Nikon Z8 for underwater

by Jim Decker and Robin Dodd

In this article, we'll provide an in-depth review of the highly anticipated Nikon Z8 for underwater photography from our first-hand perspective. We're going to explore and discuss the key aspects, such as image quality, autofocus, the differences from previous Nikon mirrorless and SLR cameras, and the major video improvements it offers - plus a whole lot more.

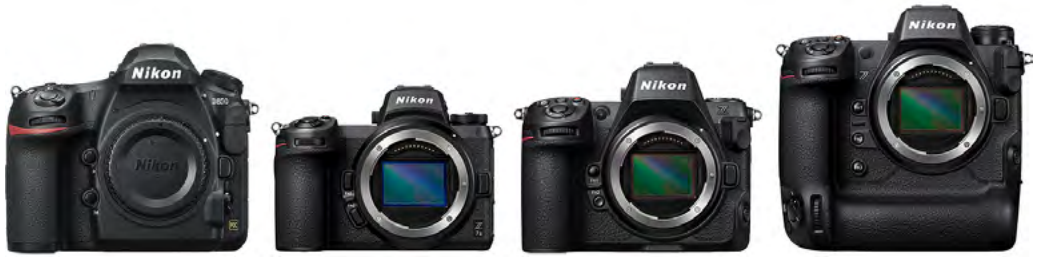
Mini Z9 or Mirrorless D850?

One burning question we had was where the Nikon Z8 fits in the Nikon lineup. Is it a mirrorless version of the Nikon D850 or a mini Nikon Z9? Well, it turns out that it's a bit of both. While the Nikon Z9 is a larger camera, the Nikon Z8 shares many similarities in terms of performance, autofocus, shooting speed, and image quality. The main difference lies in the battery life and the physical size. Underwater photographers will need to decide whether they'll prioritize a bigger battery or a smaller camera body.

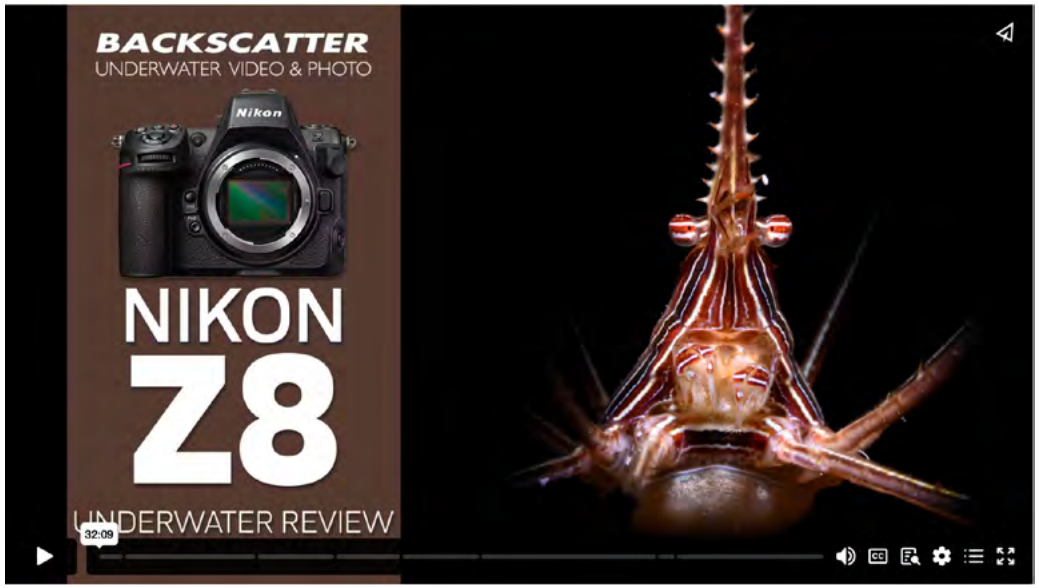
Comparing the Nikon Z8 to the Nikon D850, the most noticeable difference is the viewfinder. The Nikon Z8 features an electronic viewfinder, while the Nikon D850 has an optical one. However, the Nikon Z8 offers a significant upgrade with its 20 frames per second burst shooting and improved autofocus speed and tracking. We were particularly impressed with the 3D autofocus tracking, which worked flawlessly and exceeded our expectations.

In terms of other Nikon full-frame mirrorless cameras, the Nikon Z8 surpasses the Z7 series by a wide margin. We found the Nikon Z7 II to be a significant downgrade compared to the Nikon D850, because of the slower focus speed, slower subject acquisition, and lack of 3D autofocus tracking, but the Nikon Z8 represents a definite upgrade. It offers the same beloved 3D autofocus tracking, outstanding image quality, and superb dynamic range detail, making it a worthy successor to the Nikon D850.

When it comes to image quality, the Nikon Z8 doesn't disappoint. It shares the same sensor as the Nikon D850 and the Nikon Z9, so you can expect the same outstanding image quality. The camera produces sharp, detailed, and vibrant images, making it a reliable choice for underwater photographers who prioritize top-tier photo quality.



Nikon Z8 Camera Camera Lineup - Nikon D850 | Nikon Z7 II | Nikon Z8 | Nikon Z9

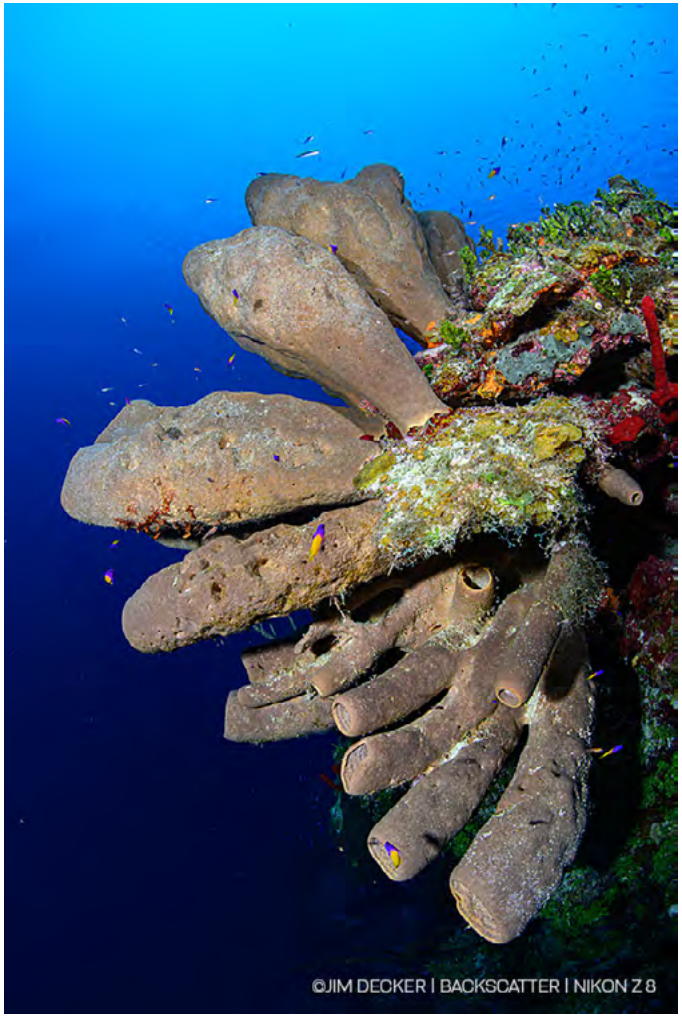


Watch our comprehensive video review for the Nikon Z8 camera, starring Backscatter CEO Jim Decker and Producer Robin Dodd.

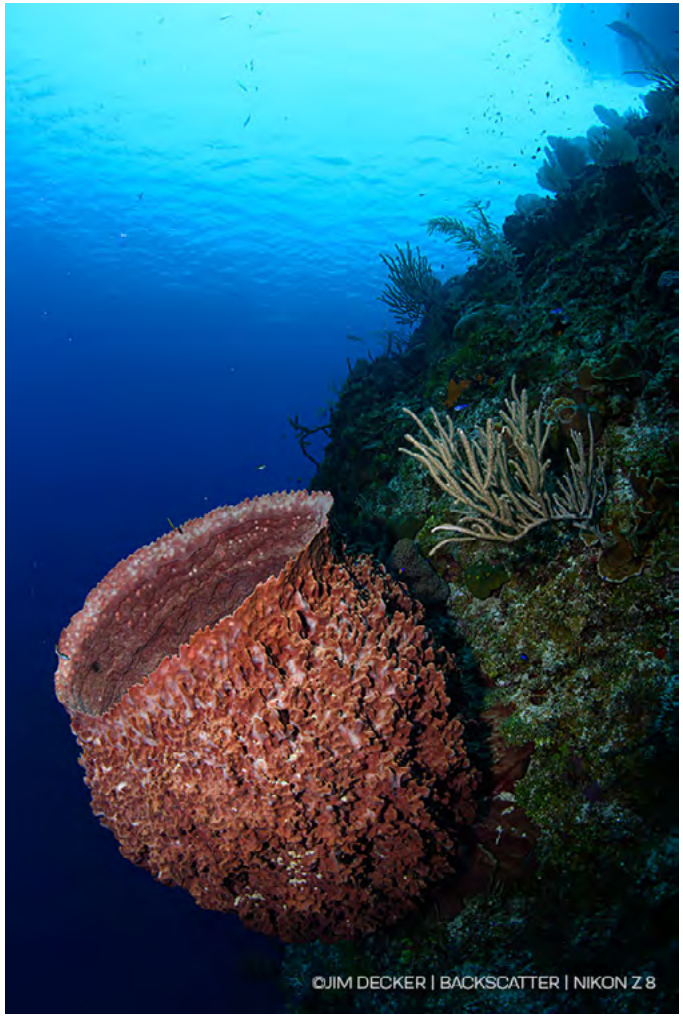
The same image quality that we've come to love from Nikon flagship cameras is present on the Nikon Z8 - vibrant colors, wide dynamic range, and super sharp detail.

What sets the Nikon Z8 apart?

During our shoot, we couldn't help but marvel at its speed and responsiveness. The camera boasts an impressive 20 frames per second burst shooting capability, an essentially bottomless buffer, and lightning-fast autofocus and tracking. But what's



©Jim Decker - large sponge
Nikon Z8 | Nikon 8-15mm | 1/100 | ISO 200 | ƒ13



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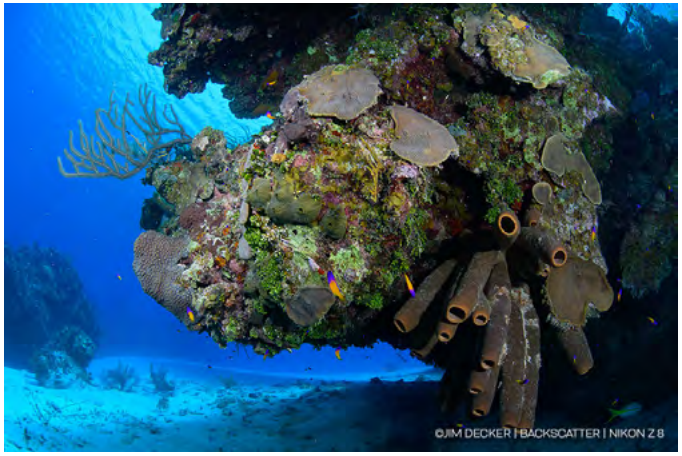
Nikon Z8 | Nikon 8-15mm | 1/125 | ISO 200 | ƒ11



©Jim Decker - Under ledge coral
The 1/200 flash sync speed limit could make it tough to pull down the background exposure on some shots.
Nikon Z8 | Nikon 8-15mm | 1/200 | ISO 320 | ƒ11

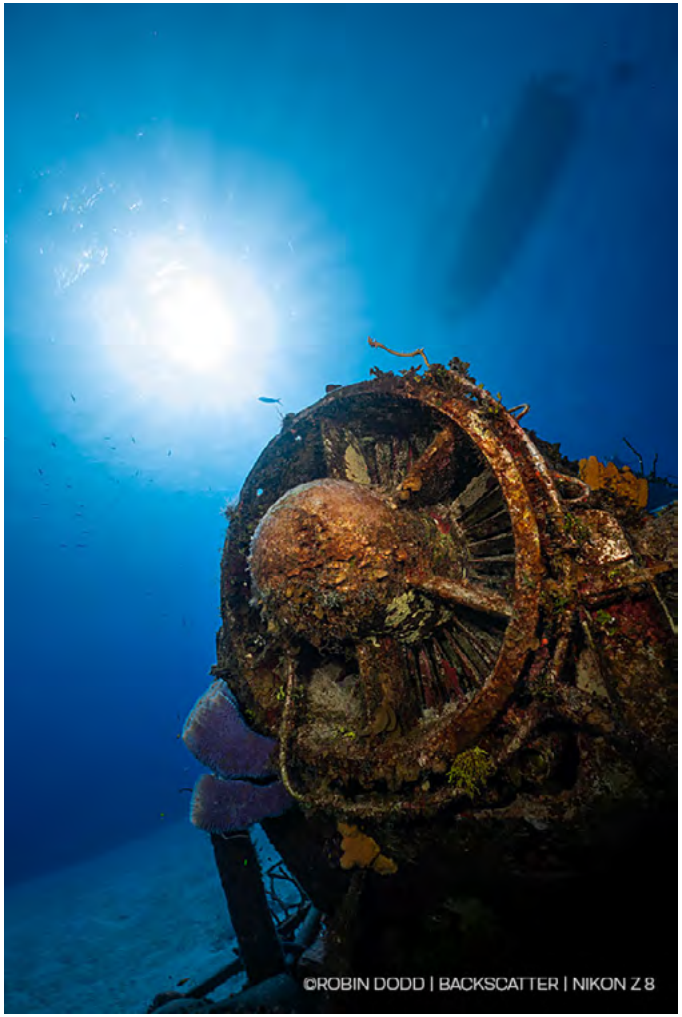
even more remarkable is that the Nikon Z8 features a purely electronic shutter, eliminating any lag and blackout in the viewfinder. It truly revolutionizes the shooting experience.

While the lack of a mechanical shutter has its advantages, it does come with some limitations. For instance, the flash sync speed is limited to 1/200th of a second, slightly slower than the Nikon D850's 1/250th of a second. All Nikon full frame mirrorless cameras share this 1/200 sync speed, along with most Canon full frame mirrorless cameras, though Sony can go up to 1/400 on their flagship A1 camera.

Electronic Viewfinder Benefits

The Nikon Z8's electronic viewfinder (EVF) offers several benefits, such as a wider view thanks to the 0.8x magnification power, focus peaking, and the ability to review images without taking your eye away from the viewfinder. For macro photography, the EVF makes an excellent tool for precise composition and focus. However, in terms of high dynamic range wide-angle shots such as sunballs, the EVF performance is less impressive compared to some higher-resolution EVF Sony cameras. We were impressed with the Shadow Boost setting in the menu that brought up the visible detail level of darker areas, but the EVF still struggled to show anything other than a completely blown out surface when looking up towards a sunball.

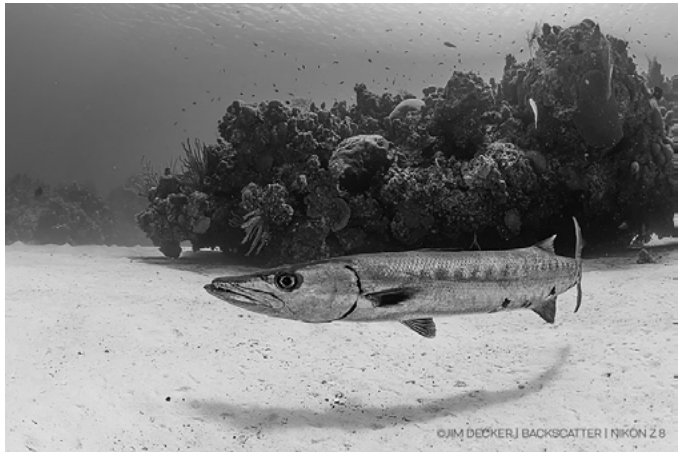
The electronic viewfinder works well but still struggles to display detail in highly backlit scenes



such as when shooting a sunball.

3D Autofocus Tracking Only Gets Better

The Nikon Z8's 3D autofocus tracking maintains its position among the best of all current autofocus tracking systems. It locks onto subjects with remarkable accuracy and smoothly tracks their movement across the frame. Whether you're shooting wide-angle or macro, the autofocus



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The wider 0.8x view of the viewfinder makes composing scenes and checking corners much easier.
Nikon Z8 | Nikon 8-15mm | 1/1,000 | ISO 1,000 | ƒ11

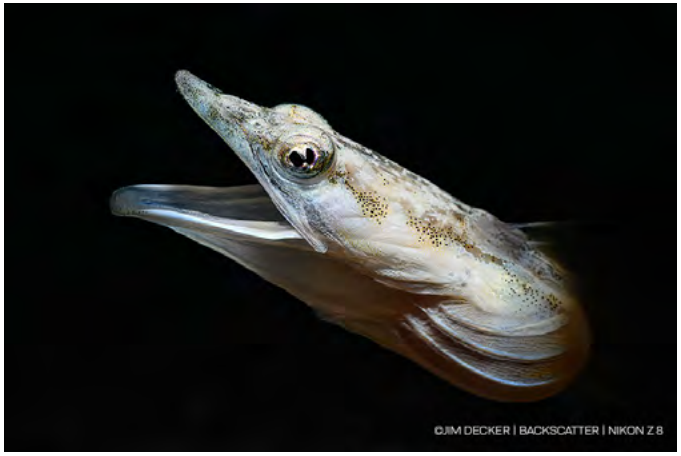
©Robin Dodd- Engine
Nikon Z8 | Nikon 14-30mm | Nauticam WACP-2 | 1/30 | ISO 64 | ƒ16

performs exceptionally well, even with micro-movements in macro photography. The camera's autofocus system is a definite highlight, making it a fantastic tool for capturing fast-paced underwater action.

The 3D autofocus tracking never let us down, whether locking onto eyes big or small.

A Great Camera Rig For Macro

When it comes to shooting macro with the Nikon Z8, we were blown away by its capabilities. The camera's high-resolution sensor, coupled with the Nikon Z 105mm macro lens, allowed us



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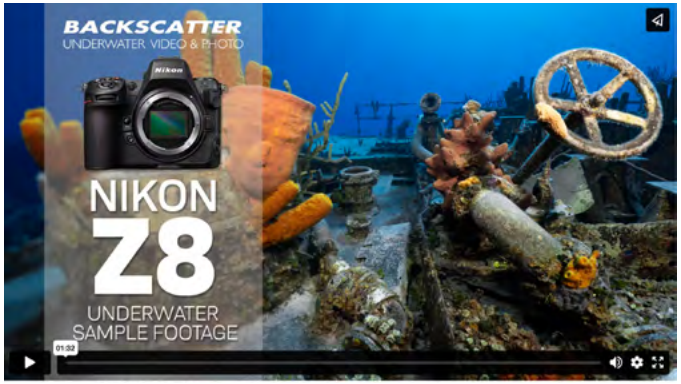
Nikon Z8 | Nikon Z 105mm | 1/200 | ISO 40 | ƒ36

to capture incredibly detailed and sharp images. Further enhancing our macro shots was the Nikon Z8's ability to achieve extremely dark ambient lighting. The camera can get do an a low extension of ISO 32, while the Nikon Z 105mm macro lens can get down to f/51 when set to its minimum focus distance. We were able to create stunning black backgrounds even in the brightest conditions, setting the Nikon Z8 apart as an exceptional macro rig.

Video Performance

The Nikon Z8 camera brings some serious firepower to the table, matching the Nikon Z9 in its overall specs. Its ability to shoot 8K 60fps in Nikon RAW and 4K 120fps with some cropping is simply mind-blowing. These specifications put the Nikon Z8 on par with top-tier video cameras. However, it's important to mention a couple of drawbacks. Firstly,

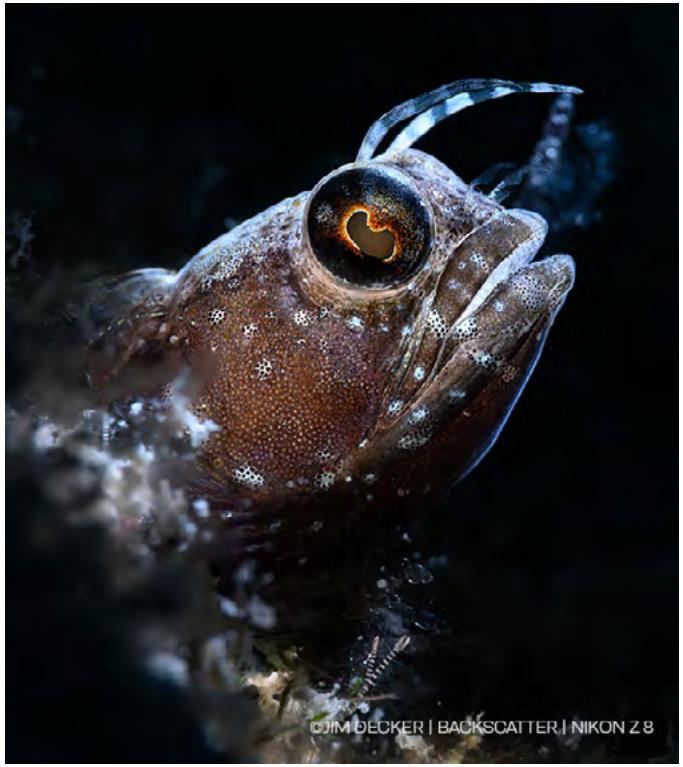


See the ambient light white balance capabilities of the Nikon Z8 in action with our underwater sample footage video.

the Nikon Z8 features only one CFexpress Type B card slot, so shooting 8K RAW will consume card space quickly. Secondly, shooting high-resolution video can lead to heat build-up, especially in demanding conditions. While we didn't encounter any issues during our shoot, it's worth considering extra batteries and monitoring heat warnings during extended video recording.

Color accuracy is crucial in underwater videography, and the Nikon Z8 delivers impressive results. However, it falls short when it comes to ambient light white balance beyond 40 feet. The camera struggles to achieve accurate white balance in deeper waters. In our testing it was unable to execute white balance at depths over 50 feet. Nevertheless, if you're shooting at shallower depths or with video lights, the Nikon Z8 performs admirably, producing vibrant and well-balanced colors.

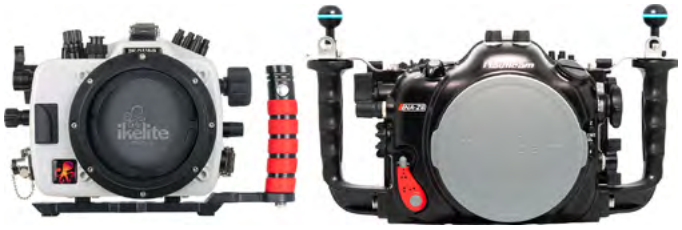
One aspect we want to address is the absence of an on-screen meter for video mode. Nikon cameras, including the Nikon Z8, lack a built-in meter, making exposure evaluation a workaround



process. To ensure optimal exposure, we recommend shooting in manual mode, adjusting shutter speed based to be double the frame rate, selecting an aperture between ƒ8 and ƒ11, and using auto ISO with -0.7 exposure compensation. We always aim to underexpose video by two thirds of a stop because most modern TVs tend to over-sharpen and over-contrast footage, so we slightly underexpose to preserve color saturation and avoid things looking washed out or overexposed. Additionally, using the exposure lock button for smooth panning shots is highly beneficial.

The Nikon Z8's in-body stabilization system provides up to six stops of stabilization, making handheld shooting significantly easier. When shooting videos the image stabilization enhances

©Jim Decker - Nikon Z8 Underwater Camera Review - Gobe Snooted
The Nikon Z8 is a powerful tool for underwater photography, excelling in image quality, autofocus performance, and overall speed.
Nikon Z8 | Nikon Z 105mm | 1/200 | ISO 100 | ƒ36



At the time of this review, only Ikelite, and Nauticam have been officially released, but we anticipate that all major underwater housing manufacturers will support the Nikon Z8.

overall smoothness, and while shooting photos it can help reduce motion blur.

Who Is The Nikon Z8 For?

The Nikon Z8 caters to a wide range of photographers, but mostly to those who are seeking an ideal balance between ultra-fast performance and top-tier photo results. It brings the power of the Z9 into a body that is significantly smaller.

If you're a current Nikon D850 user, the Nikon Z8 offers a massively faster upgrade in terms of overall shooting, along with the all-time-best 3D autofocus tracking, and the same great image quality that we have loved for years. The camera's continuous 20 frames per second RAW speed and seemingly-instant responsiveness make it an excellent choice for underwater action and topside sports photography. This camera kills any sense of

lag between the shutter button and the image being captured.

Macro enthusiasts will appreciate the exceptionally fast autofocus performance and ability to knock out virtually all ambient light when paired with the Nikon Z 105mm macro lens.

While the 8K 60p, 4K 120p, and NRAW video capabilities are impressive, videographers should be aware of certain limitations with regard to the relatively shallow 50 foot ambient light white balance limit.

The electronic viewfinder may not be the best available in terms of dynamic range detail, but the 0.8x magnification offered a wider view than we are used to making it easier to check corners, and the focus peaking came in handy when shooting super tight macro. We could even review images in the viewfinder without pulling our eye away or losing the shot.

We wish that we could get a little faster than 1/200 flash sync speed, but that seems to be about on par for most full frame mirrorless cameras.

The camera did tend to generate Hot Card warnings quickly when used in a housing but it never actually prevented us from recording videos or taking photos.

In conclusion, the Nikon Z8 is a blazing-fast camera that excels in image quality, autofocus performance, and overall speed. It's an excellent tool for underwater photography. Whether you're a professional or an enthusiastic hobbyist, the Nikon Z8 delivers exceptional results.

Pros

- Excellent image quality with a high-resolution sensor, producing sharp, detailed, and vibrant underwater photos.
- Impressive speed and responsiveness with 20 frames per second burst shooting capability, a bottomless buffer, lightning-fast autofocus and tracking, and no shutter lag.
- Advanced 3D autofocus tracking system that locks onto subjects with remarkable accuracy, making it great for capturing fast-paced underwater action.
- Exceptional macro capabilities, delivering incredibly detailed and sharp images, especially when paired with the Nikon Z 105mm macro lens.
- Powerful video performance, including the ability to shoot 8K 60fps in Nikon RAW and 4K 120fps with some cropping, rivaling top-tier video cameras.
- In-body image stabilization system provides up to six stops of stabilization, reducing motion blur in both photos and videos.

Cons

- Limited flash sync speed of 1/200th of a second, slightly slower than some other cameras.
- Quick heat build-up during high-end spec video recording.
- Ambient light white balance struggles beyond 40 feet, making it challenging to achieve accurate white balance in deeper waters.
- Absence of an on-screen meter for video mode, requiring manual adjustments and exposure evaluation workarounds.
- Only one CFexpress Type B card slot, limiting storage capacity when shooting 8K RAW video.

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