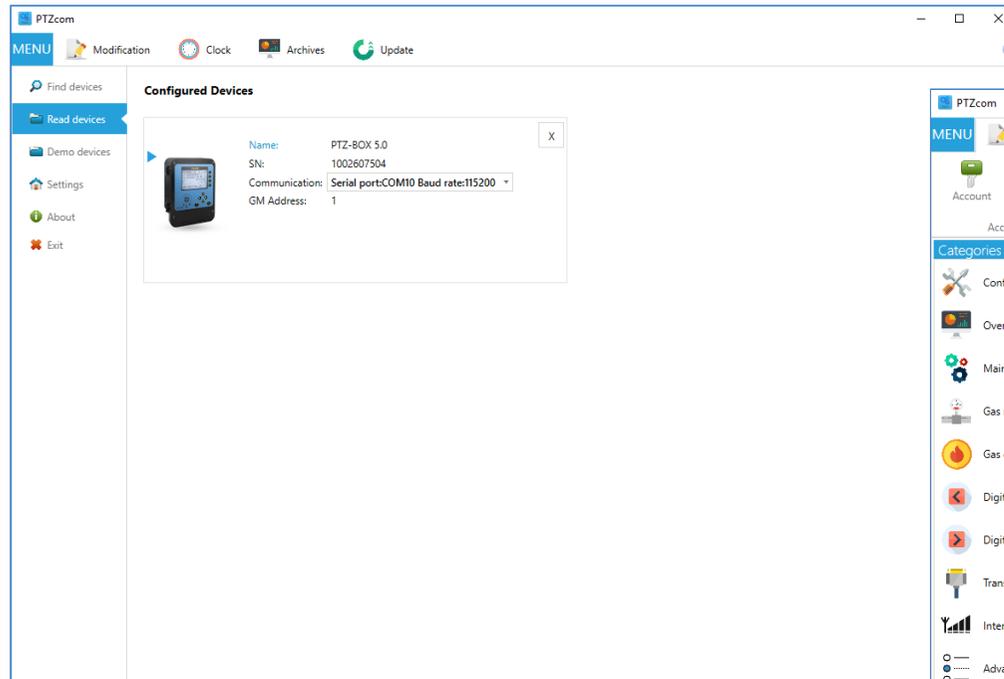




PTZcom

Application for configuration and diagnostics of devices



USER MANUAL

PROGRAM VERSION: 1.0.5.4

DOCUMENT EDITION: 1.1



MAIN MENU



TECHNICAL DATA (A)



TRANSMISSION (D)



CONSERVATION (G)



INSTALLATION (B)



CONFIGURATION (E)



SETTINGS (C)



DATA COLLECTION (F)

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A- TECHNICAL DATA



APPLICATION DESCRIPTION

PTZcom is a software designed for local and remote configuration and diagnostic of PTZ-BOX 5.0 devices. The user-friendly graphic interface allows basic and extended configuration. Interface based on device's profiles can be adapted to customer requirements. Every modified value is highlighted so the end user is aware of every unsaved configuration. PTZcom supports local firmware upgrade in devices. It also stores a list of previously connected devices and allows for quick navigation between them.



APPLICATION REQUIREMENTS

PTZcom can be used on Personal Computers which meets below requirements:

- Operating system: Microsoft Windows Vista/7/8/8.1/10
- Software:
 - Microsoft NET.Framework 4.5.2 or higher
- Hardware (one of below):
 - for wireless communication: internal or external Bluetooth 2.1 + EDR Class 2 standard (required for Bluetooth-optical interface)
 - for cable communication: USB or RS232 or RS485 or Ethernet communication port (type of required communication port depends on type of converter used for cable connection between computer and device).



B- INSTALLATION

INSTALLATION



INSTALLATION OF APPLICATION

PTZcom doesn't require any installation. To open application it is sufficient to start PTZcom.exe file.

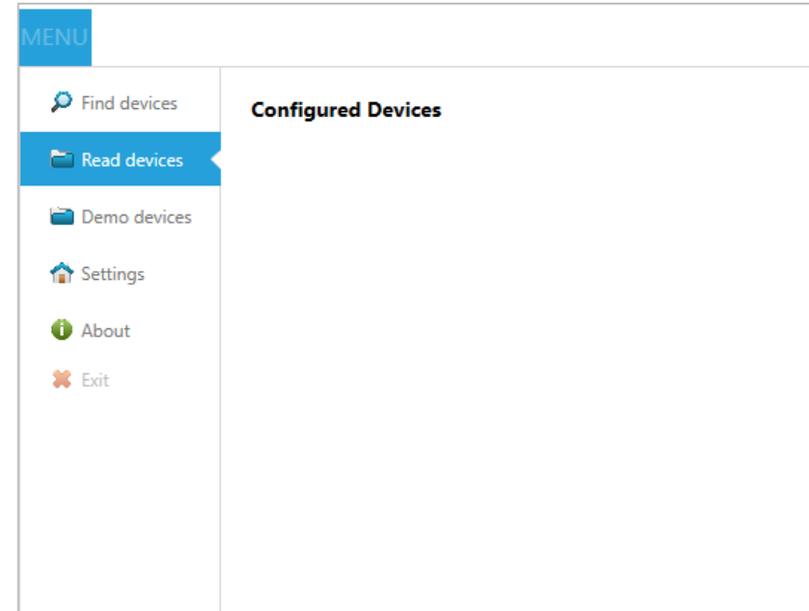


INSTALLATION



FIRST START OF APPLICATION

After first start of application it opens on list of already readout devices.





MAIN MENU



C- SETTINGS

SETTINGS

APPLICATION SETTINGS



PTZcom makes it possible to set up some common settings for application.

The screenshot shows the 'Settings' window of the PTZcom application. On the left is a 'MENU' sidebar with options: Find devices, Read devices, Demo devices, Settings (selected), About, and Exit. The main area is titled 'User Preferences' and contains three dropdown menus: 'Theme' set to 'Windows8', 'Language' set to 'English', and 'Required profile level' set to 'Basic'. Below this is the 'Predefined accounts' section, which features a table with columns for Username, Password, and Set as default. Two accounts are listed: '301' and '401'. The '301' account has its 'Set as default' checkbox unchecked, while the '401' account has it checked. To the right of the table are buttons for 'Add', 'Remove', 'Set producer prefs', 'Set as default', and 'Save'.

Username	Password	Set as default
301	••••	<input type="checkbox"/>
401	••••	<input checked="" type="checkbox"/>

SETTINGS

USER PREFERENCES



User Preferences

Theme:

Language:

Required profile level:

It is possible to set:

- Theme of application
- Language of application:
 - English
 - Hungarian
 - PolishOther languages can be added on request.
- Level of profile for devices, which should be used by application:
 - Basic (less device's functionalities)
 - Advanced (more device's functionalities – recommended for advanced users)After change of profile's level it is required to communicate with device once again.

SETTINGS



It should be remembered that translation of application's graphics interface it is a different thing than translation of profile of exact type of supported device. For example, it means that when device profile supports only English language, PTZcom can be opened in Hungarian but device profile will be visible in English.

If operation system's language is supported by application, PTZcom can start operation in the same language (default setting). Otherwise it opens in English or the other language which previously was set manually.

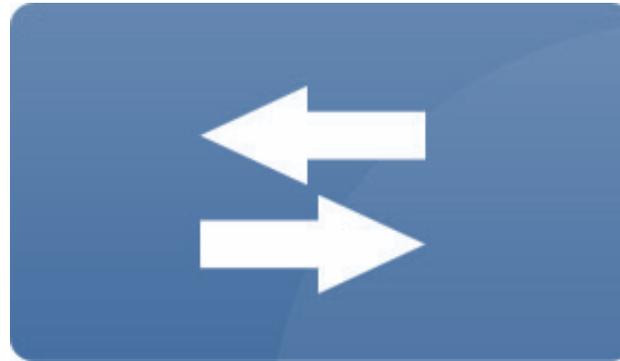
SETTINGS

PREDEFINED ACCOUNTS



Predefined accounts			
Username	Password	Set as default	
301	••••	<input type="checkbox"/>	Add Remove Set producer prefs Set as default Save
401	••••	<input checked="" type="checkbox"/>	

It is possible to set predefined accounts which are needed to configure devices. Every device needs user name and password to make configuration possible. So this setting makes possible to set user password for his devices to avoid necessity of set password during configuration of every device. It is also possible to set default account which will be used for every next readout device.



D- TRANSMISSION

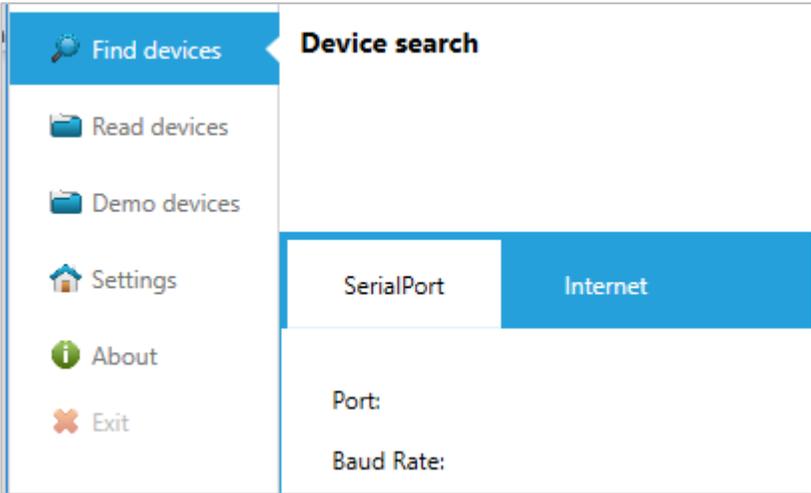
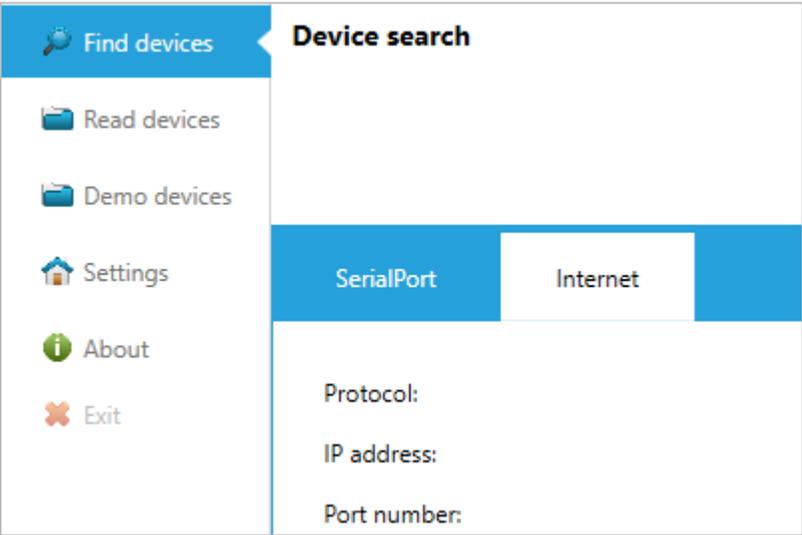


TRANSMISSION

COMMUNICATION WITH DEVICES

PTZcom supports local and remote communication with devices.

Local connection (via **Find devices/Serial Port** menu) can be done by using communication interface connected to the computer. Interface has to be visible in operating system as COM port.



Remote connection (via **Find devices/Internet** menu) can be done by using TCP/IP communication protocol. This type of communication requires this functionality in devices or in external modems connected to devices. PTZcom operates only as a master so it can communicate only with devices which operates in Call Windows Server mode (slave mode).

TRANSMISSION



LOCAL CONNECTION (SERIAL PORT)

SerialPort	Internet
Port:	COM10 ▾
Baud Rate:	115200 ▾
⬆ Advanced Settings	
Send data timeout:	500 ⇅
Read data timeout:	850 ⇅
COM port opening delay:	30 ⇅
Com port closing delay:	30 ⇅

To communicate with device via Serial Port it is needed to:

- Connect communication interface to the computer and the device.
- Set COM **Port** number assigned by operating system for interface.
- Set **Baud Rate** of communication.
Value of Baud Rate can be restricted by interface and device features.
- Set **Advanced Settings** of communication.
Default values of Advanced Settings (the unit is milliseconds) should provide proper communication but it depends on used communication interface.
- Search the device (see **DEVICE SEARCH** chapter).

TRANSMISSION



REMOTE CONNECTION (INTERNET)

SerialPort	Internet
Protocol:	TCP/IP
IP address:	87 . 251 . 228 . 251
Port number:	5 001
Advanced Settings	
Send data timeout:	1 000
Read data timeout:	2 000

To communicate with device via Internet it is needed to:

- Be sure that computer and device operates in the same network (like public or private APN etc.)
- Set type of communication **Protocol**. For now, PTZcom supports only **TCP/IP**.
- Set **IP address** of device.
- Set **Port number** of device.
- Set **Advanced Settings** of communication.
Default values of Advanced Settings (the unit is milliseconds) should provide proper communication but it depends on network quality (e.g. GSM range in device location).
- Search the device (see **DEVICE SEARCH** chapter).



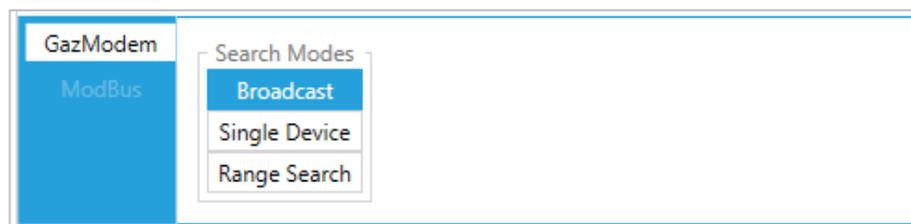
TRANSMISSION

DEVICE SEARCH

PTZcom supports communication with devices in GazModem communication protocol. Every device has its communication address (it can be the same in many devices). Due to possibility that on one type of connection (local or remote) can be available many devices with different addresses it is required to choose **Search Mode**.

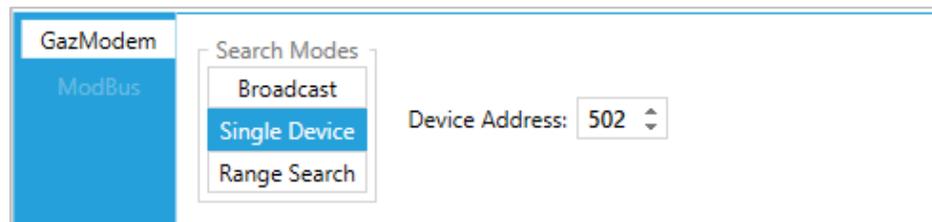
- **Broadcast.**

This mode should be used when **only one device** is available on connection. Otherwise communication will be possible only with device which will response for searching as first. This mode is helpful when we don't know device's address.



- **Single Device.**

This mode makes possible connection with the device when we know its address. This mode is helpful when there are many devices on one connection.

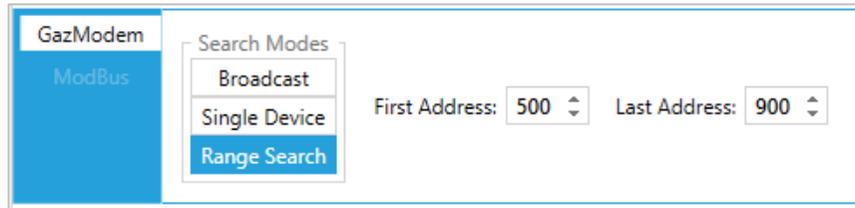


TRANSMISSION

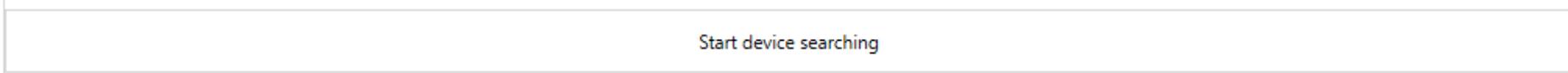


- **Range Search.**

This mode makes possible connection with the device when we don't know exact address of device but it probably lies in some range of addresses. In this mode communication will be possible only with device which will response for searching as first.



When **Search Mode** is chosen it's possible to find the device by clicking on **Start device searching** button.



When device is found, to connect to device, just click on it. Application automatically readout device configuration and switch to Modification view (see CONFIGURATION section).





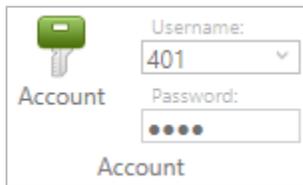
E- CONFIGURATION

CONFIGURATION

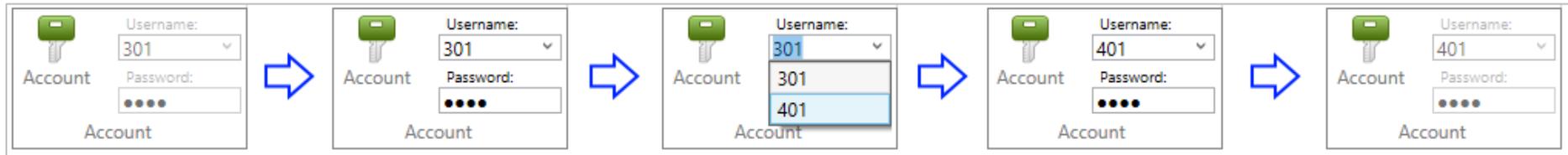


MODIFICATION TAB

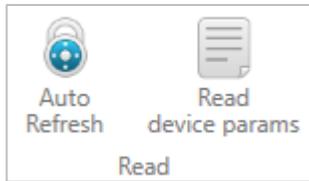
Modification tab is related to device configuration.



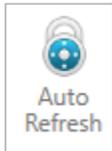
Account section makes possible to set authentication parameters for configuration because every device needs **User name** and **Password** to make configuration possible. To change authentication parameters it is needed to enable **Account** button. Then choose **User name** from list or write it manually. User name list is set in **Predefined accounts** in PTZcom **Settings** (see **SETTINGS** section). Chosen User name automatically sets **Password** which was previously defined in Predefined accounts. Otherwise it is needed to set password for user. Then **Account** button should be disabled. If Account button stay enabled it can cause problems with device configuration.



CONFIGURATION



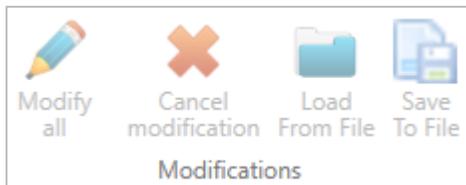
Read section is related to readout of device configuration.



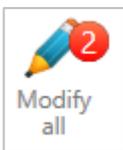
Auto Refresh button makes possible automatic re-readout of device configuration. Application starts new readout instantly after the end of previous readout. This functionality is available not for all devices and not for every view.



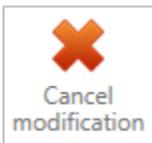
Read device params button makes possible readout of device configuration on demand.



Modifications section is related to changes of configuration of device.

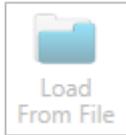


Modify all button is being enabled when some device configuration was set to be changed in device. It is required to click this button to save new configuration in device. The number in red circle shows amount of parameters to be modified (if some parameters exists in the device's profile more than once it also will be counted here). If clicking Modify all button doesn't cause any change, it means that authentication parameters was wrong.



Cancel modification button is being enabled when some device configuration was set to be changed in device. It is required to click this button to cancel intention of configuration change.

CONFIGURATION



Load From File button makes possible to see previously saved configuration. For now this functionality is not available.



Save To File button makes possible to save device configuration to file. For now this functionality is not available.



View section with **Table View** button makes possible to change view of device configuration between Profile view (button disabled, see **MODIFICATION TAB – PROFILE VIEW** chapter) and Table view (button enabled - marked by blue, see **MODIFICATION TAB – TABLE VIEW** chapter).

<i>Producer:</i> vemm tec GmbH	<i>Address:</i> 1
<i>Name:</i> PTZ-BOX 5.0	<i>DP:</i> 0434
<i>SN:</i> 1002607504	<i>ZD:</i> 0404
<i>Firmware version:</i> H1.3.0_S004.48_V1810_B09	

This section shows device's identifier, like **Name**, serial number (**SN**), communication **Address**, **Firmware version** etc.

<i>Producer:</i> vemm tec GmbH	<i>Address:</i> 1
<i>Name:</i> PTZ-BOX 5.0	<i>DP:</i> 0434
<i>SN:</i> 1002607504	<i>ZD:</i> 0404
<i>Firmware version:</i> H1.3.0_S004.48_V1810_B09	
MID0.00_M02.03_MR004.11_R004.11 MM005_U04129_L00(EN) TL0_GLO 2017-02-19 LL8	

 Green exclamation mark icon shows additional information of device's identifier.

CONFIGURATION



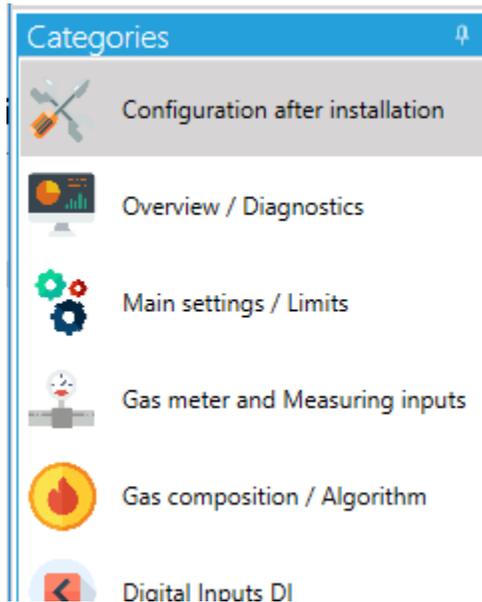
MODIFICATION TAB – PROFILE VIEW

It should be remembered that this user manual describes functionalities available in profiles for devices configuration. It means that it describes the way how some types of parameters of devices can be set. This manual doesn't describe the way how devices works or how they can be configured.

Sample view of device profile:

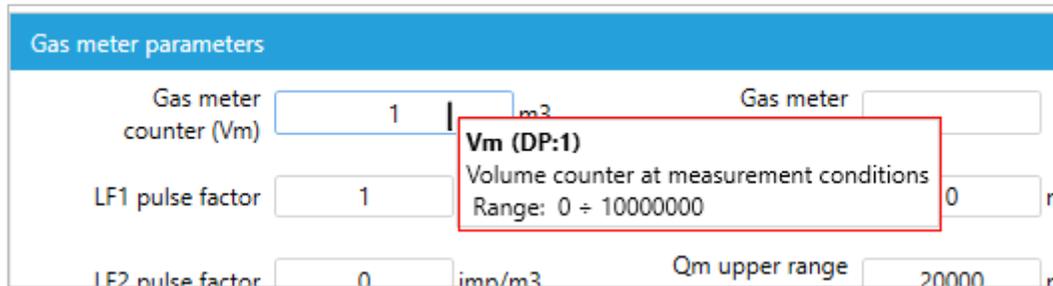
The screenshot displays the PTZcom configuration software interface. At the top, there is a 'MENU' bar with tabs for 'Modification', 'Clock', 'Archives', and 'Update'. Below this, a toolbar contains icons for 'Account', 'Auto Refresh', 'Read device params', 'Modify all', 'Cancel modification', 'Load From File', 'Save To File', and 'Table View'. A status bar on the right shows device information: 'Producer: vemm tec GmbH', 'Name: PTZ-BOX 5.0', 'SN: 1002607504', 'Firmware version: H1.3.0_S004.47_V1810_B09', 'Address: 1', 'DP: 0434', and 'ZD: 0404'. The main area is divided into 'Categories' on the left and 'Parameters' on the right. The 'Parameters' section is currently active and shows several configuration options: 'Configuration LOCK state (hardware switch)' set to 'OFF', 'Name of device's installation site' (empty text box), 'Device's menu language' set to 'English', 'Date & Time of device' set to '2017-02-23 14:45:23' and 'Clock operation mode' set to 'without automatic summer/winter time change', 'Registration of data' with 'Registration period' set to '12 min' and 'Billing Hour' set to '06:00', 'Power Supply' with 'Power supply mode' and 'Current power supply mode' both set to 'External power supply (FULL mode)', and 'Gas meter' with 'Gas meter connection' (partially visible).

CONFIGURATION



Categories section it is a list of groups of device's parameters which are related by their functionalities. It makes easier to find parameter to change it.

The way how Categories section looks like depends on device functionalities.



When mouse cursor is put on some parameter, application shows its **description** (marked in red on the picture), name of this parameter (e.g. Vm) and position in DP table (e.g. DP:1) (see **MODIFICATION TAB – TABLE VIEW** chapter)

CONFIGURATION



LF1 pulse factor imp/m3

Editable **Text box** contains short name of the parameter (e.g. LF1 pulse factor), value of parameter (e.g. 0,1) and its unit (if parameter has units, e.g. imp/m3).

LF1 pulse factor imp/m3

If value of parameter was changed (but before modification in device) value box changes its colour to orange. After modification (see **Modify all** button in **MODIFICATION TAB** chapter) it backs to white with new value.

Atmospheric pressure bar

Non-editable **Text box** shows value of parameter which is read only. This box occurs also in version where value is converted to text.

State

Schedule #1

ON/OFF switch box makes possible to enable (ON) or disable (OFF) some device functionality.

Schedule #1

LF1 pulse factor

Dropdown list box contains short name of parameter and list of possible settings of this parameters.

LF1 pulse factor
0,01 m3/pulse [100 pulses/m3]
0,1 m3/pulse [10 pulses/m3]
1 m3/pulse [1 pulse/m3]
10 m3/pulse [0,1 pulse/m3]

Dropdown list box also makes possible to show other boxes depending on setting chosen from the list.

Pulse inputs configuration
LF input time between pulses

Pulse inputs configuration
Current HF/LF pulses ratio

CONFIGURATION



MODIFICATION TAB – TABLE VIEW

It should be remembered that this user manual describes functionalities available in table view for devices configuration. This manual doesn't describe the way how devices works or how they can be configured.

Table View of device configuration shows all **DP table** of device. It's a list of all **Device Parameters** for configuration and current data of device. This view also supports device configuration modification but unlike Profile view, it requires knowledge about how parameters can be changed (meaning of values).

Table View is a default view for devices which are not supported as Profile view.

Index	Name	Unit	Actual Value	New Value	Long Description
0	Vb	m3	0		Volume counter at base conditions
1	Vm	m3	0		Volume counter at measurement conditions
2	V2	m3	0		Control volume counter at measurement conditions
3	E	kWh	0		Energy counter
4	M	kg	0		Mass counter
5	Vme	m3	0		Emergency volume counter at measurement conditions
6	Vbe	m3	0		Emergency volume counter at base conditions
7	Ee	kWh	0		Emergency energy counter

CONFIGURATION



Table View also supports modification of configuration. Editable parameters has white fields in New Value column (instead of non-editable parameters which are grey). New value of parameter has to be set in **New Value** column. Saving new configuration is possible by **Modify all** button or **Edit** button which appears next to new value. Edit button supports modification only one parameter.

The screenshot displays the configuration interface for a PTZ device. At the top, there is a navigation bar with several sections: 'Account' (with fields for Username: 401 and Password: masked), 'Read' (with 'Auto Refresh' and 'Read device params' buttons), 'Modifications' (with 'Modify all', 'Cancel modification', 'Load From File', and 'Save To File' buttons), and 'View' (with a 'Table View' button). To the right of the navigation bar, device information is shown: 'Producer: vemm tec GmbH', 'Name: PTZ-BOX 5.0', 'SN: 1002607504', 'Firmware version: H1.3.0_S004.48_V1810_B09', 'Address: 1', 'DP: 0434', and 'ZD: 0404'. Below the navigation bar, a 'Parameters' section is visible, containing a table with columns: Index, Name, Unit, Actual Value, New Value, and Long Description. The table has a blue header and a blue bar above it that says 'Drag a column header and drop it here to group by that column'. The table contains the following data:

Index	Name	Unit	Actual Value	New Value	Long Description
0	Vb	m3	0		Volume counter at base conditions
1	Vm	m3	0	132,5 <input type="text" value="Edit"/>	Volume counter at measurement conditions
2	V2	m3	0		Control volume counter at measurement conditions
3	E	W/h	0		Energy counter

CONFIGURATION



CLOCK TAB

In **Clock** tab it is possible to set device clock. Every clock modification requires to set proper authentication parameters (Account – User name / Password).

MENU	Modification	Clock	Archives	Update
Account	Username: 401 Password: ●●●●	Producer: vemm tec GmbH Name: PTZ-BOX 5.0 SN: 1002607504 Firmware version: H1.3.0_S004.48_V1810_B09	Address: 1 DP: 0434 ZD: 0404	
		Comparison of times PC Time: 2018.12.14 14:28 Device time: ---- Read device time	Synchronization New Time: Enter date [calendar icon] <input type="checkbox"/> Set now Set device time	

It is needed to **Read device time** first, to check difference between computer and device time.

CONFIGURATION

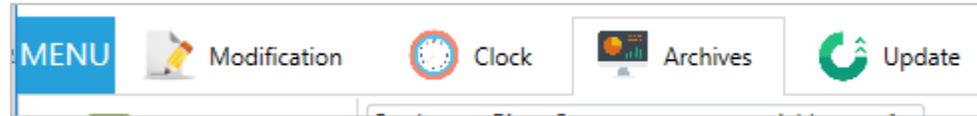


New device clock can be chosen from **New Time** list or set the same as PC clock by choosing **Set now** check box. After that it can be send to device by clicking on **Set device time**.

Comparison of times		Synchronization	
PC Time:	2018.12.14 14:29	New Time:	
Device time:	2017.02.19 21:00	14.12.2018 14:28	<input type="checkbox"/> Set now
Read device time		Set device time	

CONFIGURATION

ARCHIVES TAB



For details see **DATA COLLECTION** section.

CONFIGURATION

UPDATE TAB



PTZcom supports firmware update of devices (**Update** tab).

The screenshot displays the PTZcom web interface with the 'Update' tab selected. The interface is organized into several sections:

- Navigation Menu:** Includes 'MENU', 'Modification', 'Clock', 'Archives', and 'Update'.
- Account Section:** Shows 'Username: 401' and a 'Password' field.
- Updater Operations:** Contains 'Open file' and 'Update' buttons.
- Device Information:** Lists 'Producer: vemm tec GmbH', 'Name: PTZ-BOX 5.0', 'SN: 1002607504', and 'Firmware version: H1.3.0_S004.48_V1810_B09'. It also shows 'Address: 1', 'DP: 0434', and 'ZD: 0404'.
- Progress Bar:** Displays '0,00%'.
- Log Section:** Features a 'Log' header and a table with 'Log info' and 'Message' columns.
- File List Section:** Includes a 'File name' input field and a table with 'Type' and 'Version' columns.

CONFIGURATION



Firmware update steps:

1. Set or choose authentication parameters (Accounts section) which allows device configuration.

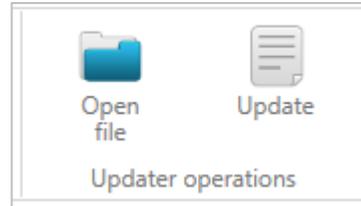
Account

Username: 401

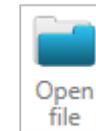
Password: ●●●●

Account

2. In **Updater operations** section



Choose **Open file** and choose firmware file which should be uploaded to device.



3. It will show information about chosen file.

File list

File name: D:\vemm tec\PTZ5_pack_S004.47_V1810_R004.11_H1.3.0_M02.03_DS04.pfp

Type	Version
Firmware	4.47
Configuration files	4.47



4. Make sure that proper file was chosen.
5. In **Updater operations** section choose **Update**.



CONFIGURATION



6. It will cause begin of communication with device and show of detected device identifier



Make sure that it is proper device and confirm by OK.

Log info	Message
16.12.2018 10:47:56 PM [INFO]	Device detected: vemm tec GmbH PTZ-BOX 5.0 1002607504 H1.3.0_S004.47_V1810_B09 0434 0404
16.12.2018 10:47:56 PM [INFO]	File name:: D:\vemm tec\PTZ5_pack_S004.47_V1810_F

Continue?

Device detected:
vemm tec GmbH
PTZ-BOX 5.0
1002607504
H1.3.0_S004.47_V1810_B09
0434
0404

OK Anuluj

7. Firmware update begin operation.

20,00%

Log info	Message
16.12.2018 10:49:36 PM [INFO]	Update started. Please wait...
16.12.2018 10:49:36 PM [INFO]	Proceed with update.



8. After proper firmware update application will show information about successful firmware update.

100,00%	
Log	
Log info	Message
16.12.2018 10:52:46 PM [INFO]	Firmware update successfull.
16.12.2018 10:52:19 PM [INFO]	Checking update status...
16.12.2018 10:52:09 PM [INFO]	Finishing update. Please wait...
16.12.2018 10:49:36 PM [INFO]	Update started. Please wait...

9. If at the end of update process some ERROR appear, it is required to repeat firmware update procedure.

Sample of error:

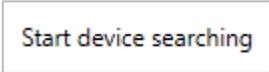
Log	
Log info	Message
16.12.2018 10:52:46 PM [ERROR]	Update verification error.
16.12.2018 10:52:19 PM [INFO]	Checking update status...
16.12.2018 10:52:09 PM [INFO]	Finishing update. Please wait...
16.12.2018 10:49:36 PM [INFO]	Update started. Please wait...

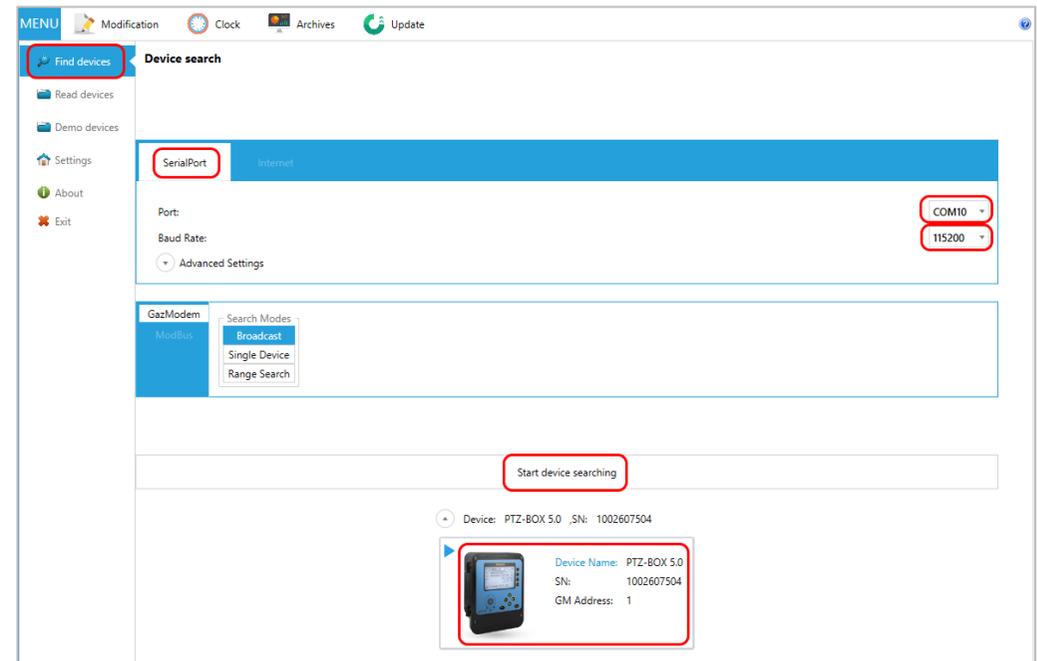
CONFIGURATION



STEP-BY-STEP CONFIGURATION

Sample of connecting to the device and change of its configuration.

1. Connect device to computer via communication interface.
2. Start PTZcom and go to  menu.
3. Choose communication channel. 
4. Set Port number assigned to communication interface. 
5. Set Baud Rate of communication. 
6. Start searching of  device.
7. When device is found, click on it to connect.



CONFIGURATION

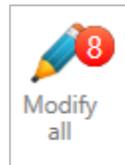


- Application automatically readouts device configuration and opens Profile view.
- Set or choose authentication parameters (Accounts section) which allows device configuration . The change is available after choosing **Account** button.
After set of authentication parameters it is required to disable **Account** button.
- Choose categories and set parameters which should be modified in the device.

Account configuration form with fields for Username (401) and Password (masked).

Registration period: 60 minutes

- Confirm modification by clicking on **Modify all** button.

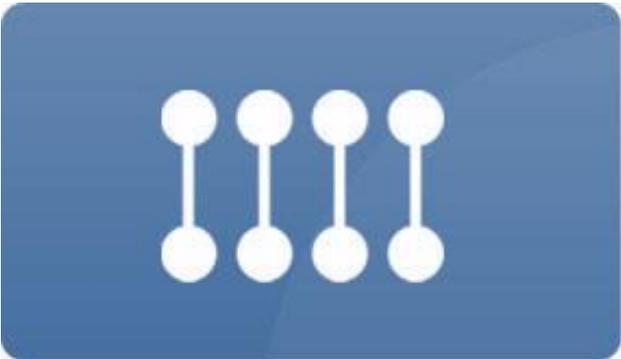


- After modification, changed parameters will back from orange mark to white and Modify all button back to disabled.
- If clicking **Modify all** button doesn't cause any change, it means that authentication parameters was wrong.

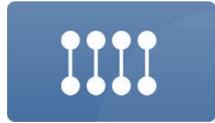
The screenshot shows the PTZcom configuration interface. The 'Modify all' button is highlighted with a red box. The 'Registration of data' section shows 'Registration period' set to 60 min. The 'Gas meter parameters' section shows 'Gas meter counter (Vm)' set to 151,200 m3 and 'LF1 pulse factor' set to 0,1 m3/pulse [10 pulses/m3].



MAIN MENU



F- DATA COLLECTION



LOGGED DATA AND EVENTS READOUT

PTZcom supports readout of logged data and events from devices (**Archives** tab).

MENU Modification Clock Archives Update

Account: Username: 401 Password: [masked] Account

Producer: vemm tec GmbH
Name: PTZ-BOX 5.0
SN: 1002607504
Firmware version: H1.3.0_S004.47_V1810_B09

Address: 1
DP: 0434
ZD: 0404

Archives Reader

Archive Type:

Monthly data Daily data **Hourly data** Periodic data Event Reader

Data Range:

Date From: 11.12.2018 07:55

Date To: 18.12.2018 07:55

Data Format:

Index	Time	Vb	st	Vm
5	16.02.2017 06:00	1986,233	221	2181,254
6	17.02.2017 06:00	1986,233	8	2181,254
7	18.02.2017 06:00	1986,233	8	2181,254
8	19.02.2017 06:00	1986,233	8	2181,254
9	20.02.2017 06:00	1986,233	8	2181,254
10	21.02.2017 06:00	1986,233	8	2181,254
11	22.02.2017 06:00	1986,233	8	2181,254

Names in header

Index	Time	Name st	Value
5	16.02.2017 06:00	Vb 1986,233	221
6	17.02.2017 06:00	Vb 1986,233	8
7	18.02.2017 06:00	Vb 1986,233	8
8	19.02.2017 06:00	Vb 1986,233	8
9	20.02.2017 06:00	Vb 1986,233	8
10	21.02.2017 06:00	Vb 1986,233	8

Names in rows

File Path: D:\vemm tec\hourly_20181218075820.csv

Save as

Read



MAIN MENU



G- CONSERVATION

CONSERVATION



UPDATE OF APPLICATION

The newest version of PTZcom is available from manufacturer.

PTZcom supports also automatic remote update.



www.vemmtec.de