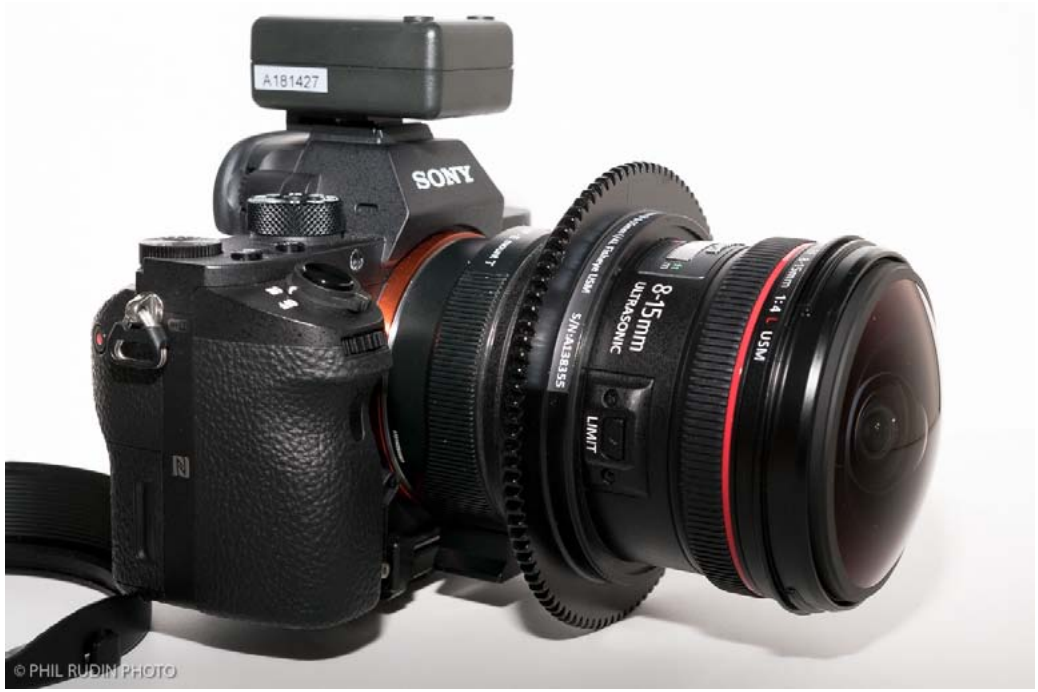
Canon EF 8-15mm F/4L USM Fisheye

by Phil Rudin

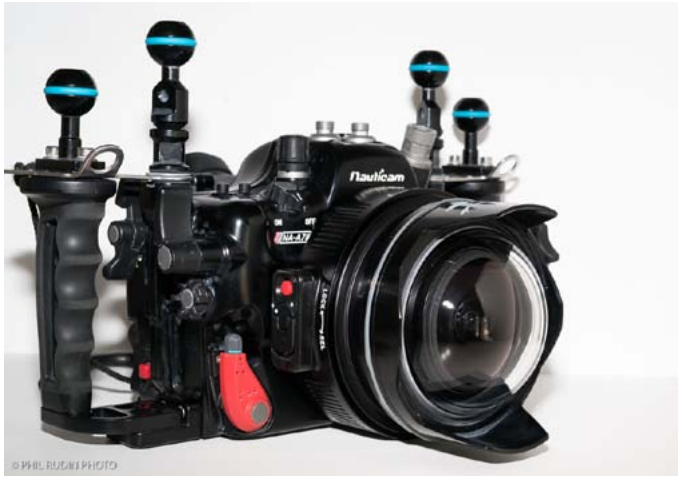
Rarely do we see a photo product come along that is both unique and exciting in so many ways. The Canon EF 8-15mm F/4L USM Fisheye zoom lens is both radical in design and exceptionally well suited for underwater photography. This lens is not new and was announced in August 2010 to replace the old EF 15mm F/2.8 Fisheye for full-frame sensor bodies. At the time Canon had no fisheye lens to cover APS-C or APS-H size sensors. This lens combines both circular and full-frame fisheyes into one lens. Unlike the popular Tokina 10-17mm for APS-C cameras that covers a range from 180-100 degrees the Canon 8-15mm covers a range from 180-175-30 degrees on full-frame. It also works as a full-frame fisheye on both APS-C and APS-H size sensors with a slight crop in both formats. I have not tested this lens with any sub full-frame cameras and will confine my comments to use with full-frame cameras.

Circular fisheye lenses were the first type of fisheye to be developed and they have been around since the early 1900s. Full-frame fisheye lenses started to become popular during the early 1960s. The difference between the two types of lenses is simple, the circular fisheye lens renders a perfectly round image within the center of the 3:2 format sensor while the full-frame fisheye covered the entire frame. Keep in mind that with the circular image you are loosing megapixels to the black negative space while the full-frame image takes advantage of the entire sensor. Both 8mm and 15mm fisheye lenses for Canon full-frame cameras are offered by third-party lens manufactures like Sigma but the Canon 8-15mm fisheye is the only lens that combines the two into one lens making it a unique and more cost effective addition for underwater photography.



Sony A7R II with Metabones adapter, Canon 8-15mm Fisheye and Nauticam zoom gear

Alma Jean Wreck, Puerto Galera Philippines, Sony A7RII, Canon 8-15mm Fisheye, Nauticam NA-A7 II housing, Zen DP-100 dome port, ISO-200, 15mm, 1/160th, F/6.3.



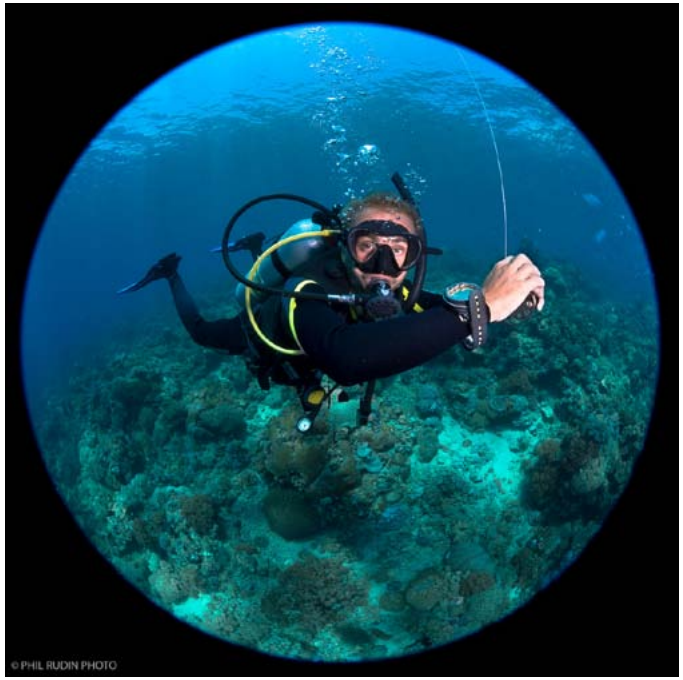
Nauticam NA-A7II housing and Zen Underwater DP100 dome port

The Canon 8-15 fisheye has the "L" moniker which indicates the Pro design and quality of this lens. The "L" lens is designed with an Ultrasonic Motor (USM), excellent glass with quality lens coatings, a zoom locking mechanism, AF/MF switch, dust and moisture sealing, removable lens shade, quality storage pouch and a maximum reproduction ratio of 1:3. It is like having two completely different lenses in one excellent package.

The Canon 8-15mm F/4L retails in the US for $1250.00/UK Amazon £1020.00.

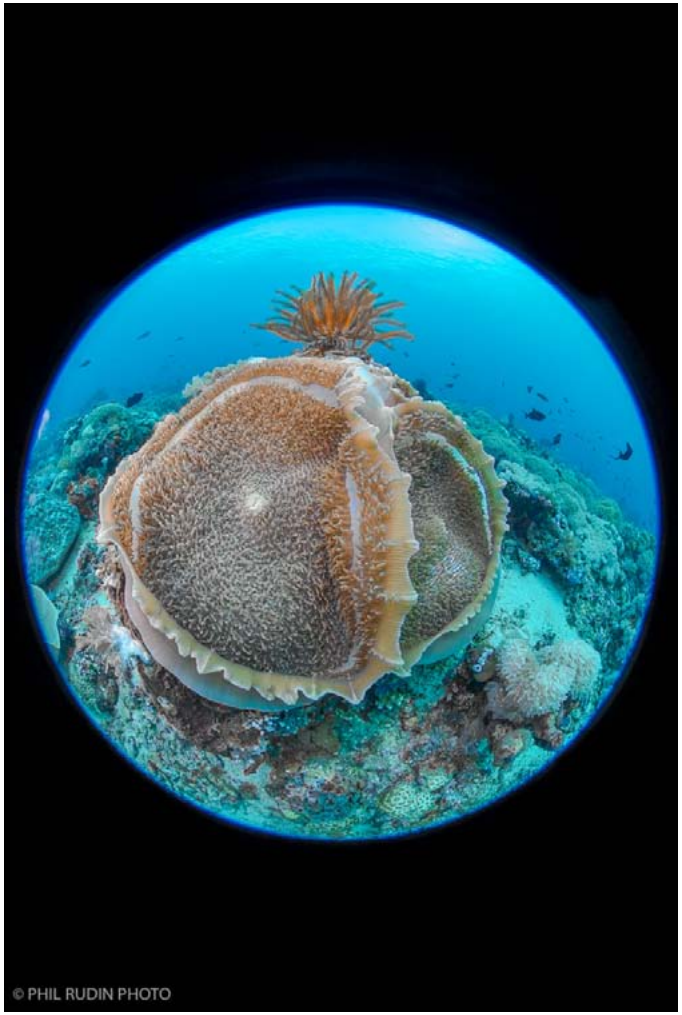
Field Testing

For this review I used the Canon 8-15 Fisheye with the Sony A7R II full-frame camera body, Nauticam NA-A7 II housing, port adapter, zoom gear and Zen Underwater DP-100 Fisheye dome port. One of the things I really like about mirrorless cameras is the ability to use just about any lens supported by a lens adapter. In this case I used a



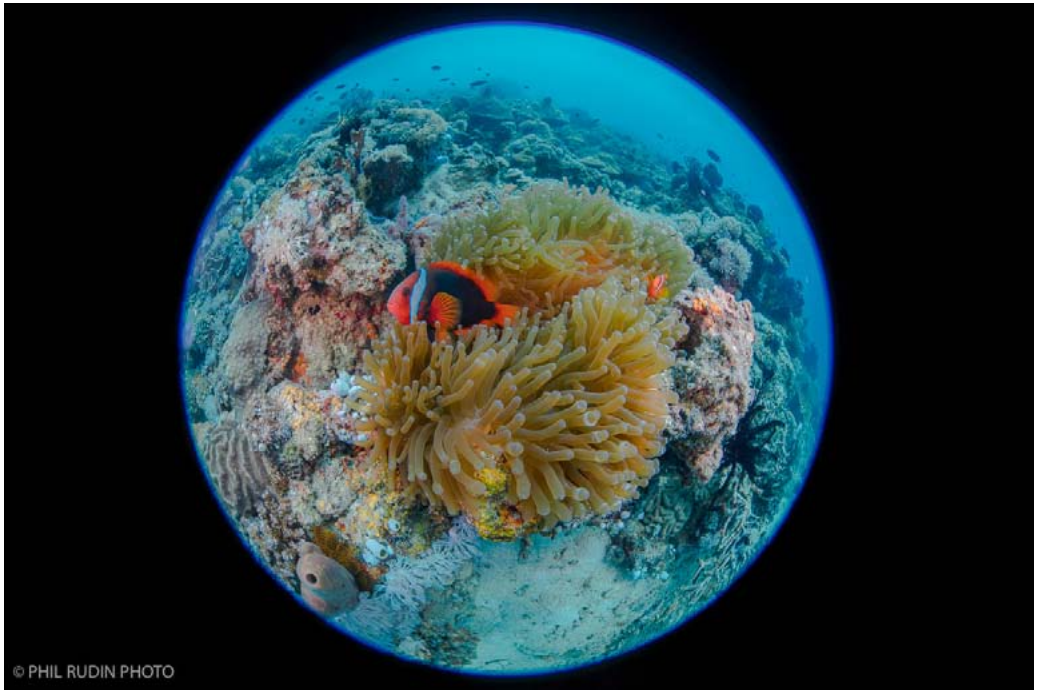
Puerto Galera Philippines, Sony A7RII, Canon 8-15mm Fisheye, Nauticam NA-A7 II housing, Zen DP-100 dome port, ISO-200, 8mm, 1/250th, F8

Metabones EF to E mount-T IV adapter with the latest firmware updates. The Metabones adapter allows you to use all of the automatic functions like auto focus, aperture control, metadata and more associated with a Canon full-frame camera while maintaining excellent auto focus speed. Nauticam port recommendations include the optical glass 230mm or 140mm and the 8.5 inch acrylic with the associated port extensions. Each of these dome ports have strengths and weaknesses like better split (over/under) images and corner sharpness with the larger ports or less corner sharpness but better CFWA (close focus wide angle) and WAM (wide angle macro) with the smaller ports . The Zen DP-100 (100 mm) port allows you to get very close

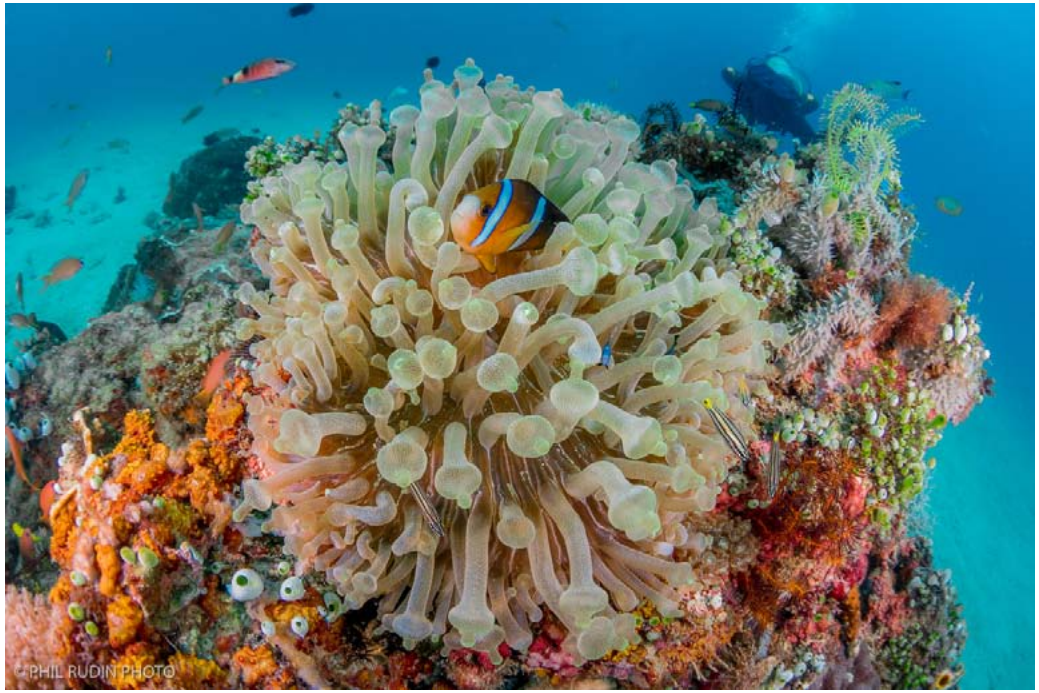


Anemone, Verde Island Philippines, Sony A7RII, Canon 8-15mm Fisheye, Nauticam NA-A7 II housing, Zen Underwater DP-100 dome port, ISO-640, 8mm, 1/50th, F/9

to the subject in tight spaces and is much easer to travel with than some of the larger and heavier ports. Beauty is in the eye of the beholder so you can judge the quality of the results for yourself and choose the port that best suits your needs.



Tomato Clownfish, Puerto Galera Philippines, Sony A7RII, Canon 8-15mm Fisheye, Nauticam NA-A7 II housing, Zen Underwater DP-100 dome port, ISO-200, 8mm, 1/125th, F/7.1



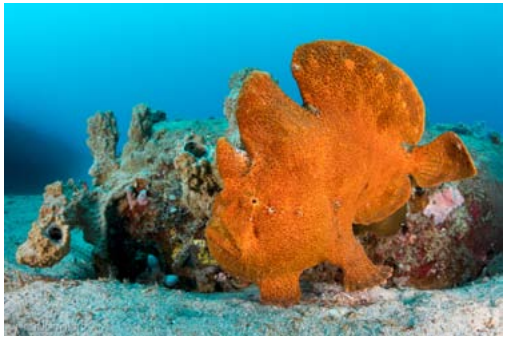
Puerto Galera Philippines, Sony A7RII, Canon 8-15mm Fisheye, Nauticam NA-A7 II housing, Zen Underwater DP-100 dome port, ISO-200, 15mm, 1/250th, F/9.0

In the field most if not all images are going to be taken at either the 8mm or the (14)/15mm end of the zoom range. Focal lengths in between 8mm and 15mm will be cropped at the top and bottom as the circular image begins to expand across the full frame sensor. So you would either be filling the entire frame at 15mm or getting a completely circular image at 8mm.

The Zen Underwater DP-100 (100mm) optical glass port has a removable dome shade which is held in place by an O-ring. To remove the shade the O-ring slides back over the port then you turn the shade a quarter turn to remove. This needs to be done with most ports when you are using an 8mm circular fisheye lens to prevent vignetting. It is much easer to remove the hood underwater than it is to put it back on so after a few dives I just left the shade off. The port comes with a neoprene cover for protection. The lens shade also needs to be removed before the lens is mounted inside the port.

Full-frame fisheye lenses are the overwhelming choice for many underwater photographers doing wide angle, CFWA and WAM photography. Some find the circular images to be more of a gimmick rather than a serious choice while others find the round images very appealing. My takeaway is that the Canon 8-15mm fisheye lens provides an additional unique prospective from which to view the underwater world much like an extreme macro lens.

With all fisheye lenses the name of the game is getting close to your subject, for me anything beyond about 45cm (18 inches) is reserved for large animals like Whale Sharks. Because of the close focusing distance and the maximum 1:3 reproduction ratio many of my images are taken within a few centimeters of my subject. I like to keep my Inon Z-240 strobes pulled back and away from the dome with the front of the strobes at least parallel with the grips on my housing. I also like the strobes to be pulled in close to the housing rather than way out on either side. This makes shooting vertically much easer when the strobes are set to manual power. By reducing power to the lower strobe (about two stops is good) I avoid overexposing



Giant Orange Frogfish, Puerto Galera Philippines, Sony A7RII, Canon 8-15mm Fisheye, Nauticam NA-A7 II housing, Zen Underwater DP-100 dome port, ISO-200, 15mm, 1/160th, F/9

the sand or bottom in lower portion of the image. Because I am getting very close to my subjects I find that my Glowdive light defusers (reviewed in a past uwpmag.com issue) work very well to cover the wide AOV of this lens. I try to stick with an aperture value of F/13 or a bit greater for executable depth of field on full-frame and adjust ISO and strobe power to achieve proper exposure. Remember that fisheye lenses have a very wide AOV allowing things like your fins, intense strobe flash, loose strobe cords and parts of other divers to appear within the frame. While composing an image I look into the edges of the frame for unwanted appendages and other distractions.

When exhibiting circular fisheye images their seems to be two schools of thought on how they should be presented. One is that the images be shown full frame in the 3:2 format with all of the black negative space and the other is to use a 1:1 format much like the old 2 1/4 medium format film cameras where less of the black space is shown. Again this is an issue of personal taste and how you intend to use your images. Typical with all fisheye lenses is having to contend with chromatic aberration, (also known as purple fringing) in the corners of the image. In the circular images CA appears as a 360 degree ring between the exposed image and the black negative space in the frame. Most CA can be removed in post with LightRoom, Photoshop and other photo software. I have seen much worse CA in other fisheye lenses but it is difficult with very wide lenses to avoid sunlight in your images. The best solution for this issue is trying to keep your back to the sun while shooting.

This is a lens I would recommend highly for both Canon and full frame mirrorless camera users who are looking for both quality and versatility in a fisheye lens.

Phil Rudin