



## ThermIQ2 installation for Debian 11, "Bullseye", version 1.0

This installation description is valid for ThermIQ and ThermIQ-MQTT using Debian 11, bullseye.

Installation prerequisites:

1. A running Debian Bullseye Installation
  - a. This guide does not cover how to get Debian up and running and targets users with a thorough Linux experience.
2. A ThermIQ-MQTT card
3. telnet/ssh client, in windows: i.e telnet.exe or Putty. Mac: terminal

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

Now it's time to install the ThermIQ sw package. The switch `-mosquitto` can be skipped if you already have an MQTT server.

Connect and login to the host computer, open a terminal window.

Type:

```
cd /tmp
su root
    Enter the root password if requested
rm setup_script
wget http://www.thermiq.net/getThermIQ2.php?setup=debian -O setup_script
chmod a+x setup_script
./setup_script --thermiq_mqtt --mosquitto 2>&1 | sudo tee /var/thermiq_install.log cd
/etc/mosquitto
mosquitto_passwd -c /etc/mosquitto/passwd thermiq
and enter your mqtt password
```

Write down mqtt pw

This will take a couple of minutes, then **restart the machine** to make sure all settings are re-applied.

That's all setup needed on the host!

The setup\_script from above can be used as blueprint for other Linux distros as well:

- The poller should be called every minute to aggregate data in the database
- The ThermIQ\_MQTT\_listener should be started as a service and is responsible for putting the MQTT messages into the database.
- /opt/bin/php is the hardcoded path in all scripts and needs to be available
- /usr/sbin/ needs to be in the path, also from apache2

1. Open link: [http://<your-ip-address>/install/check\\_install.php](http://<your-ip-address>/install/check_install.php) in a web-browser with the IP address from bullet 4. A quick analysis of the installation will be done. If all looks ok proceed to next step

Open link: <http://<your-ip-address>/install/install.php> in a web-browser



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. Use “sqlite” as database type unless you already have a MySQL database setup and know how to administrate it.

For MySQL you need to create two new databases, ‘thermiq\_db’ and ‘thermiq\_userdb’

Each step will be enabled as the previous step is completed but a manual “reload” of the page is sometimes needed. Here you can also setup a Dropbox backup account and secure the installation page with a password.

Bullet	Step	Key	Value
3	-	Raspberry username	pi
3	-	Raspberry password	
4	-	Raspberry IP-address	
5		Mqtt user	thermiq
		Mqtt password	
5		MQTT Public cert	/etc/mosquito/ca.crt
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	

## 2. Hardware Installation:

**ThermIQ-MQTT:** Configure and connect your ThermIQ-MQTT card according to these instructions: [www.thermiq.net/installation\\_mqtt.pdf](http://www.thermiq.net/installation_mqtt.pdf)

3. Open link: <http://<your-ip-address>> in a web-browser with the IP address from step 4  
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.
  - e. Select "[Widget settings](#)" and enable the widgets you want to see on the home page

Done 😊

Now is a good time to check out the ThermIQ forum at [www.ThermIQ.net](http://www.ThermIQ.net)

Note 1. Apache and Mosquitto will be installed by default. Please make sure that you also install a firewall and that you secure your installation from attacks.

Note 2: The MQTT server installed is from mosquitto.org, it is configured to enable both open and encrypted connections using self-signed certificates in /etc/mosquitto/certs/  
These certificates can be regenerated by logging in with ssh as pi and typing

```
cd
cd certs
generate-CA.sh
cp -f *.cert `hostname`.key /etc/mosquitto/certs/
systemctl restart mosquitto.service
```

ThermIQ\_MQTT will only be able to use encrypted “MQTTS” connection if the raspberry has a public IP-address or port forward from one. Edit /usr/sbin/generate-CA.sh to add the IP-address in ‘IPLIST’ and hostname in ‘HOSTLIST’ before regenerating certificates then copy ca.crt to all mqtt clients.

Note 3: ThermIQ does not run on PHP8 yet