

Zen DP100 fisheye port

By Phil Rudin

Zen Underwater, the highly acclaimed hand-crafted optical glass dome port manufacturing company is located in Ft. Lauderdale Florida, USA. Zen has recently announced a new optical glass port for the DP100 port line designed for use with the Nauticam Mini housings for the Olympus and Panasonic Micro four-thirds cameras using the Panasonic 8mm F/3.5 Fisheye lens.

This new port builds on the success of the highly regarded Zen 230mm, 200mm, 170mm, 100mm and Olympus Pen line of optical glass ports. Like all Zen ports the DP100 port line is made from the finest materials using state-of-the-art design and advanced optical technology.

The DP100 is a 100mm (four inch) port made from the same Broadband AR coated BK7 optical glass found in all Zen Underwater ports. The DP 100 line of ports all have a depth rating of 100 meters (328 feet) and are designed for Aquatica, Hugyfot, Ikelite, Nauticam, Olympus, Sea&Sea and Subal (type 3&4) housing mounts.

These ports are designed exclusively for use with lenses like the Nikkor 10.5mm F/2.8G DX fisheye,

Canon 8-15mm F4L fisheye zoom and the extremely popular Tokina 10-17mm F/3.5-4.5 fisheye zoom some of the ports have a removable lens shades.

At a little over half a kilo the Zen DP100 ports are very travel friendly and easy to pack in a carry-on bag like the ThinkTank Airport Security roller-bag that I travel with. The new DP100 port for mirrorless housings has two parts, the dome port is a Subal DP100 port with the Subal type 3 housing mount.

The port ships assembled with the Zen PA-N85-S3 port adapter for Nauticam MILC housings, the adapter fits between the Zen/Subal port and housing. The port adapter can also be used with other Subal type 3 ports from Zen or Subal to support a wide verity of legacy lenses plus current

Nauticam NA-EM5 housing with Zen DP100 port and Olympus 12mm F/2 lens

Hawksbill Turtle, Panasonic 8mm fisheye, ISO-200, F/9, 1/250th, with two Inon Z-240 strobes





Nauticam NA-EM1 housing with Zen DP100 port and Panasonic 8mm fisheye using two Inon Z-240 strobes

Azure Vase Sponge, Panasonic 8mm fisheye, ISO-200, F/8, 1/250th, with two Inon Z-240 strobes

and future Micro 4/3 lenses. Lens adapters like the Olympus MMF-3 can be used with Zuiko Digital ED lenses like the extremely sharp 50mm F/2 macro and many more. This port adapter is NOT compatible with the Nauticam housings for Sony NEX and A type cameras.

While the new DP100 port is specifically designed for use with the Panasonic 8mm F/3.5 fisheye I have also used it with the Olympus 12mm F/2 and the Olympus 17mm F/1.8 rectilinear lenses with an excitable loss of corner sharpness.

The port ships with a storage cover to protection the optical glass.

The Panasonic Lumix G 8mm F/3.5 is a “full frame” fisheye lens for Micro four-thirds cameras which has a 180 degree above water diagonal angle of view covering the entire camera sensor. The lens is extremely light at 165grams (5.82oz) and measures just 6.07 x 5.18 cm (2.39” x 2.04”) so it can easily fit into your pocket and takes up very little space in a carry-on bag.

The lens ships with front and rear storage caps, a quality storage bag and

has a one year manufactures warranty. The lens has a built-in (nonremovable) shade and a curved front element which prevents the implementation of filter threads on the front of the lens. Gelatin filters can be installed on the rear of the lens in a small filter holder for your photo needs. The lens has 10 elements in nine groups with one ED lens which helps minimize distortion and chromatic aberration commonly associated with fisheye lenses. Current Olympus and Panasonic cameras also have distortion correction software in camera. The out of focus areas across the frame have a smooth “bokeh” which is well controlled by the seven blades used to form the rounded shape of the lens iris.

Multicoated lens elements help to prevent lens flare and reduce ghosting. The lens has an internal focus stepping motor which provides extremely fast, smooth and near silent auto focus which is especially useful when shooting video. The lens will also remain in focus all the way to the port glass which is ideal for close focus wide angle work. The Panasonic 8mm fisheye has excellent image quality across the frame from F/4 to F/16 with the very best results in the F/ 5.6 to F/8 range where depth of field will be well beyond the needs of most photographers.

The Panasonic fisheye and Zen DP100 port combination have been



Green Finger Sponge, Panasonic 8mm fisheye, ISO-200, F/ 6.3, 1/250th, with two Inon Z-240 strobes

my goto fisheye system for some time now. I have used this lens and port with several Olympus and Panasonic cameras and will share the following observations. This port and lens combo can be used with a verity of Nauticam Mini housings including current housings for Olympus E-PL3&5, E-M10, E-M5, E-M1, Panasonic DMC-GF2&3, GX-7, GH-3 the soon to be introduced GH-4 and the Blackmagic Pocket Cinema camera along with three discontinued



Divemaster Dewey, Panasonic 8mm fisheye, ISO-200, F/8, 1/250th, with two Inon Z-240 strobes

micro 4/3 housings.

All of the housings can be setup with a variety of strobe placement options for both still and video photography. One of the things I like most about this lens/port combination is the ability to create a very compact and light weight ultra wide angle package using two small strobes like the Inon Z-240 or S-2000 strobes. I use a one inch mounting ball secured to the cold shoe on the top of the housing with a triple arm clamp and

two 100 mm double ball arms. I then put one of StiX large floats on each arm and use a standard clamp for my two Inon Z-240 strobes which are fired via optical cable.

With the E-M1 housing I leave the grips in place and with housings like the E-M5 housing I remove the tray and grips and just use the wriststrap to support the system. With the E-M1 housing I can also just mount the Z-240 strobes directly onto the bulkheads on the grips. With



Azure Vase Sponge, Panasonic 8mm fisheye, ISO-200, F/ 11, 1/250th, with two Inon Z-240 strobes

way behind the port or they will show in the corner of the frame or cast a harsh light into the corner of the frame. The strobe cables should also be well secured behind the housing so they don't appear in the frame.

To get greater distance between the strobes a more conventional configuration using double strobe arms attached to the grips is recommended. At ISO-100 to ISO-400 and shutter speeds in the 1/125th to 1/320th range I prefer using F/stops in the F/5.6 to F/8 range which works quite well with most subjects. These settings will provide all of the depth of field you will require for both CFWA and wider shots like large animal or wreck shots.

Keep in mind that all fisheye lenses create more distortion than wide rectilinear lenses will so choose your subject and composition accordingly. The closer a straight line like a wrecks mast is to the center line of the fisheye lens the less distortion will be created.

My view is that the Panasonic 8mm F/3.5 fisheye is a must-have lens for any underwater micro four-thirds shooter and that the Zen DP100 port provides the very best optical quality for a port of this size. This port is not recommended for use as an over/under port a much larger port would do a better job.

The Zen DP100 fisheye dome for Nauticam mirrorless housings sells at your authorized Zen Underwater dealer for around \$899.95, £729.95 incl.VAT. The Panasonic 8mm fisheye sells in the \$640.00, £840.00 range and a robust used market for this lens can be found on the internet.

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this configuration I use the triple ball clamp and add a Nauticam 250mm x 60mm carbon fiber float arm to help boost the housing. All of these configurations allow you to get the strobes very close to the port for CFWA and by simply turning the strobe beam angle away from the port subjects at a greater distance will get excellent coverage with little backscatter.

Shooting with the housing tray removed and the wrist-strap allows you to move the strobes about two inches closer to the port. The strobes should be all the