

Nauticam FCP-1

by Kevin Palmer

Ever since full frame digital cameras started to become popular for underwater, the photographic community has longed for a true full frame fisheye zoom, but to no avail. Many of us remember the joy of the Tokina 10-17 fisheye zoom hitting the market for our APS-C crop sensor cameras. Finally, we had a full 180 degree diagonal view fisheye for the big scenes and decent zoom range when we needed to be a bit tighter. And since it could fit in a small dome and focus down to the glass, it was amazingly versatile.

Nikon and Canon came out with very nice fisheyes with a less zoom range, so it seemed the big camera names were catching on. We here at Reef, started grilling manufacturers years ago about when we would see a true full frame fisheye zoom for all these wonderful full frame cameras being introduced. These lenses would likely have to be around 15-22mm to be the equivalent to the experience the Tokina provided on a crop sensor. It even turned out that that Tokina had indeed designed one, but it was locked up in a license to another manufacturer. Has any manufacturer made any further

progress? Not yet. The UW market just hasn't turned enough heads unfortunately. So, people have been stuck on 180 degree fisheye at 15mm or zooming to 8mm for 180 degree circular fisheye. Some folks add a third-party 1.4X Tele-Extender to the 8-15 fisheye zooms to approximate the range, but those give up some image quality.

Enter Nauticam.

As a company pioneered by actual underwater photographers, Nauticam has always looked to solving problems where there did not appear to be an off-the-shelf solution available. This has been particularly evident with their focus on underwater specific optics over that last many years. After their tremendously successful WWL series of wet lenses and WACP series of water contact ports, it is not too surprising



ISO 250 @28mm f/9 1/80



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ISO 400 @29mm f/13 1/60

that they pursued a solution to the fisheye conundrum that the camera manufacturers did not seem to be interested in addressing. The FCP-1 is the result of that nearly two-year quest.

What is perhaps most exciting about the FCP-1 is not just the 170 degree angle of coverage, which was expected, but rather the incredible range of coverage options that the conversion port achieves with a relatively limited range of focal lengths available through the zoom lens. Compatible with 28mm lenses to create 170 degrees of coverage, there are now several mirrorless zoom

lenses that offer a substantial range of coverage. For instance, the Sony 28-70mm mid-range zoom lens offers 170 degree FOV at 28mm down all the way to a mere 62 degrees FOV at 70mm. The flexibility is a bit mind-boggling as it allows for fisheye reef scenics, distant blue water pelagic subjects, and wide angle macro all on the same dive.

The shots above give a pretty good sense of the range of coverage which is impressive. There are some notes to be aware of when shooting the FCP.

The optic provides the sharpest overall image quality at the wider focal



ISO 320 @50mm F/10 1/100

lengths. These photos were shot with the Nikon Z8 and the Z 24-50 zoom lens. Zoomed to 50mm provides a lovely opportunity with the angel fish above, but you can see the corners are a little softer than the images shot at 28mm - even when shot at f/10. Not a problem for most shooters, but good to understand.

This brings up one other point worth noting. The magic involved in turning a 28mm focal length into a 15mm fisheye equivalent does not necessarily bring the same depth of field you might get with the fisheye lens at the same aperture. How much difference? I would guesstimate it at

about two stops difference. So, when shooting the close focus wide angle shot of the anemone and clown fish, I shot it with high ISO, slow shutter and f/13 which provided plenty of depth of field (it was a cloudy day). That being said, the FCP performs quite well at f/8 & f/9 for general wide angle shooting.

Are there any other caveats? Well, like all fisheye lenses, expect barrel distortion at the widest focal lengths. Fortunately, the underwater world tolerates that pretty well unless you are shooting straight pilings or shooting a tiger shark straight from the side.

If you are shooting 24-50mm lens



ISO 250 36mm f/9 1/100



ISO 250 36mm f/9 1/100



This image is zoomed out to about 25mm showing a more significant vignette. ISO 320 f/11 1/200



ISO 400 50mm f/11 1/80



ISO 400 29.5mm f/11 1/100

as produced by Canon & Nikon, be aware that the image will vignette until you get to 28mm. You can just crop it if you over-zoom of course, but Nauticam makes special zoom gears for these lenses so it will limit the lens from zooming past 28mm if that is a concern.

What follows are shots taken at various narrower focal lengths. It is valuable to remember that corners will not be as sharp and to try and minimize subjects in the corners, when possible, as

well as stopping down a bit more. But having the flexibility to shoot more portraits is a big plus.

The abilities of the FCP-1 are intriguing, so who is it for? First and foremost, this is a fisheye option with added flexibility. If you are a fish portrait shooter who occasionally needs a super wide angle set up, this is likely not your best choice. If you are dedicated fisheye shooter, but need a bit more flexibility or are always cropping your shots, the FCP might make a lot of sense. It also has a lot to

offer the traveling dive photographer who wants to minimize their gear to simplify their packing. The FCP is smaller than a WACP-1 and just a little larger than the WACP-C. Using this set up with a compact zoom lens and one extra port for a macro lens gives you the range to cover almost anything you will encounter.

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