



qubino®

Your little magic for the smartest home.

USER MANUAL **EN**

WEATHER STATION



The Qubino Weather Station is a Z-Wave supported weather station able to collect 10 essential weather values.

Table of contents

About Qubino	3
Safety Information.....	5
Weather Station - Available Frequencies	6
Where To Buy	7
1. Introduction.....	7
2. Use Cases	9
2.1. Usage examples for Qubino Weather Station	9
2.2. Usage examples where Qubino Weather Station is connected with other devices in the Z-Wave network ..	11
3. Qubino Weather Station Advantages and Highlights	13
3.1. Advantages	13
3.2. Highlights	15
4. Package Contents	16
5. Compatibility with Z-Wave Gateways (hubs)	17
6. Installation	18
7. Device Information and Support	19
8. Adding the device to a Z-Wave network (Inclusion).....	20
9. Removing the device from a Z-Wave network (Exclusion).....	22
10. Associations	23
11. Configuration Parameters	25
12. Technical Specifications	33
13. Remote Weather Sensors	35
14. Z-Wave Command Classes.....	40
15. Important Disclaimer	42
16. Warning	42
17. Regulations	42

About Z-Wave:

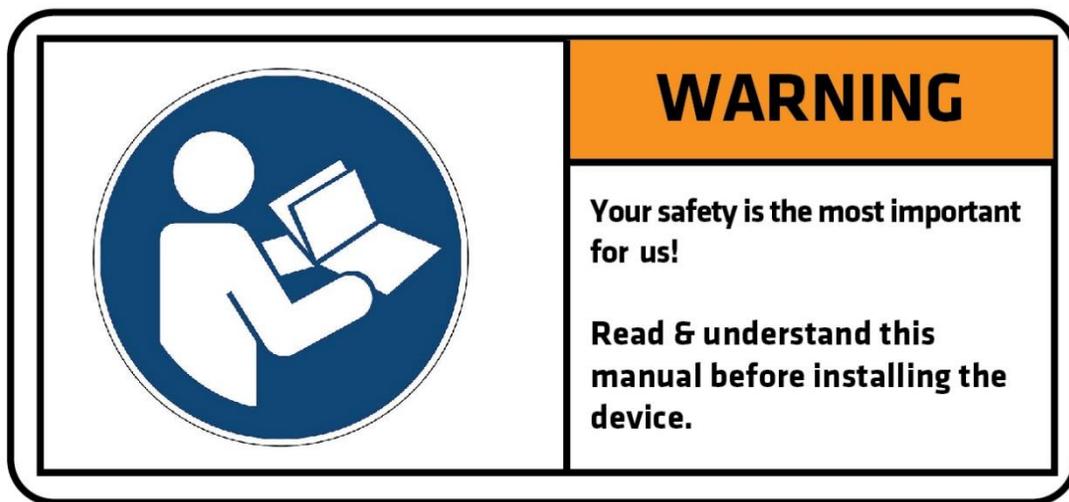
The Z-Wave protocol is an interoperable, wireless, RF-based communications technology designed specifically for control, monitoring, and status reading applications in residential and light commercial environments. Mature, proven, and broadly deployed (with over 50 million products sold worldwide), Z-Wave is by far the world market leader in wireless control, bringing affordable, reliable, and easy-to-use 'smart' products to millions of people in every aspect of daily life.

Source: www.z-wavealliance.org

Safety Information

For Qubino, safety is first, so we have prepared lots of safety tips and information that can be found throughout this manual.

To ensure your safety, please read this manual carefully before installing the device; follow the instructions exactly. The manufacturer (GOAP d.o.o. Nova Gorica) shall not be legally responsible for any equipment damage or personal injury caused by incorrect installation or operation other than that covered in this manual.



 Please check the Technical Specifications and Electrical Diagram chapters, as well as fuse requirements in the Installation chapter before installing the device.

Weather Station - Available Frequencies

ORDERING CODE (MODEL NUMBER)	Z-WAVE FREQUENCY*
ZMNHZD1	868,4 MHz
ZMNHZD2	921,4 MHz
ZMNHZD3	908,4 MHz
ZMNHZD4	869,0 MHz
ZMNHZD5	916,0 MHz
ZMNHZD6	868,4 MHz
ZMNHZD7	919,8 MHz
ZMNHZD8	865,2 MHz
ZMNHZD9	922,5 MHz
ZMNHZDA	919,7 – 921,7 – 923,7 MHz
ZMNHZDB	868,1 MHz
ZMNHZDC	868,1 MHz
ZMNHZDD	919,8 MHz
ZMNHZDE	920,9 MHz

*You can check the Z-Wave frequency in your country here:

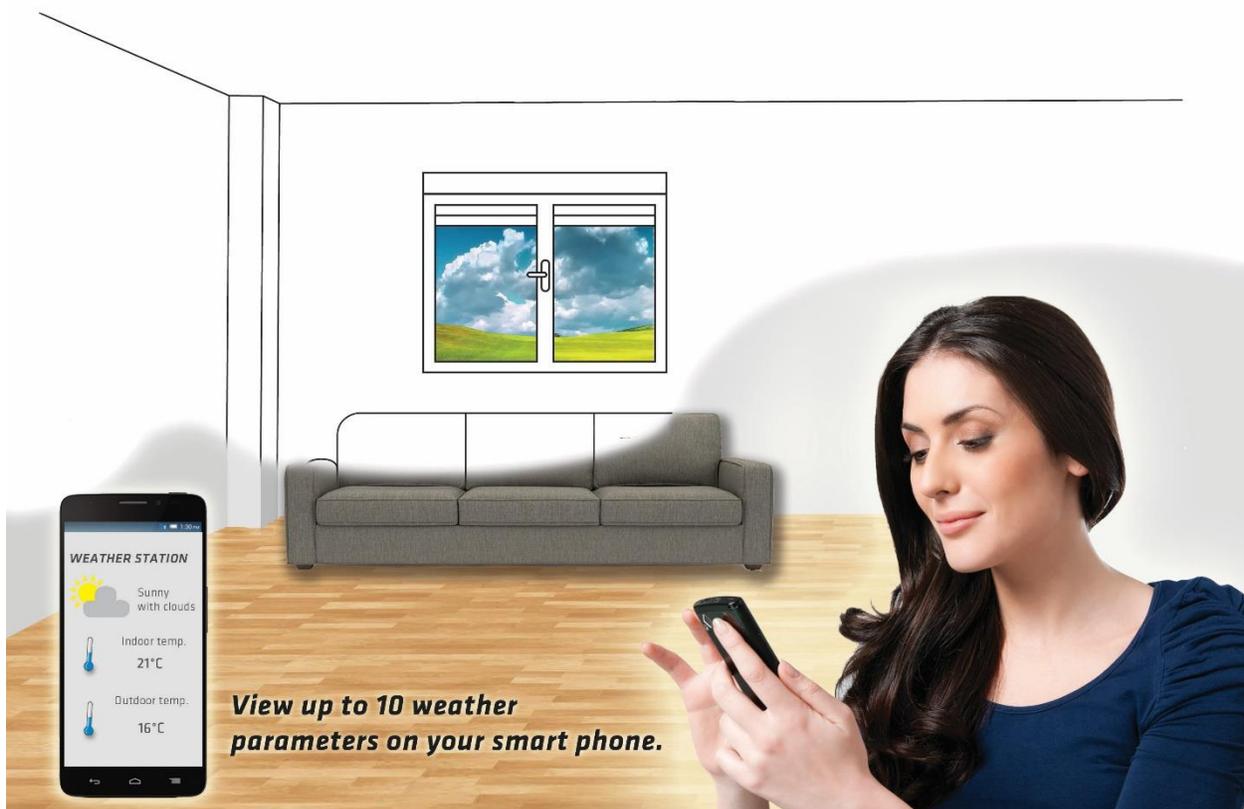
https://z-wave.sigmadesigns.com/wp-content/uploads/Z-Wave_Frequency_Coverage-.pdf

Where To Buy

To find your nearest Qubino dealer visit: <http://qubino.com/where-to-buy/>

1. Introduction

The Qubino Weather Station is a Z-Wave supported weather station able to collect 10 essential values: indoor and outdoor temperature and humidity, rain rate and wind direction, speed, gust, temperature and wind chill. All measured data is sent to your Z-Wave network to help you control your smart home devices.



The Qubino Weather Station enables smart devices to respond to climate events and changes. It is an essential Z-Wave companion to help you create all climate-related scenes in your smart home.

The Qubino Weather Station Key receives wireless data packages from thermo/hygro sensors 1 and 2, the rain sensor and the wind gauge and sends it to the Z-Wave gateway (hub). When plugged into the USB power adapter, it receives data for temperature, wind chill, wind speed, wind gust, wind direction, humidity, rain rate and battery level for each sensor. It is also designed to act as a repeater in order to improve the range and stability of the Z-Wave network.

Weather Station measures 10 weather values:

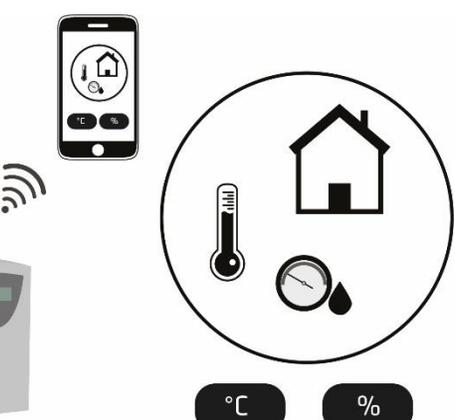
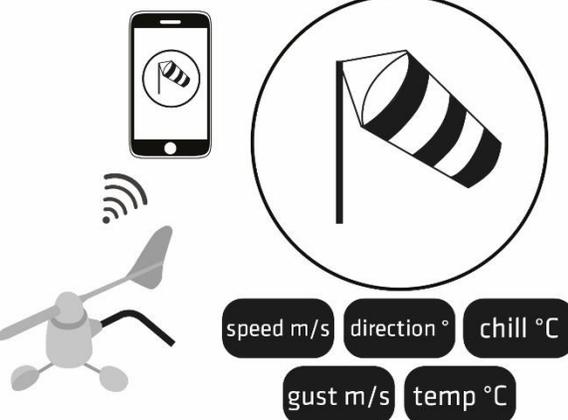
Indoor Temperature (measured on the thermo/hygro sensor)	Outdoor temperature (measured on the thermo/hygro sensor)	Indoor humidity (measured on the thermo/hygro sensor)	Outdoor humidity (measured on the thermo/hygro sensor)	Rain Rate (measured on the rain sensor)	Wind direction (measured on the Wind gauge)	Wind Speed (measured on the Wind gauge)	Wind gust (measured on the Wind gauge)	Outdoor Temperature (measured on the Wind gauge)	Wind Chill (measured on the Wind gauge)
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



2. Use Cases

The Weather Station can be used in many different scenes, which can help make your life more comfortable. We have prepared a few of them for you—so you can get an idea for your next smart home project. Of course, there are countless of other options for how to use Qubino Weather Station to make your life easier.

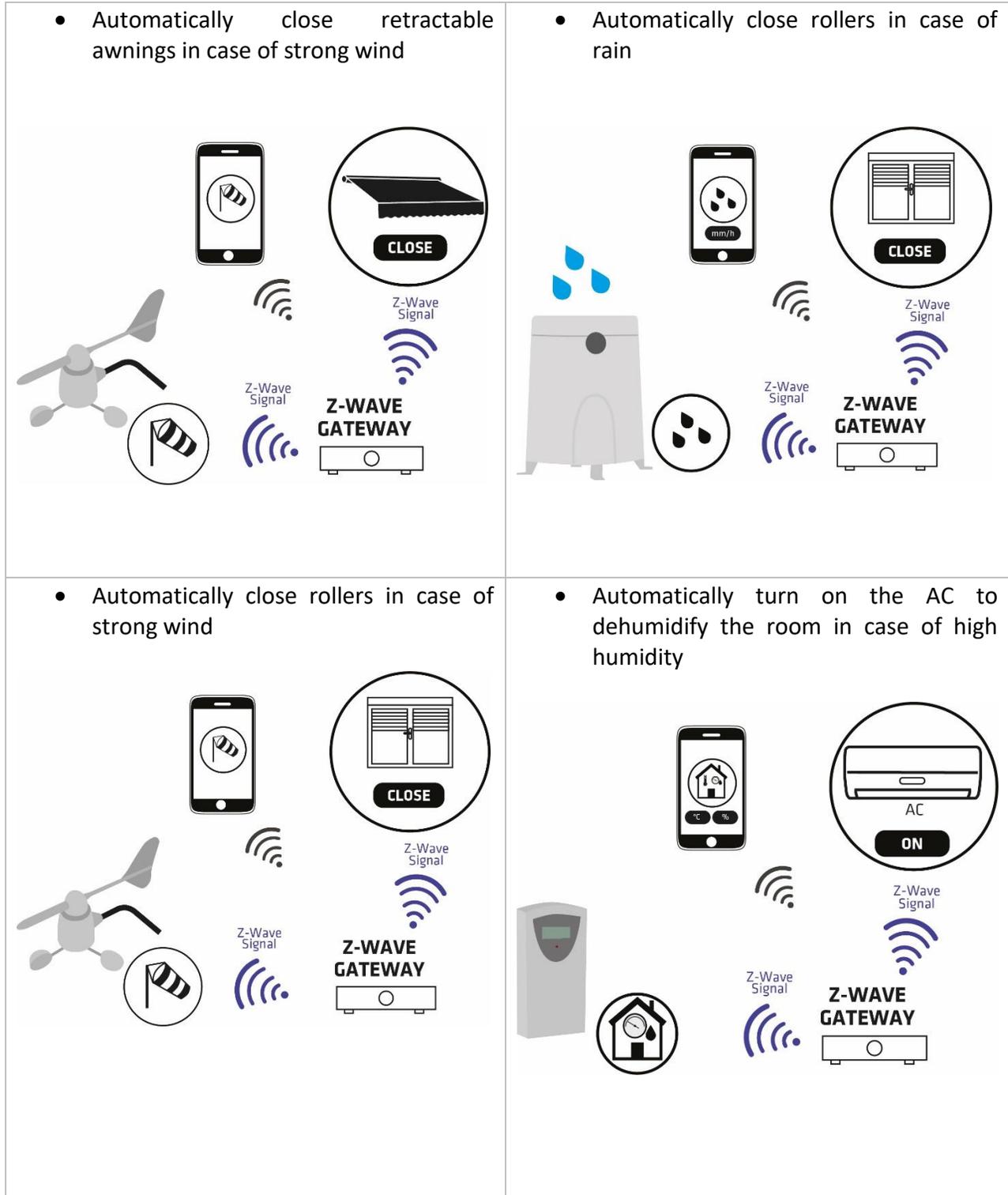
2.1. Usage examples for Qubino Weather Station

<ul style="list-style-type: none">• Remotely receive data about rain rate  <p>mm/h</p>	<ul style="list-style-type: none">• Remotely receive data about indoor temperature/indoor humidity  <p>°C %</p>
<ul style="list-style-type: none">• Remotely receive data about outdoor temperature/outdoor humidity  <p>°C %</p>	<ul style="list-style-type: none">• Remotely receive data about wind parameters (speed, direction, chill, gust, temperature)  <p>speed m/s direction ° chill °C gust m/s temp °C</p>

- **Want to control other devices in your Z-Wave network with the Weather Station?**
- Connect the Weather Station with other devices in your network to remotely and automatically trigger another Z-Wave device.



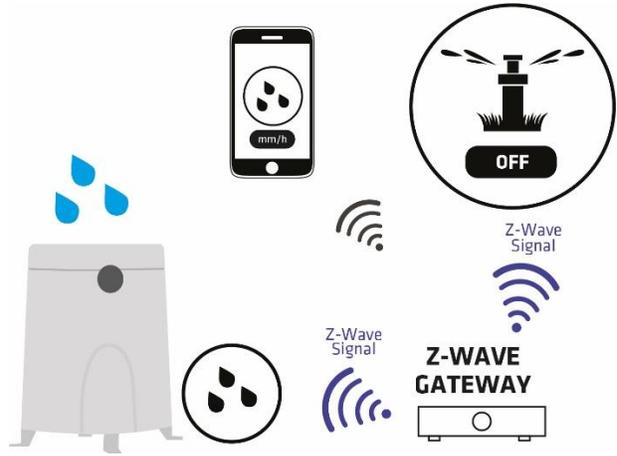
2.2. Usage examples where Qubino Weather Station is connected with other devices in the Z-Wave network



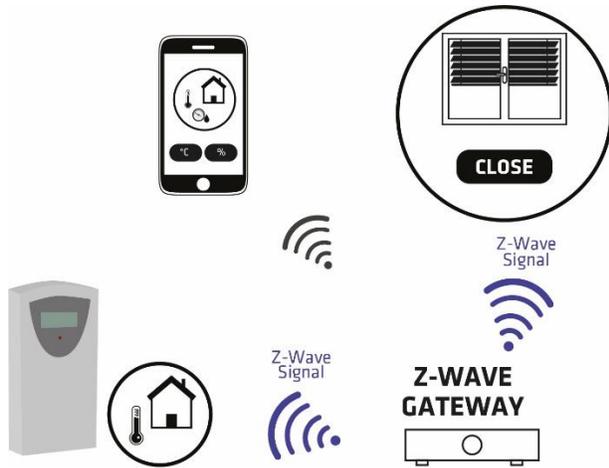
- Automatically turn On or Off heating according to the indoor temperature



- Automatically turn off the irrigation valves in case of rain



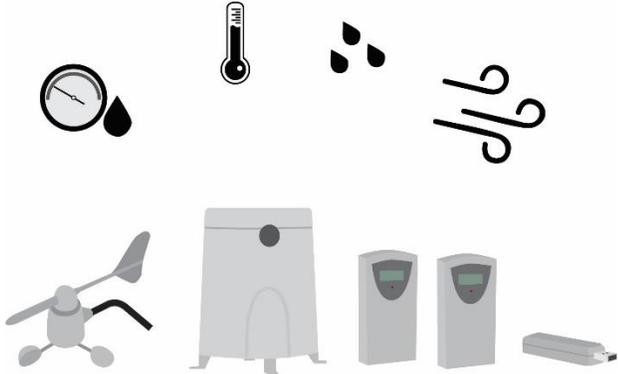
- Automatically close venetian blinds in case of high outdoor temperature



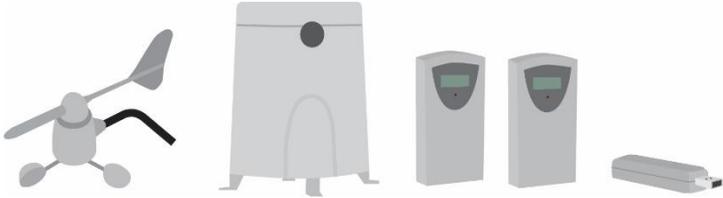
3. Qubino Weather Station Advantages and Highlights

3.1. Advantages

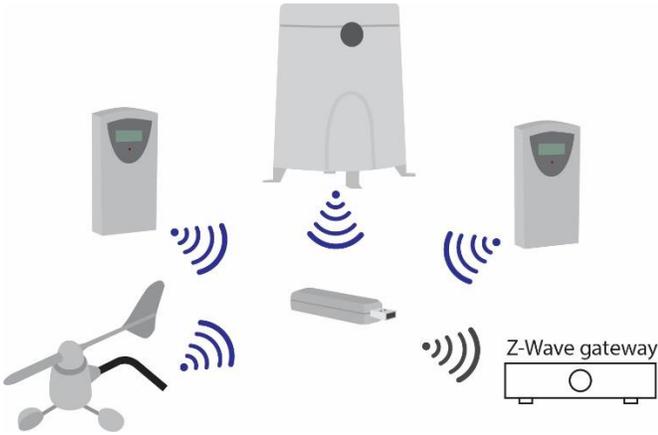
- The Qubino Weather Station is the world's first Z-Wave supported weather station to collect 10 essential values. The weather values are collected with the help of 4 individual sensors that monitor and transmit live weather data to your Z-Wave gateway (hub). The 2 included LCD-display thermo-hygrometers measure temperature and humidity. An anemometer measures all aspects of wind that you need to know: speed, chill, gust, and direction. And the rain sensor measures rain rate (the amount of rain). All sensors monitor and report battery levels. All measured data is sent to the Z-Wave network to help you control your smart home devices.



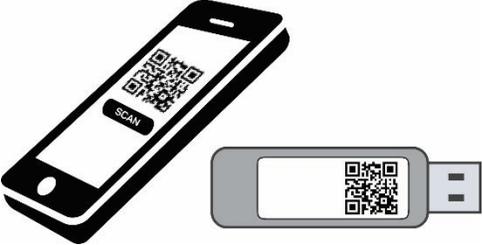
- Qubino Weather Station allows the easiest and quickest installation. Because of its practical size, the installation can be accomplished in under 30 minutes.



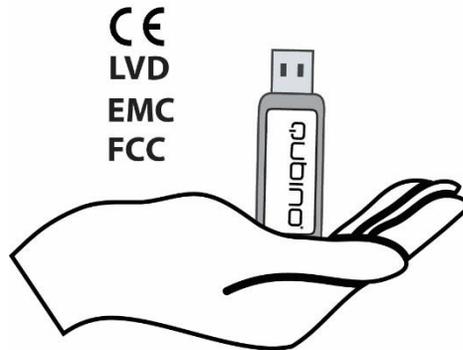
- The weather data is sent to a Weather Station USB Key which not only acts as a Z-Wave signal repeater, but relays all data to your Z-Wave gateway (hub) for advanced home automation. For example, if the wind speed or rain rate exceeds a certain amount, automatically close your garage door. Program your smart home’s HVAC system to respond instantly to the outdoor temperature and humidity for more efficient indoor temperature regulation. With plenty of configuration parameters to work with, count on near endless possibilities for your smart home.



- By scanning the QR code on the back of your Weather Station USB Key, the serial and part number of the product are automatically copied on user’s mobile device and they can have direct access to Qubino’s technical support team. With the help of serial and part number, the support team can check the production log file, which contains the date of production as well as all the relevant product parameters and information, so they are able to give the best support possible.



- Qubino Weather Station is safety certified and has CE, LVD, EMC and FCC certificates.



3.2. Highlights

- Remotely (via smartphone or PC) receive real time weather parameters
- Supports auto-inclusion mode for quick set up
- Supports additional parameters for expert users, which allows for advanced configuration*
- Acts as a signal repeater which improves the range and stability of your Z-Wave network
- Can be used to remotely control and trigger other devices in your Z-Wave network

*Your gateway (hub) needs to support advanced configuration and parameter input if you wish to use this feature

4. Package Contents

- Weather Station USB Key
- 2 x Thermo-Hygro Sensor
- Anemometer - Wind Gauge with Solar panel (Wind cups, Wind vane, Anemometer arm, Anemometer base, 4 screws)
- Rain Sensor (Funnel shaped lid with battery hatch, Sensor base, Bucket see-saw mechanism, Protective screen, 4 screws)
- Installation Manual

5. Compatibility with Z-Wave Gateways (hubs)

Please check compatibility with your Z-Wave gateway (hub) before you purchase this device. If you don't see your gateway (hub) in the table below, please contact us at: <http://qubino.com/support/#email>.

i Please note that the gateway (hub) compatibility was updated on 14.3.2018 and it may not include the latest testing data.

Weather Station	Temp	Wind dir	Velocity	Wind gust	Wind temp	Wind chill	Thermo/Hygro CH2 -Temp	CH2 humidity	Rain Rate	Thermo/Hygro CH1 humidity	Comments
Domoticz V3.5877	×	×	×	×	×	×	×	✓	×	×	
Fibaro HC Lite v 4.130	○	○	○	○	○	○	○	○	○	○	Set root node group 1 association to multichannel in fibaro.
Vera Edge v 1.7.2406	×	×	×	✓	×	×	×	×	×	×	
Zipato	T	T	T	T	T	T	T	T	T	T	
Z-Wave Me	✓	✓	×	✓	✓	✓	×	✓	✓	×	
Eedomus	×	✓	✓	✓	✓	✓	✓	T	✓	×	
Open Z-Wave	✓	✓	✓	✓	✓	✓	✓	✓	T	T	Issues with inclusion
Piper	×	×	×	×	×	×	×	×	✓	×	
SmartThings	✓	✓	✓	✓	✓	✓	✓	✓	×	×	Incompatible
NETIChome	T	T	T	T	T	T	T	T	✓	✓	
Homey	T	T	T	T	T	T	T	T	T	T	
Eedomus	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Jedom	✓	✓	✓	×	✓	✓	✓	✓	✓	✓	
Zipatile	T	T	T	T	T	T	T	T	T	T	
Devollo	X	X	X	X	X	X	X	X	X	X	Weatherstation isn't detected correctly.
Verbund	T	T	T	T	T	T	T	T	T	T	
Indigo 7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
ImperiHome	×	×	×	×	×	×	×	×	×	✓	
OpenHab	○	○	○	○	○	○	○	○	○	○	values are update only after polling

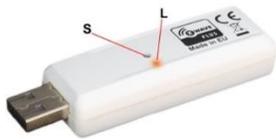
Symbol	Explanation
✓	Works fully
×	Not working
○	See comment
T	Testing in progress

6. Installation

i Before installing the device, please read the following carefully and follow the instructions exactly:

USB Key Installation:

1. Connect the Weather Station USB key to the USB power supply.
2. Place the USB key as far as possible from metal elements as they may cause signal interference.
3. Place the USB key within range of your Z-Wave network and within range of all 433 MHz sensors.



- S** Service button (used to add or remove device from Z-Wave network).
- L** LED

LED Indicator

1. LED is blinking in 1 second intervals: The device is in exclusion mode
2. LED is ON: The device is in inclusion mode
3. LED blinks once: The device received data from Thermo/Hygro Sensor Ch1
4. LED blinks twice quickly: The device received data from Thermo/Hygro Sensor Ch2
5. LED blinks 3 times quickly: The device received data from Wind Gauge
6. LED blinks 4 times quickly: The device received data from Rain Sensor

7. Device Information and Support

Did you know that Qubino offers Z-Wave devices with 100% quality control guaranteed throughout the production process? Every single unit is tested and examined before being approved for sale – a truly unique pledge in the industry.

Why is this important?

Every device has a dedicated serial number and part number, which is assigned to the device only after it goes through a strict testing procedure.

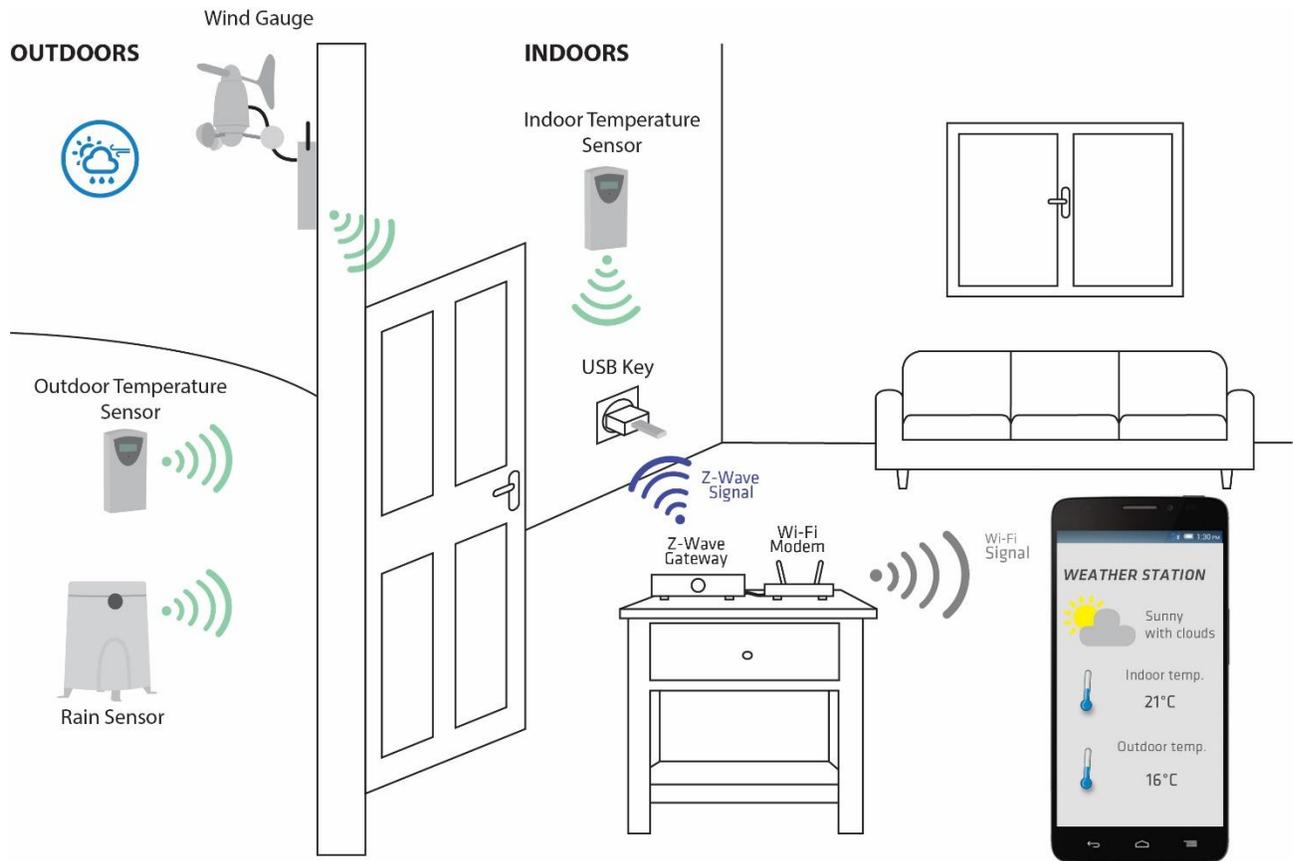
By scanning the QR code on the back of your Qubino, its device title, serial number, and part number are automatically copied to your mobile phone. You can also use the code for direct access to the device page for more information. If you still don't find what you're looking for, click on the link to Qubino technical support team. They will be able to automatically read the serial and part number from your device and quickly review the production log file containing the production date as well as any relevant device parameters and information. This process allows our team to immediately identify and address issues, giving you the best support possible.

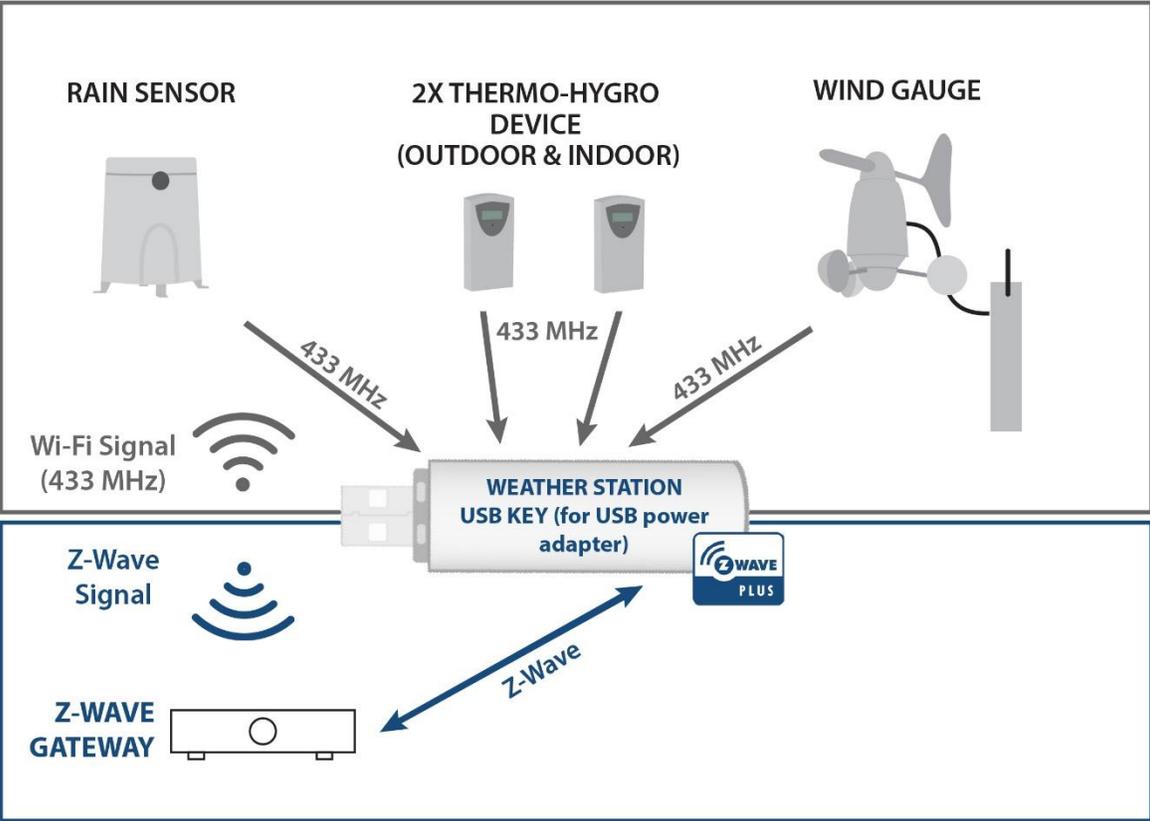
GET SUPPORT IN 3 SIMPLE STEPS:



Based on customer and business partner feedback, we're proud to boast Qubino's support team as the best and fastest on the market. If you don't find the answers to your questions in this document, please contact our support team by scanning the QR code on your device or through our website: <http://qubino.com/support/#email>. We will try to help you as soon as possible.

8. Adding the device to a Z-Wave network (Inclusion)





AUTO-INCLUSION

- 1. Enable inclusion mode on your Z-Wave gateway (hub)
- 2. Connect the USB key to the USB power supply
- 3. Auto-inclusion will be initiated within 5 seconds of connection to the power supply and the device will automatically enrol in your network

MANUAL INCLUSION

- 1. Connect the USB key to the USB power supply
- 2. Press and hold the S (Service) button for 1.5 to 4 seconds
- 3. A new device will appear on your dashboard

9. Removing the device from a Z-Wave network (Exclusion)

Z-WAVE EXCLUSION

1. Connect the USB key to the USB power supply
2. Make sure the USB key is within direct range of your Z-Wave gateway (hub) or use a hand-held Z-Wave remote to perform exclusion
3. Enable exclusion mode on your Z-Wave gateway (hub)
4. Press and hold the S (Service) button for 1.5 to 4 seconds
5. The USB key will be excluded from your network but any custom configuration parameters will not be erased.

FACTORY RESET

1. Connect the USB key to the USB power supply
2. Press and hold the S (Service) button for 4 to 8 seconds

 By resetting the USB key, all custom parameters previously set on the USB key will return to their default values, and the owner ID will be deleted. Use this reset procedure only when the gateway (hub) is missing or otherwise inoperable.

10. Associations

Use associations for direct communication between the Weather station and other devices within your Z-Wave network without the need to use the gateway (hub).

Association Groups:

Root device:

- Group 1: Lifeline group (reserved for communication with the gateway (hub)), 1 node allowed.
- Group 2: basic on/off (triggered when the Wind Gust of the Wind Gauge exceeds the Configuration Parameter 1 Value), up to 16 nodes.
- Group 3: basic on/off (triggered when the Rain rate exceeds the Configuration Parameter 2 Value) up to 16 nodes.

End point 1: Thermo/ Hygro Sensor Ch1 – Temperature

- Group 1: Lifeline group, 0 nodes allowed.

Endpoint 1 receives Temperature data from Thermo/Hygro Sensor on Channel 1. It is capable of receiving data in range of -199.0°C and 199.0°C. However, the operating temperature of the 433 MHz sensor is from -10°C to 60 °C.

End point 2: Wind Gauge – Direction

- Group 1: Lifeline group, 0 nodes allowed.

Endpoint 2 receives Direction data from Wind Gauge. The data is in the range of 0.0° to 360.0°.

Endpoint 3: Wind Gauge – Velocity

- Group 1: Lifeline group, 0 nodes allowed.

Endpoint 3 receives wind speed data from Wind Gauge. It is capable of receiving data in the range of 0.00 m/s to 88.00 m/s.

End point 4: Wind Gauge – Wind gust

- Group 1: Lifeline group, 0 nodes allowed.
- Group 2: basic on/off (triggered when the Velocity exceeds the Value of Configuration Parameter 1) up to 16 nodes.

Endpoint 4 receives wind speed data from Wind Gauge. It is capable of receiving data in the range of 0.00 m/s to 88.00 m/s.

End point 5: Wind Gauge – Temperature

- Group 1: Lifeline group, 0 nodes allowed.

Endpoint 5 receives Temperature data from Wind Gauge. It is capable of receiving data in range of -199.0°C and 199.0°C. However, the operating temperature of the sensor is from -10°C to 60°C.

End point 6: Wind Gauge – Wind Chill

- Group 1: Lifeline group, 0 nodes allowed.

Endpoint 6 receives Temperature data from Wind Gauge. It is capable of receiving data in the range of -199.0°C and 199.0°C. However, the operating temperature of the sensor is from -10°C to 60°C.

End point 7: Rain Sensor

- Group 1: Lifeline group, 0 nodes allowed.
- Group 2: basic on/off (triggered when the Rain rate exceeds the Configuration Parameter Value 2) up to 16 nodes.

Endpoint 7 receives and calculates rain rate. The rain rate is in range of 0.00 mm/h and 300.00 mm/h.

End point 8: Thermo/ Hygro Sensor Ch1 – Humidity

- Group 1: Lifeline group, 0 nodes allowed.

Endpoint 8 receives Humidity data from Thermo/ Hygro Sensor on Channel 1. The data is in range of 0% and 100%.

End point 9: Thermo/ Hygro Sensor Ch2 – Temperature

- Group 1: Lifeline group, 0 nodes allowed.

Endpoint 9 receives Temperature data from Thermo/Hygro Sensor on Channel 2. It is capable of receiving data in the range of -199.0°C and 199.0°C. However, the operating temperature of the sensor is from -10 °C to 60°C.

End point 10: Thermo/ Hygro Sensor Ch2 – Humidity

- Group 1: Lifeline group, 0 nodes allowed.

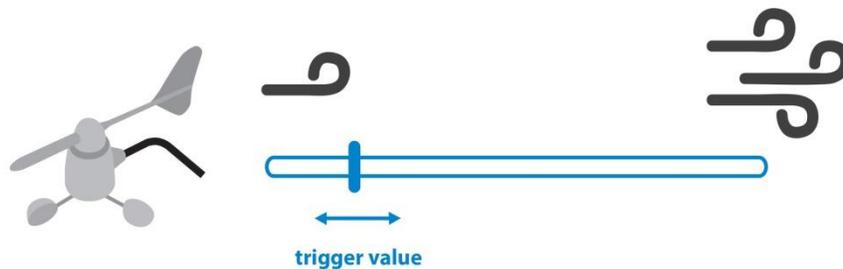
Endpoint 10 receives Humidity data from Thermo/ Hygro Sensor on Channel 2. The data is in range of 0% and 100%.

11. Configuration Parameters

Parameter No. 1 – Wind Gauge, Wind Gust Top Value

Values (size is 2 byte dec):

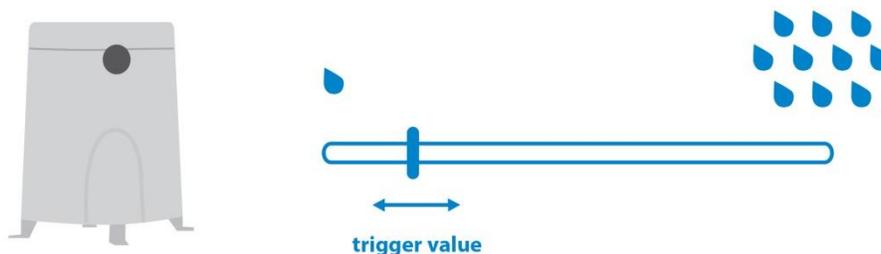
- default value 1000 (10.00 m/s)
- 0 – 8800 = value from 0.00 m/s to 88.00 m/s - if the Wind Gust is Higher than the parameter value, the device triggers an association.



Parameter No. 2 – Rain Gauge, Rain Rate Top Value

Values (size is 2 byte dec):

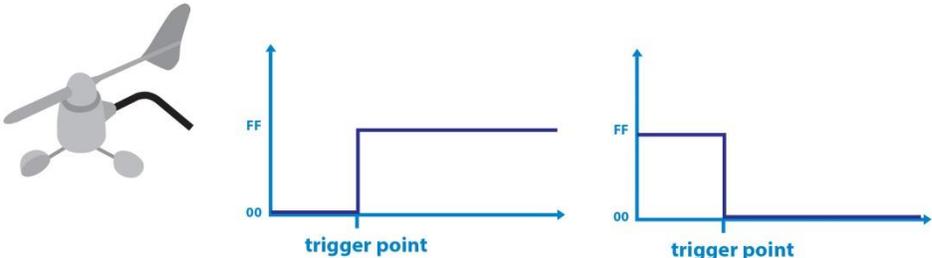
- default value 200 (2.00 mm/h)
- 0 – 30000 = value from 0.00 mm/h to 300.00 mm/h - if the sensor Rain Rate is higher than the parameter value, a device triggers an association



Parameter No. 3 – Wind Gauge, Wind Gust

Values (size is 1 byte dec):

- default value 1
- 0 - If the Wind Gust is higher than the parameter No. 1 value, then the device sends a BasicSet(0x00) command.
- 1 - If the Wind Gust is Higher than the parameter No. 1 value, then the device sends BasicSet(0xFF) command.



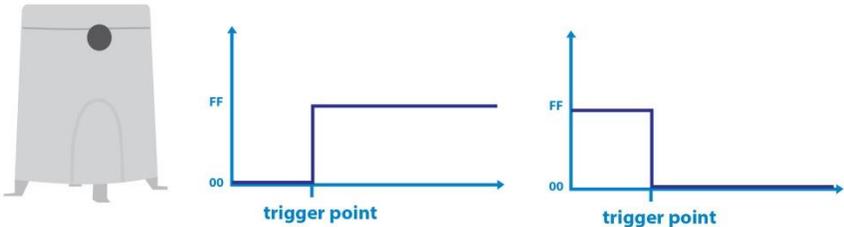
Parameter No. 4 – Rain Gauge, Rain Rate

Values (size is 1 byte dec):

- default value 1
- 0 - If the Rain rate is Higher than the Parameter No. 2 value, then the device sends a BasicSet(0x00) command.
- 1 - If the Rain rate is Higher than the Parameter No. 2 value, then the device sends BasicSet(0xFF) command.

Unsolicited Report

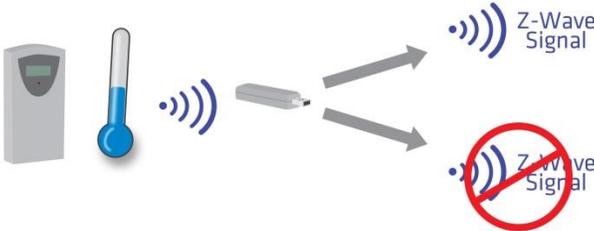
If you enable Unsolicited Reports on the End Points, the USB Key will send data to the gateway (hub) every time it receives data from the 433MHz sensors, which are different from the previous data.



Parameter No. 5 – End point 1 – Unsolicited Report

Values (size is 1 byte dec):

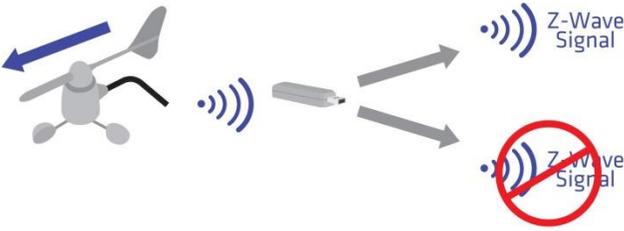
- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled



Parameter No. 6 – End point 2 – Unsolicited Report

Values (size is 1 byte dec):

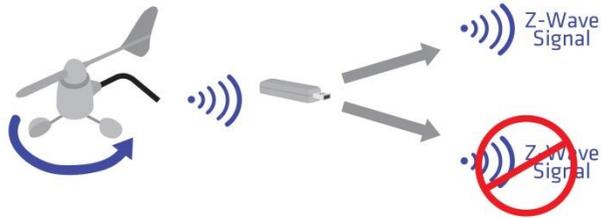
- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled



Parameter No. 7 – End point 3 – Unsolicited Report

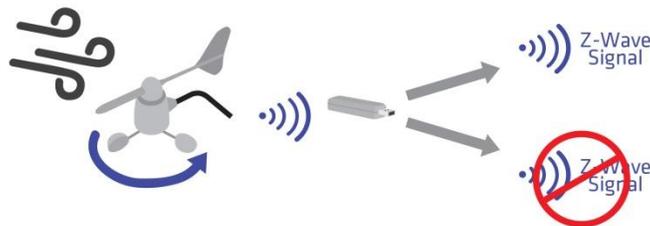
Values (size is 1 byte dec):

- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled

**Parameter No. 8 – End point 4 – Unsolicited Report**

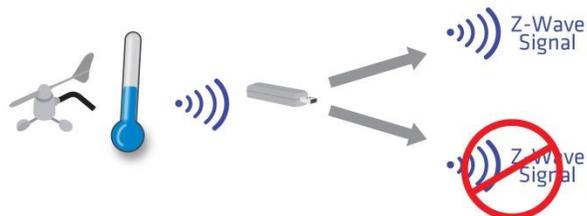
Values (size is 1 byte dec):

- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled

**Parameter No. 9 – End point 5 – Unsolicited Report**

Values (size is 1 byte dec):

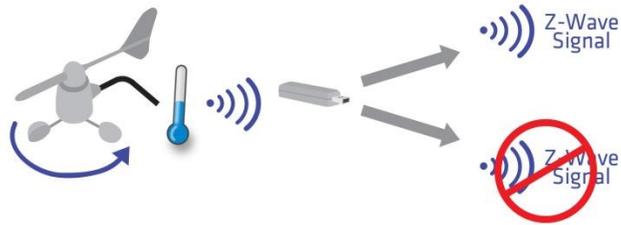
- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled



Parameter No. 10 – End point 6 – Unsolicited Report

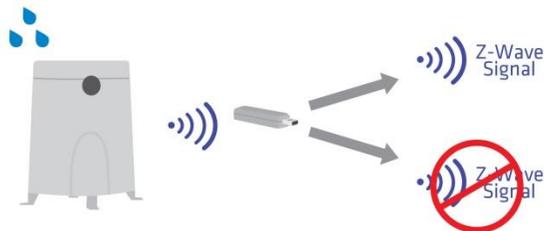
Values (size is 1 byte dec):

- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled

**Parameter No. 11 – End point 7 – Unsolicited Report**

Values (size is 1 byte dec):

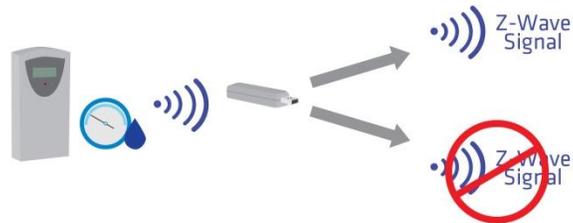
- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled



Parameter No. 12 – End point 8 – Unsolicited Report

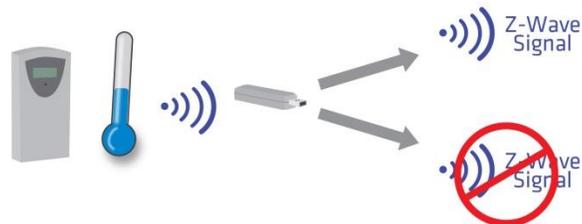
Values (size is 1 byte dec):

- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled

**Parameter No. 13 – End point 9 – Unsolicited Report**

Values (size is 1 byte dec):

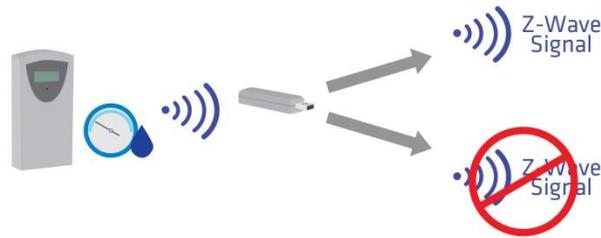
- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled



Parameter No. 14 – End point 10 – Unsolicited Report

Values (size is 1 byte dec):

- default value 1
- 0 – Unsolicited Report disabled
- 1 – Unsolicited Report enabled



Parameter No. 15 – Random ID Enable

Values (size is 1 byte dec):

- default value 0
- 0 – Random ID disabled
- 1 – Random ID enabled

If Random ID is disabled, the Weather Station USB Key can receive data from multiple 433 MHz Sensors on the same Channel. If the Random ID is enabled, the USB Key can receive data from only one sensor on the same channel. If the USB Key does not receive a data from a sensor on a specific channel for more than 2.5 hours, it clears the Random ID of the device and waits for a new ID. If you replace the batteries in the devices, the Random ID will change. If you want that the USB Key accept a device immediately, set the Parameter No. 15 to “0” and in the next step again to “1”.



Parameter No. 250 – Unsecure / Secure Inclusion

Values (size is 1 byte dec):

- default value 0
- 0 – Unsecure Inclusion
- 1 – Secure Inclusion

The Weather Station Key supports both, the secure and unsecure inclusion. Even if the gateway (hub) does not support security command classes, the Key could be included as unsecure and keep all the functionality. By default, the Key includes as unsecure. To include the Key as secure, follow the procedure:

1. Include the Key into the gateway (hub)
2. Set the parameter 250 to the value “1”
3. Enable add/remove mode on gateway (hub),
4. Hold service button S between 1.5 and 4 seconds to exclude the device
5. If the exclusion of the device was successful, the LED on the device starts blinking
6. Unplug the device out of the power supply
7. Enable add/remove mode on gateway (hub)
8. Plug the device into the power supply to star auto inclusion
9. Now the device should be included as secure

The same procedure is to include the device as unsecure.



12. Technical Specifications

Weather Station	
Package Dimensions	460x120x430 mm (18,11x4,72x16,92 in)
Package Weight	2 kg (4,41 lb)
USB Key	
Power supply	USB Power Supply, 5V DC
Operation temperature	-10 ~ +40°C (14 ~ 104°F)
Z-Wave operation range	up to 30 m indoors (98 ft)
Distance to 433Mhz Sensors	up to 100 m (depending on building materials); up to 328 ft
Dimensions (WxHxD)	79x16x24 mm (3,11x0,62x0,92 in)
Electricity consumption	0,3W
433 Mhz Sensors	
Batteries	2 x UM-3 or "AA" size 1.5 V
Operation temperature	-10 ~ +60°C (14 ~ 140°F)
Distance to USB Key	up to 100 m (depending on building materials); up to 328 ft
Receiving Cycle	Remote Thermo/Hygro -Sensors cca. 45s Rain Gauge cca. 183s Wind Gauge cca.33s
Temperature Accuracy	+/-1°C or +/-2°F
Humidity Accuracy	+/-5%
Wind Speed Accuracy	+/- (2mph + 5%)
Wind Direction Accuracy	+/-11.25°

SAFETY PROCEDURE IN CASE OF LOST CONNECTION BETWEEN 433 MHz WIRELESS SENSORS AND WEATHER STATION USB KEY:

Safety Procedure in the case of lost connection between the 433 MHz Wireless Sensor and the Weather Station USB Key (more than 15 minutes of lost connection), the device will set Sensor values to extreme values. (Temperature = -199.0 °C, Velocity = 88.00 m/s, Rain = 300.00 mm/h, Humidity = 100 % or Direction = 0.0°), so that the associations and scenes are triggered to lower the chance of potential damage. If the Weather Station USB Key lose the power supply (or any other reason reset the Key), the Key will not report Sensor Values to the gateway (hub) until new data is received or maximum 240 seconds. If after 240 seconds, the Key still does not have new data from the sensor, it will set the sensor values to extreme values. On each End point we can get battery level from corresponding sensor. On the Root device is a battery level from the sensor with the lowest battery level.

13. Remote Weather Sensors

The remote weather sensors include a thermo-hygrometer, anemometer (wind gauge) and rain sensor. All data collected by the sensors are transmitted to the Weather Station Key by wireless RF, with a range up to 100 meters (open area). The Weather Station Key supports a maximum of 2 thermo-hygrometers, allowing 2 channels of temperature/humidity display (Ch1 and Ch2).

Setting up the Remote Weather Sensors

Before starting up the Weather Station Key, setup all the remote sensors first. When placing the sensors, make sure that they are within receiving range of the console unit.

Ideally, they should be within the line of sight of the console unit. Transmission range may be affected by trees, metal structures and electronic appliances. Test reception before permanently mounting your weather station.

Also make sure that the sensors are easily accessible for cleaning and maintenance. The remote sensors should be cleaned on a weekly basis, since dirt and debris will affect sensor accuracy.

Setting up the Thermo-Hygro Sensor(s)

1. Open the latch at the base of the thermo-hygro sensor.
2. Set the channel with a slide switch to Ch1 or Ch2 (Channel has to be selected before inserting batteries)
3. Insert two 2 x UM-3 or "AA" size 1.5 V batteries.
4. Use a pin to press the "RESET" key which is in the battery compartment of thermo-hygro sensors after LED flash.
5. Replace the latch and mount the unit at desired location.

***Placement Tips:**

- The thermo-hygro sensor should be in an area with free air circulation and sheltered from direct sunlight and other extreme weather conditions. Place the unit in a shaded area, such as under a roof.
- Avoid placing the sensor near sources of heat such as chimneys.
- Avoid any areas which collect and radiate heat in the sun, such as metal, brick or concrete structures, paving, patios and decks.

- Ideally, place the sensor above natural surfaces such as a grassy lawn.
- The international standard height for measurements of air temperature is at 1.25m (4 ft) above ground level.

Setting up the Rain Sensor

1. Unlock the funnel-shaped top of the rain sensor by turning both knobs on the sides of the rain sensor in an anti-clockwise direction.
2. Lift the top off the base and insert two 2 x UM-3 or “AA” size 1.5 V batteries into the battery holder.
3. Replace the lid and secure into place by turning the knobs clockwise.
4. Place the rain sensor in a location such that precipitation can fall directly into the sensor, ideally 2-3 ft above the ground. It may be secured into place by using the four screws provided.
5. The sensor must be accurately levelled for optimum performance. To check if the sensor is levelled, remove the lid and check if the ball bearing inside is at the midpoint of the leveller. Additionally, a bubble level or carpenter’s level may be used.
6. Attach the protective screen onto the top of the lid. The screen will prevent any debris entering the sensor.

Placement Tips:

- The rain sensor should be placed in an open area away from walls, fences, trees and other coverings which may either reduce the amount of rain rate into the sensor, deflect the entry of wind - blown rain, or create extra precipitation runoff. Trees and rooftops may also be sources of pollen and debris.
- To avoid rain shadow effects, place the sensor at a horizontal distance corresponding to two to four times the height of any nearby obstruction.
- It is important that rain excess can flow freely away from the sensor. Make sure that water does not collect at the base of the unit.
- The rain rate measurement mechanism utilizes a magnet; hence do not place any magnetic objects around the proximity of the sensor.

Setting up the Anemometer (Wind gauge)

1. Assemble the wind cups and wind vane to the anemometer arm
2. Attach the assembled anemometer to the base.
3. Insert two 2 x UM-3 or “AA” size 1.5 V batteries into the battery holder in the base and connect the second battery to the solar panel connector.
4. Mount the anemometer onto a vertical surface, using the fittings provided.

Placement Tips:

- Check that wind can travel freely around the anemometer and is not distorted by nearby buildings, trees or other structures.
- For better results, place the anemometer at least 3 m above local structures and obstacles. The ground creates a frictional effect to wind flow and will attenuate readings.
- Aim for maximum exposure of the anemometer to the commonest wind directions in your area.
- The official mounting location for anemometers is 10m (33 ft) above ground level in a clear unobstructed location.

Maintenance

Changing Batteries

The battery statuses of the sensors are checked every hour. If the low battery indicators light up, replace the batteries for the corresponding unit immediately.

Changing Batteries for the Remote Sensors

1. Replace the batteries following the setup instructions for the corresponding sensor.
2. When the batteries are properly installed, the sensor will resume sending signals to the main console unit.

Cleaning

The Weather Station Key and outer casings for the remote sensors can be cleaned with a damp cloth. Small parts can be cleaned with a cotton tip or pipe-cleaner. Never use any abrasive cleaning agents and solvents. Do not immerse any units with electronic parts in water or under running water.

Anemometer

- Check that the wind vane and wind cups can spin freely and are free from dirt, debris or spider webs.

Rain Sensor

Like all rain gauges, the rain sensor is prone to blockages due to its funnel shape. Checking and cleaning the rain sensor from time to time will maintain the accuracy of rain measurements.

- Detach the protective screen and lid. Remove any dirt, leaves or debris by cleaning the items with soapy water and a damp cloth. Clean small holes and parts with a cotton tips or pipe-cleaner.

- Look out for spiders or insects that might have crawled into the funnel.

- Also clean the swinging mechanism with a damp cloth.

Troubleshooting

The Weather Station Key will not receive any data when the wireless link with the Sensor is lost. Check or replace the batteries for the corresponding sensor.

If the above does not solve the problem, check the wireless transmission path from the corresponding sensor to the main console unit and change their locations if necessary.

Although wireless signals can pass through solid objects and walls, the sensor should ideally be within the line of sight of the console unit.

The following may be the cause of reception problems:

- Distance between remote sensor and Weather Station Key is too long. (Maximum transmission distance in open area conditions is up to 100 m.)

- Signal shielding materials such as metal surfaces, concrete walls or dense vegetation in the path of transmission.

- Interferences from wireless devices (such as cordless phones, radio headsets, baby listening devices) and electronic appliances.

The weather readings do not correlate with measurements from TV, radio or official weather reports

Weather data can vary considerably due to different environmental conditions and placement of weather sensors.

Check the placement tips included in this manual to site your sensors in the best possible way.

PRECAUTIONS

This product is engineered to give you years of satisfactory service if you handle it carefully. Here are a few precautions:

1. Do not immerse the unit in water.
2. Do not clean the unit with abrasive or corrosive materials. They may scratch the plastic parts and corrode the electronic circuit.
3. Do not subject the unit to excessive force, shock, dust, temperature or humidity, which may result in malfunction, shorter electronic life span, damaged battery and distorted parts.
4. Do not tamper with the unit's internal components. Doing so will invalidate the warranty on the unit and may cause unnecessary damage. The unit contains no userserviceable parts.
5. Only use fresh batteries as specified in the user's manual. Do not mix new and old batteries as the old ones may leak.
6. Always read the user's manual thoroughly before operating the unit.

14. Z-Wave Command Classes

ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_ALWAYS_ON

GENERIC_TYPE_SENSOR_MULTILEVEL

SPECIFIC_TYPE_ROUTING_SENSOR_MULTILEVEL

Z-Wave Supported Command Classes:

COMMAND_CLASS_ZWAVEPLUS_INFO_V2,

COMMAND_CLASS_DEVICE_RESET_LOCALLY_V1

COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2

COMMAND_CLASS_POWERLEVEL_V1

COMMAND_CLASS_SECURITY

COMMAND_CLASS_FIRMWARE_UPDATE_MD_V2

Z-Wave Securely Supported Command Classes:

COMMAND_CLASS_VERSION_V2

COMMAND_CLASS_SENSOR_MULTILEVEL_V7

COMMAND_CLASS_MULTI_CHANNEL_V4

COMMAND_CLASS_ASSOCIATION_V2

COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3

COMMAND_CLASS_ASSOCIATION_GRP_INFO_V2

COMMAND_CLASS_CONFIGURATION

COMMAND_CLASS_BATTERY

COMMAND_CLASS_MARK

COMMAND_CLASS_BASIC

Endpoint 1, 2, 3, 4, 5, 6, 7, 8, 9, 10**Device Class:**

ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_ALWAYS_ON

GENERIC_TYPE_SENSOR_MULTILEVEL

SPECIFIC_TYPE_ROUTING_SENSOR_MULTILEVEL

Command Classes:

COMMAND_CLASS_ZWAVEPLUS_INFO_V2,

Securely Supported Command Classes:

COMMAND_CLASS_VERSION_V2

COMMAND_CLASS_SENSOR_MULTILEVEL_V7

COMMAND_CLASS_ASSOCIATION_V2

COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3

COMMAND_CLASS_ASSOCIATION_GRP_INFO_V2

COMMAND_CLASS_BATTERY

COMMAND_CLASS_MARK

COMMAND_CLASS_BASIC

This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from any other manufacturers. All constantly powered nodes in the same network will act as repeaters regardless of the vendor in order to increase reliability of the network.

15. Important Disclaimer

Z-Wave wireless communication is not always 100% reliable. This device should not be used in situations in which life and/or valuables are solely dependent on its functioning. If the device is not recognized by your gateway (hub) or shows up incorrectly, you may need to change the device type manually and make sure your gateway (hub) supports multi-channel devices. Contact us for help before returning the device: <http://qubino.com/support/#email>

16. Warning

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being. When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposal free of charge.

17. Regulations

FCC COMPLIANCE STATEMENT:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: —Reorient or relocate the receiving antenna. — Increase the separation between the equipment and receiver. —Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. —Consult the dealer or an experienced radio/ TV technician for help.

Legal Notice

This user manual is subject to change and improvement without notice. GOAP d.o.o. Nova Gorica reserves all rights to revise and update all documentation without any obligation to notify any individual or entity.

Declaration of Conformity

Qubino Weather Station device is in compliance with the essential requirements and other relevant provisions of the Low voltage (LVD) Directive (2014/35/EU), Electromagnetic Compatibility (EMC) Directive (2014/30/EU), Radio Equipment Directive (2014/53/EU), Directive RoHS 2 (2011/65/EU) and Directive ErP (2009/125/EC).

WEEE

According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.



NOTE: User manual is valid for device with SW version S1 (SW version is part of P/N)!

Example:P/N: ZMNHZDxHxS1Px

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