

## NETWORK - MANUAL

### NETWORK ORIGINAL INSTRUCTIONS

Manufacturer: **Preservatech Europe sp z o.o.**  
Równa 1, 85-846 Bydgoszcz, Poland  
[www.preservatech.com](http://www.preservatech.com)

Design: **Preservatech Inc**  
Canada  
[www.preservatech.com](http://www.preservatech.com)

This Manual covers the operation of Preservatech's network hardware and software.

Mini One, PMCG, Maxi One devices and external RH/T sensors can be monitored and controlled from PC computer connected to the existing Wi-Fi or Ethernet network or through our WWW monitoring service.

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### Introduction.

All of Preservatech's equipment can be monitored from the local PC or through our WWW monitoring service. Both, local and internet monitoring allows to check the status of any device connected to the network as well as change the setup of a device.

Our local monitoring service utilizes the existing Wi-Fi or Ethernet network to connect any Windows PC running Windows XP or newer.

Our WWW monitoring service uses an internet connection. The status as well as the parameters may be checked or changed through any WWW enable device.

### Hardware

#### - Hub

PMCG, Mini One and Maxi One use Preservatech's HUB to connect to the local Wi-Fi or Ethernet network.



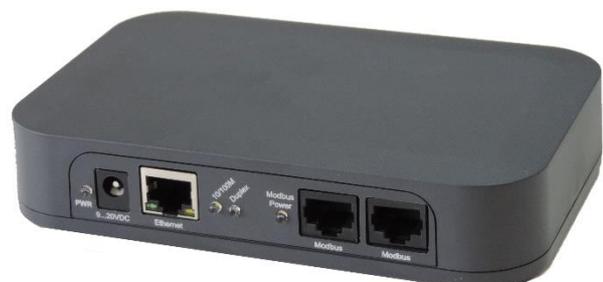
The HUB must be connected to the machine, using a typical Ethernet cable. A single hub can be connected up to 8 devices.

The Hubs are connected to the PC or Internet using the existing Wi-Fi network or a cable Ethernet LAN.

On the front panel, there are three push buttons and LED indicators which functions will be explained in the following chapters.

Two Modbus, one Ethernet and power connectors are located on the HUB's back wall.

Modbus connectors are used to connect directly the machines (if more than two machines are connected, cable splitters must be used). The ethernet connector is used only if the HUBs need to be connected to the LAN by wire. Otherwise HUB will be working within the existing Wi-Fi network.



Power supplies are included with the HUB but any 9-20 VDC power supply can be used.

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### - PC Computer

If the monitoring will be executed locally, a PC computer with Windows XP or newer is required. If all the data is to be saved, the computer needs to be constantly working and connected to the same Wi-Fi network as all HUBS.

In the case of WWW monitoring will be used, a Windows laptop or PC is needed for the initial setup of the HUBs.

(We can supply a pre-configured PC/laptop if needed)

## Software

Server software allows the user to monitor all the devices on a local PC computer. The initial HUB setup requires a PC/laptop with the server software installed.

Server software can be installed on any PC computer running Windows.

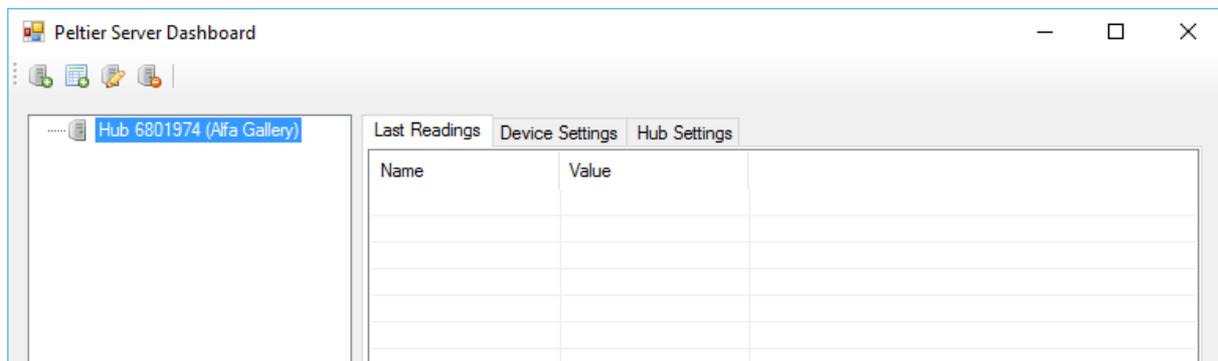
The server software is available on the included CD or downloaded from our website.

To install the software you must run "setup.exe". During installation, it is possible to choose the language (English or Chinese)

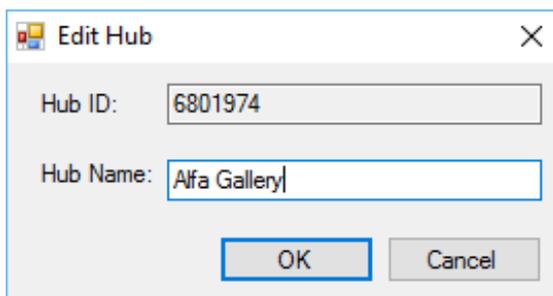
*Software should work properly with a Windows Firewall activated, but since we do not have control over the firewall setup, it is possible that some changes need to be made to the firewall to allow the HUB(s) to connect with the PC.*

### Hub Setup

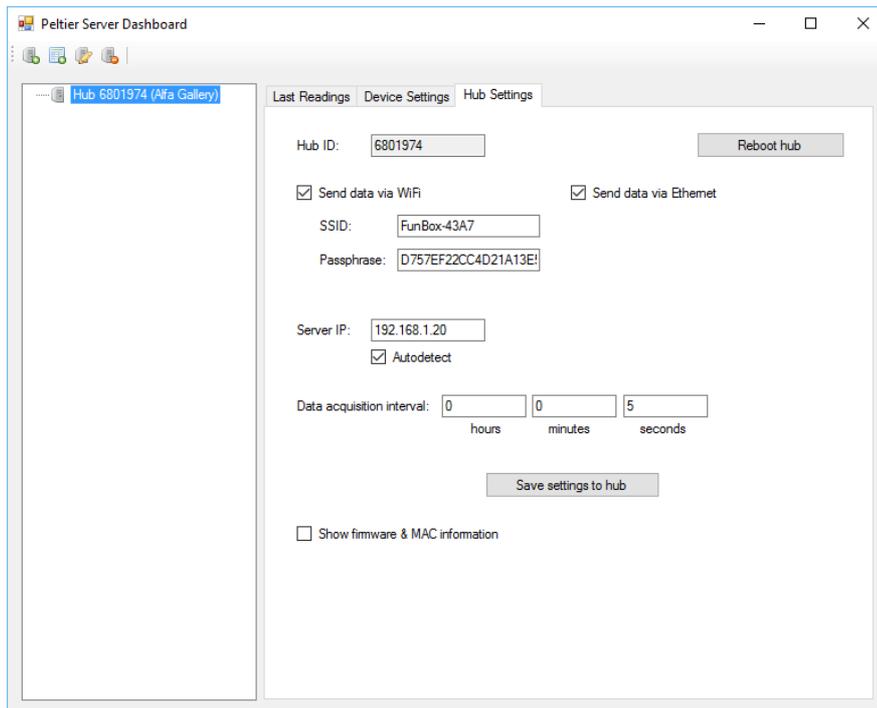
- a. Connect HUB to the power. At this point, there is no need to connect any machines to the HUB.
- b. Press „**Config**” button. **Config** LED will blink.
- c. Open your Wi-Fi network connection and select “**hub\_XXXXXX**” (x corresponds to the HUB number) and connect the computer to it.
- d. Open the server software. Hub will show up on the left column of the software window (it can take some time – up to 2 minutes)



- e. Click on EDIT (third icon from the left on menu strip). You can rename the HUB to easily identify. Click OK to save.



- f. Go to the Hub Settings.
  - Enter name of the WiFi network (SSID) and corresponding password (Passphrase) Under Server IP, make sure Autodetect is marked.
  - Enter Data acquisition interval.
  - Click on „Save settings to hub”
  - Press Reset button on the HUB. (attention LED will blink for a few seconds)



- g. If your computer has not already switched back to the standard Wi-Fi network then select your standard network and connect the computer  
**(It must be the same Wi-Fi network set in the HUB)**

NOTE EVERY HUB CAN SUPPORT UP TO 8 MACHINES

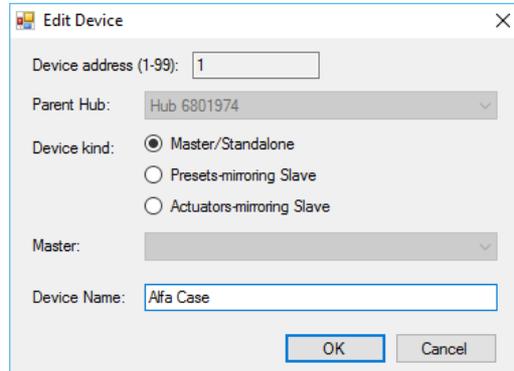
EVERY MACHINE CONNECTED TO THE HUB NEEDS TO HAVE UNIQUE NETWORK ADDRESS WHICH CAN BE SET IN MACHINE CONTROLLER UNDER „Adr“ PARAMETER.



If the HUB is properly configured, with all the machines possessing their own distinctive “Adr” parameter set (between 1-99) then all the connected devices will be visible in the left column of the software.

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- Each device can be Named for easy identifying.  
Device can also be set as slave – master.



**Edit Device**

Device address (1-99):

Parent Hub:

Device kind:  Master/Standalone  
 Presets-mirroring Slave  
 Actuators-mirroring Slave

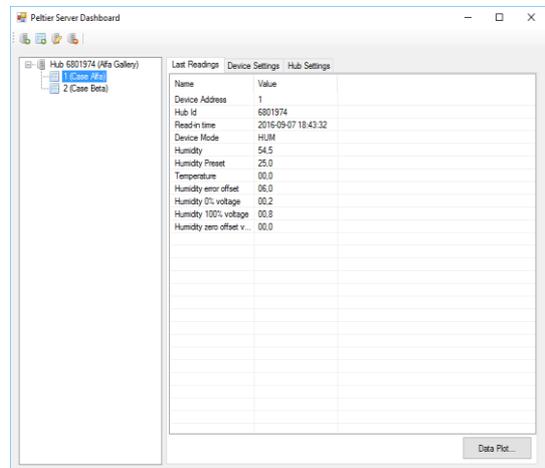
Master:

Device Name:

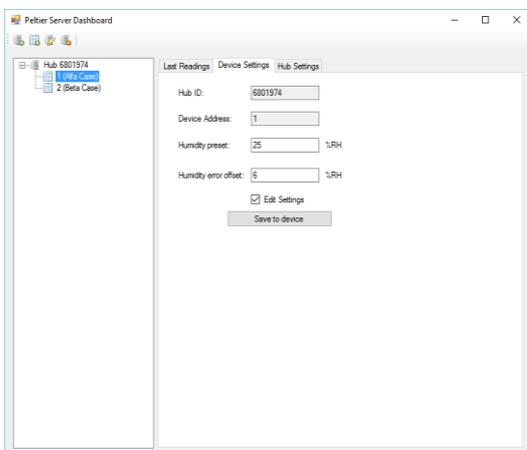
## Using Server Software

Please note: ***If all historical data is required, PC computer with server software must be constantly working and connected to the Wi-Fi Network.***

**Last Readings** page, shows the latest status of the device, this status changes at the rate selected in the setting.



Name	Value
Device Address	1
Hub Id	6801974
Read-in time	2016-09-07 18:43:32
Device Mode	Hum
Humidity	54.5
Humidity Preset	25.0
Temperature	00.0
Humidity error offset	06.0
Humidity 0% voltage	00.2
Humidity 100% voltage	00.8
Humidity zero offset v...	00.0



**Peltier Server Dashboard**

Hub ID:

Device Address:

Humidity preset:  %RH

Humidity error offset:  %RH

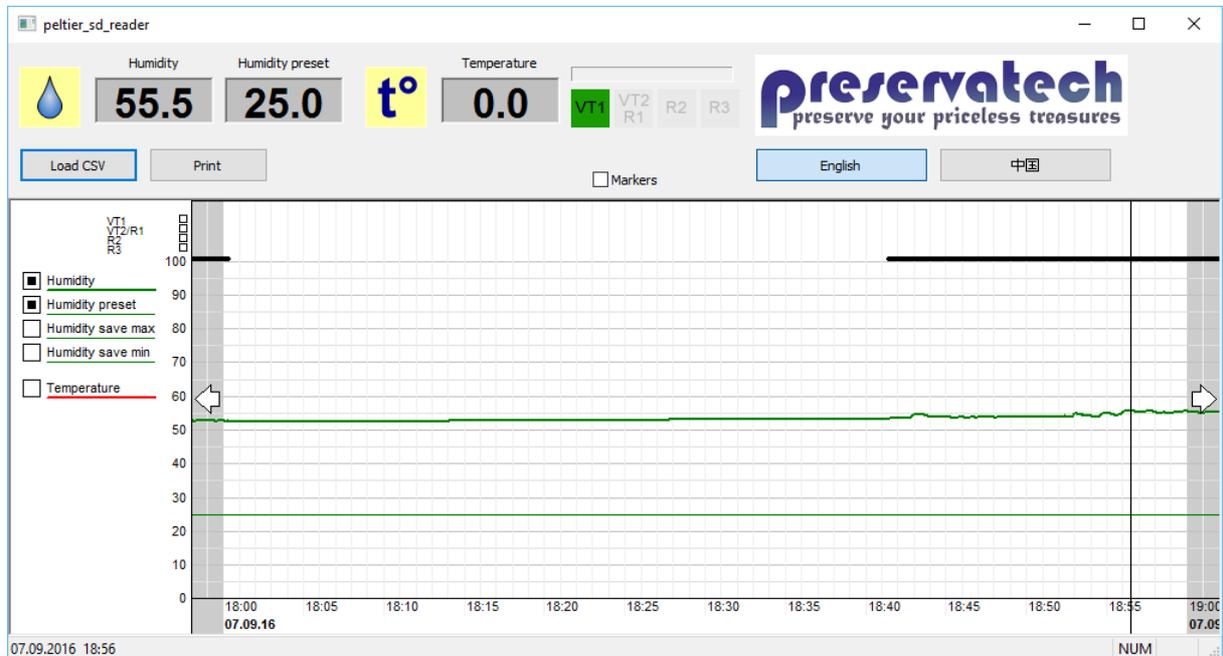
Edit Settings

**Device Setting** page allows to remotely set **Humidity preset** and **Error Offset** for each device in the network.

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To see graph Plot, click “Data Plot” on the “last reading” page.

Data plot displays the actual and historical data for a particular device.



## WWW Monitoring

Machines can be monitored and re-set through WWW server. In this case any WWW enable device can be used to check status or re-set machines. Please contact [info@preservatech.com](mailto:info@preservatech.com) for more info how to set WWW monitoring service.