

U-drone BW Space Pro from Youcan Robot tested

Yes, You can

Text and Fotos: Willi Kuhlmann

Youcan Robot products, founded in Shanghai in 2016, are now also available on the European market. The company is particularly well positioned in the area of underwater drones. Youcans ROV (Remote Operation Vehicle) with the name BW Space Pro promises high-quality technology for professional underwater exploration missions, for ambitious photography and filming under the water surface. A practical test.

With the BW Space Pro, Youcan Robot is sending an underwater drone with the dimensions 410 × 310 × 130 millimeters and a weight of 3.9 kilograms at a price of 1,599 euros into the race for market shares in the relatively young ROV market for use in lakes and open waters. Customers can choose between two versions, the BW Space Pro 4K and the BW Space Pro 4K Zoom. The difference lies, the name suggests, in the recording technology used in each case. A 12-megapixel camera was installed in both, which can record videos in 4K and at 30 fps. With its 1 / 1.7 "CMOS sensor, the focal length of the Pro is 4K

4.45 millimeters. The Pro 4K Zoom camera has a 1 / 1.8 "CMOS sensor, the focal length is between 3.8 and 11.4 millimeters, the eponymous specialty is the

six times digital zoom. We used the "simple" version for this test, as the zoom version was not yet available at this time.

Guest friendly

Both versions are equipped with two vertically and horizontally mounted motors and, according to the manufacturer, have a diving depth of up to 100 meters. Youcan Robot advertises with a maximum runtime - depending on the application - of 3 to 5 hours, which would really be a considerable amount. A special feature is that in addition to the live image on the controller, another smartphone or tablet can be logged in as a guest in the WLAN of the BW Space. It is possible to see the live image on VR glasses and on another device at the same time. For



packaged well and securely, the bW space Pro 4k can be transported comfortably

As usual with u-drones, the bW space Pro 4k is connected via data cable to the WiFi base, which carries the control commands receives and passes on to the underwater vehicle

professional photo and video productions as well as underwater inspections a really extremely useful feature. The plug-in connection from the WLAN base to the underwater drone is very convenient for transport, since this considerably reduces the dimensions to be taken into account. The processing of the drone makes an overall high-quality impression and gives hope for the durability of the U-drone.

The manufacturers prefer to advertise their products in a kind of South Sea flair with clear water and the finest beaches. But everyday life usually looks a little different, so of course underground drones must also convince in the sometimes cloudy and less inviting domestic waters, which should prove a first test run. After charging the batteries, the free app, which is available for devices with iOS and Android operating systems, must be installed to transfer all important information and the live image. Before the first start, after switching on the wifi buoy in the app menu, you can choose between a 2.4 or 5.8 gigahertz connection and the controller can be connected to your smartphone or tablet using Bluetooth. You can control with virtual joysticks directly



the app, a game controller or the high-quality special BT controller. This is available in the Youcan Robot range as an additional option for EUR 100. To make it short: If you want to carry out serious underwater operations, you will not be able to avoid the corresponding control equipment anyway, and so you can only advise on this investment because the special controller not only offers long operating times, but also enables sensitive control. In addition to the live image, the display in the app also provides information about the position of the boat and various telemetry values.

PositiO litter

The BW Space Pro can be held exactly in position via the switchable stabilization mode, comparable to that of flight drones. The diving device kept the depth absolutely constant and the app delivered all important data via the monitor of the smartphone or tablet. The switch between manual and stabilized mode is made using a switch on the controller. When exchanging, you should definitely choose the manual control mode, as the stabilization electronics

YOUCAN ROBOT ON THE NET

WEBSITE: WWW.youcanRobot.com

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In addition to outputting the live image via the app, another output medium can be used

how to connect video glasses





1) the u-drone not only scores in crystal clear Caribbean water, the picture quality is also good in a German lake.

2) The live image displayed in the app provides a good insight into the underwater world



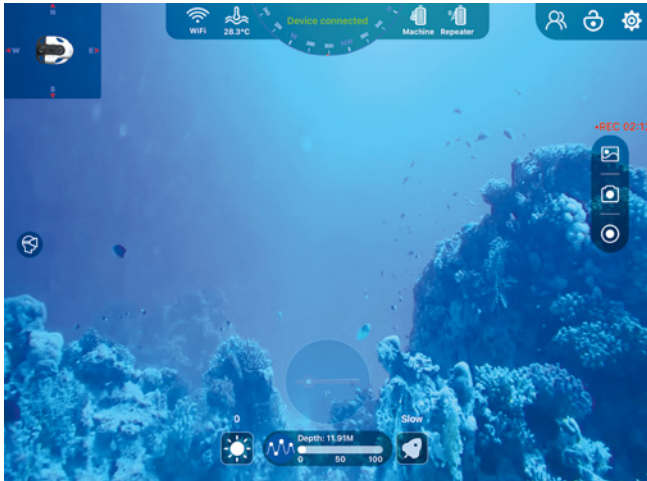
otherwise counteracts the desired direction of travel too much. If you have reached the desired depth, the automatic stabilization does an indispensable service. If you lose control or the WiFi connection is broken, the BW Space Pro will automatically reach the water surface. The overall control behavior comes astonishingly close to that of flying relatives, but in the end the physical properties of air and water flows are similar in many respects. Unfortunately, the visibility in German waters is very small, but the manufacturer has also thought of that. If visibility is poor, the controller can switch on two LED lamps, each with 1,380 lumens in the front of the drone, and dim them in several stages. Another remarkable feature is an automatic mode that adjusts the lighting conditions to the view.

The powerful underwater drone was developed not least to capture special moments under water without having to go into the water yourself. With the help of the 4K UHD camera and "Real Time Streaming", you can see a pin-sharp live image of what the BW Space Pro 4K is "seeing" on your smartphone or tablet. In Germany, such underwater drones enable hull inspections of boats or the inspection of fish stocks. After the first tests in Germany we started packing because the warmer part of the test operation was due. The BW Space Pro 4K was quickly stowed in hand luggage and arrived in Egypt. The first discussions were held with Jean Luc, the owner of the Panorama Divers diving center in Hurghada. We discussed where and how a professional use of underwater drones would make sense in the Red Sea. On the diving boats, which are in large numbers at the popular spots off the Egyptian coast, in addition to the crew, of course, the active divers go with them. But also a number of accompanying persons that should not be underestimated. Showing these people the underwater world in the Red Sea by drone could be a worthwhile additional business for diving instructors. At the same time, the "underwater observer" offers a good opportunity to keep a good eye on less experienced water sports enthusiasts and diving students even below the water surface. But also a number of accompanying persons that should not be underestimated. Showing these people the underwater world in the Red Sea by drone could be a worthwhile additional business for diving instructors. At the same time, the "underwater observer" offers a good opportunity to keep a good eye on less experienced water sports enthusiasts and diving students even below the water surface. But also a number of accompanying persons that should not be underestimated. Showing these people the underwater world in the Red Sea by drone could be a worthwhile additional business for diving instructors. At the same time, the "underwater observer" offers a good opportunity to keep a good eye on less experienced water sports enthusiasts and diving students even below the water surface.

fast connection

The next day we went out into the open sea. After the first anchor on the reef, the BW Space Pro 4K was made ready and the interest quickly awakened among the others present. I was very surprised at the quick connection. Only seconds until the live image is broadcast, unfortunately this is known quite differently. The divers had of course set out for their first dive as quickly as possible, and non-divers now had the opportunity to take a dry look at the fascinating underwater world. The passengers were offered an unforgettable experience via the video glasses that were logged into the WLAN base at the same time. Vertical diving and staying in the controlled position are the discipline of the U-drone. The inclination can be locked at +/- 45 degrees via the controller, so that you can get a good overview. In connection with electronic image stabilization, this enables very quiet video recordings. I was amazed that the BW Space Pro 4K, in contrast to other underwater drones, does not require any additional weight to compensate for the higher buoyancy in salt water. In the salt water and the current conditions of the Red Sea, it quickly became apparent that - unlike in the quieter German inland lake - a slight forward drive is required to submerge from the water surface. The integrated protective grilles in front of the motors, which reliably prevent small stones from entering, proved to be very useful. I was amazed that the BW Space Pro 4K, in contrast to other underwater drones, does not require any additional weight to compensate for the higher buoyancy in salt water. In the salt water and the current conditions of the Red Sea, it quickly became apparent that - unlike in the quieter German inland lake - a slight forward drive is required to submerge from the water surface. The integrated protective grilles in front of the motors, which reliably prevent small stones from entering, proved to be very useful. I was amazed that the BW Space Pro 4K, in contrast to other underwater drones, does not require any additional weight to compensate for the higher buoyancy in salt water. In the salt water and the current conditions of the Red Sea, it quickly became apparent that - unlike in the quieter German inland lake - a slight forward drive is required to submerge from the water surface. The integrated protective grilles in front of the motors, which reliably prevent small stones from entering, proved to be very useful. that - unlike in the quieter German inland lake - a slight forward drive is required to descend from the water surface. The integrated protective grilles in front of the motors, which reliably prevent small stones from entering, proved to be very useful. that - unlike in the quieter German inland lake - a slight forward drive is required to descend from the water surface. The integrated protective grilles in front of the motors, which reliably prevent small stones from entering, proved to be very useful.

The next time you anchor at the reef, the students should be filmed while descending so that the dive can then be analyzed together. The BW Space Pro 4K followed the divers in depth and filmed the entire dive. After the surfacing, the students waited for the video and teacher Jean Luc then evaluated it together with them. The diving students were very enthusiastic about this method because they recognized their mistakes more quickly. After the second dive, I was amazed that the battery capacity was still above 65 percent, although a total dive time of 1.5 hours was already indicated. And



The pilot can see the most important parameters directly on the live image on the on-screen display

this with strong currents in the open sea. During later dives, operating times of up to 4 hours were achieved, which is an above-average value and is pleasantly close to the manufacturer's mentioned. The WiFi base should always stay dry as it is not water-proof, but this was no different with the underwater drones tried so far, even if this was promised in advertising. The cutouts on the front and rear sides are also very useful, as this makes it easy to lift the drone out of the water.

Business areas

After this successful start, other potential customers were also enthusiastic about the possibilities, further test drives were agreed. At the same time, appointments for hull inspections were made with some other boat owners. Here, another possible business area for drone service providers was revealed, since this is how an initial inventory of the offer is made

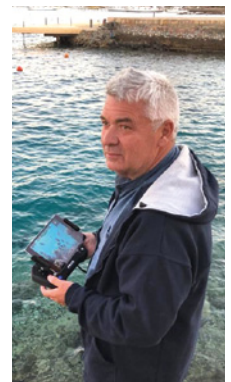


In the field of science as well as environmental and coastal protection there are potential uses for u-drones.

after all, with minimal intervention in the Ecosystem collect interesting image data

MY CONCLUSION

THE BW SPaCe Pro 4k WAS IN FIVE WEEKS ALMOST EVERY DAY IN USE WITH THE OPEN SEA IN EGGYPT AND IT WAS NO FAILURE OR ERRORS. you can see DEVELOPMENT OF THE UNDERWATER DRONES IN THIS PRICE SEGMENT, COMPARABLE WITH THE BEGINNINGS IN FLYDRONE DEVELOPMENT. THE GOOD PROCESSING IS SUITABLE FOR THE BW SPACE FOR THE PROFESSIONAL USE. THE RELATIVE NEW CAPITAL UNDERWATER DRONES ALWAYS HAS A LOT OF POTENTIAL, AND ALREADY HAVE HAVE UNDERWATER DRONES LIKE THE BW SPACE PRO A WHOLE LOT OF THREE.



before the boats are put into dry dock. Further appointments with the diving centers and the environmental organization HEPCA in Egypt are planned, for example, to check anchorages or to discover environmental pollution and, if necessary, to track down the causes.

Not only inspection tasks, diving training can also be an interesting business case for u-drone operators

