ThermIQ2 installation for Windows+XAMPP, version 2.09

Installation prerequisites:

1. A PC running Windows Vista or newer
2. A USB cable and a power adaptor for ThermIQ-MQTT
3. An Ethernet cable
4. A ThermIQ-USB, ThermIQ-MQTT/ROOM,/ROOM2 card

Configuration (expect about 30 min-1h installation time)

Help and instructions in black
Things to write down in green. You might use the table at last page
Actual commands/actions in blue

1. Start by downloading and installing XAMPP for Windows from:

   https://www.apachefriends.org/index.html
   ThermIQ is verified to work with XAMPP 7.4.24 and requires an PHP >=7.4 and is likely to work with all releases 7.x releases above 7.4. PHP 8 is not yet verified.

   Use default options where applicable and install it to the default directory C:\xampp (Do not change this directory!!)

   You might have to restart Windows at this point to complete the XAMPP installation.

2. Open a windows Powershell window by clicking on the Windows flag and then by typing "Powershell" either on the "Run:"-line or in the search tools. A dos window will not work!

3. In the Powershell command line, copy and paste one line at a time from below:

   ```
   mkdir c:\tmp
   cd c:\tmp
   $c = new-object System.Net.WebClient
   $c.DownloadFile("http://www.thermiq.net/getThermIQ2.php?setup=windows","c:\tmp\setup.bat")
   ```

   If installing for ThermIQ-USB card type:
   ```
   .\setup.bat
   ```
   If installing for ThermIQ-MQTT/ROOM/ROOM2 card type:
   ```
   .\setup.bat -m
   ```

   Note down your IP-Address

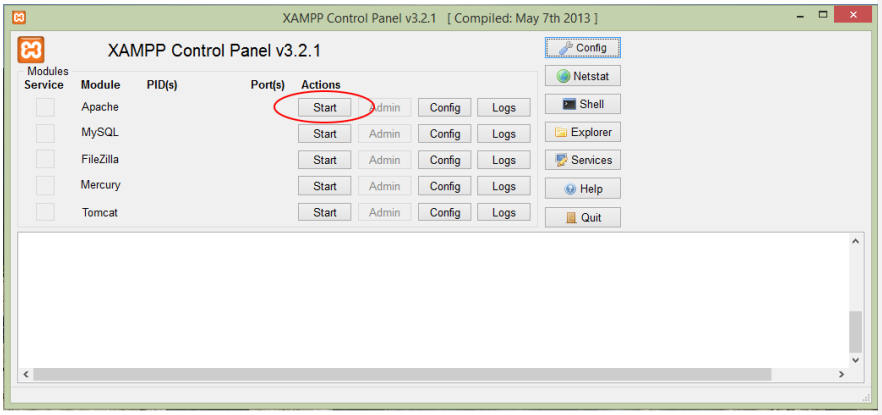
   Then open c:\xampp\php\php.ini in an editor and change the include_path to be:
   include_path=".;C:\xampp\php\PEAR;c:\xampp\usr\sbin;c:\xampp\htdocs;c:\xampp\php\google-drive\src";

   also check that the file ends with one, not multiple, sections like this:
   [PHP_COM_DOTNET]
   extension=php_com_dotnet.dll

4. Follow one of the following guides on how to install depending on which hardware, ThermIQ or ThermIQ-MQTT you have:

   Appendix A: ThermIQ-MQTT (WiFi Connected)
   Appendix B: ThermIQ (USB Connected)

5. Now it's time to open the XAMPP Controlpanel and start Apache



Open link: http://127.0.0.1/install/install.php in a web-browser
A page like this will open:

Follow the steps 1-4 shown in the browser to complete the installation until all items are green, write down your data in the table below. Here you can also setup a Dropbox backup account and secure the installation page with a password.

6. Open link: http://ip-address/ in a web-browser with the IP address from step 3
   Login with:
   a. User: as given during Bullet 6, Step 3
   b. Password: as given during Bullet 6, Step 3
   c. Check the different settings in the right corner drop down menu
   d. Select "Poller settings" and configure what devices to collect data from
      - Select one of ThermIQ or ThermIQ_MQTT depending on your hardware.
      - Fill in all ThermIQ-MQTT info in the poller settings.
   e. Select "Widget settings" and enable the widgets you want to see on the home page

Done ☺

Note, if you want to access your ThermIQ remotely, you can open your router/firewall using “port forwarding” for the ip-address and port above. But please be aware of the potential security risks this enables.

Now is a good time to check out the XAMPP home page at http://www.apachefriends.org where there's a lot of information available especially in the forum i.e :

- How to secure your XAMPP from intruders.
- How to setup a free dynamic ip service if you want your PC to be easily accessible from the internet

and don't forget to check out the ThermIQ forum at www.ThermIQ.net

Bullet	Step	Key	Value
1	-	Server IP-address	
4	USB	Com-port	
4	MQTT	Mqtt user	thermiq
4	MQTT	Mqtt password	
4	MQTT	MQTT Configuration file	C:\Program files\mosquitto\mosquitto.conf
6	2	Order email	
6	2	License key	
6	3	Administrator login name	
6	3	Administrator login password	
6	6	Installation username	
6	6	Installation password	
		Wifi name (SSID)	
		Wifi Password	

Appendix A: ThermIQ-MQTT configuration

ThermIQ-MQTT needs a MQTT server to communicate with, download the free Mosquitto server from http://mosquitto.org and install it on an always running Windows pc. Mosquitto requires openssl to be installed and provides a link in the installer. Make sure you select "add openssl dll files to Windows system directory."

Commented [AS1]: Fixa windows pather
Install as admin

After installation open a dos shell (cmd) as administrator and type:

```
copy c:\xampp\ThermIQ_Windows\mosquitto.conf  "c:\Program files\mosquitto\"
"c:\Program Files\mosquitto\mosquitto_passwd.exe" -c "c:\Program Files\mosquitto\passwd" thermiq
                    enter your mqtt password          Write down mqtt pw
C:\Program Files\mosquitto\mosquitto install
```

This will make mosquitto to run as a service. The mosquitto.conf file can be changed to tune your installation and contains by default only basic MQTT support without encryption. Read more at mosquitto.org

ThermIQ also needs as service in windows which listens for messages from ThermIQ-MQTT and adds them to the database. Please install nssm, to simplify setup in Windows. Download it from https://nssm.cc/description

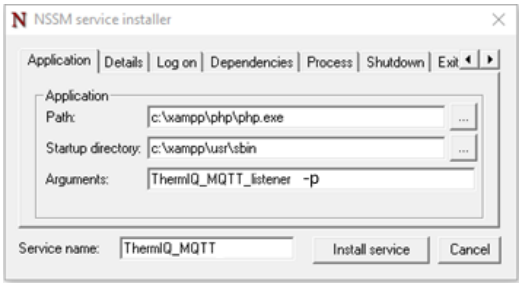
And extract nssm.exe into C:\Windows\ (or your choice of directory in path)

Then open a Dos shell as Administrator (Open Windows search, type cmd, Right Click, Run as Administrator)

then type:

```
nssm install
```

and add the following:



The -p option ensure that the hourly aggregation of data is done.

The rest can be left as is. Click "Install Service" and you will be back in the Dos shell.
Type:

```
nssm start ThermIQ_MQTT
```

And you are done!

Configure and connect the ThermIQ-MQTT board to the heatpump according to the instructions at:
www.thermiq.net/ThermIQ_MQTT_installation.pdf

Tips: If you want to make your mosquitto server externally accessible from the internet you should enable MQTTS support and generate self –signed certificates. One guide describing this is:
https://mcuoneclipse.com/2017/04/14/enable-secure-communication-with-tls-and-the-mosquitto-broker/

Appendix B: ThermIQ USB driver install

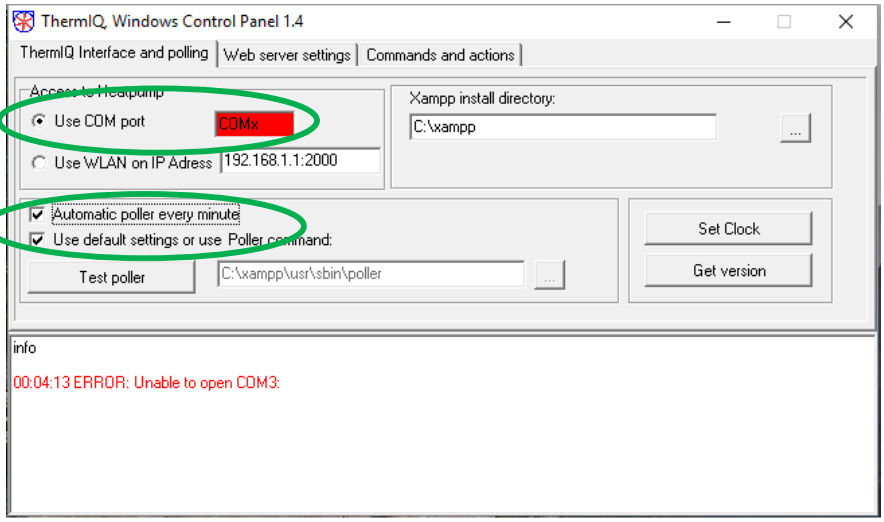
Connect your ThermIQ card to your pC

Windows 10:

You need to have the Microsoft Visual C++ redistributables installed. These can be found here: Visual C++ redistributables

No special driver is required since Windows 10 have a generic drivers that works with ThermIQ. When you plug in the ThermIQ-card a COM: port and a Thumb-drive will be automatically identified. Use the device manager to figure out the number of the new COM-port and write it down below (i.e. COM3:)

After installation in step 3 you should have a new Icon on your Windows Desktop called “Thermiq ControlPanel”. Click it and you should see something like this:



Fill in the right COM-port from above and make sure both tick-boxes are checked. The Control-panel must always be running in order for ThermIQ to collect data.

Connect the ThermIQ board to the heatpump, place the PC close to the heatpump and connect the PC to your network. More instructions at: www.thermiq.net/installation2.pdf

Appendix C: Usb drivers for old Window versions

The ThermIQ card requires a Windows driver to be installed. The driver is included in the "ThermIQ sofware package for windows" and can be found in folder "C:\Xampp\ThermIQ_Windows\"

Start with connecting the ThermIQ to the PC and wait for Windows to open up the found new hardware dialog. Select "Search and install". Windows will now search for but not find any suitable drivers.

You will now get the option to point to where the driver is located. Choose folder "C:\Xampp\ThermIQ_Windows\". and install it even though it's not "Windows-certified". In Windows 8 and 8.1 this is only possible if you restart with "Driver Signature Check Disabled". See below for an example on how to do that.

When done, a new window will appear with "ThermIQ Composite Port". ThermIQ should now be properly installed and ready to use. A new USB-thumb drive should appear as well as a new COM-port. Use the device manager to figure out the number of the new COM-port and write it down below(i.e COM3:).

The driver is unsigned and needs some special steps when installing it in Windows 7 or Windows 8/10.

Windows 7:

One method is to continuously press F8 when Windows is booting up until you get the Advanced Boot Options menu, then select "Disable Driver Signature Enforcement". Continue into windows and install the driver.

Windows 8:

One proven guide can be found at http://www.howtogeek.com/167723/how-to-disable-driver-signature-verification-on-64-bit-windows-8.1-so-that-you-can-install-unsigned-drivers/