

# INON

## Underwater Housing



## Capture the Moment

### Underwater Housing for Canon EOS 60D

# X-2 for EOS60D

Dedicated underwater housing for Canon EOS 60D. Built on the concept of "Capture the Moment" and further refined its stress-free control layout for intuitive operation as shooting the camera on land. The X-2 for EOS60D leaves you nothing but crucial essence of a camera; photographing.

#### [X-2 for EOS60D Main Features]

Size	W198mm/7.8in x H171mm/6.7in x D121mm/4.8in
Weight (air)	approx. 2,085g/73.5oz [45°Viewfinder model standalone] approx. 2,045g/72.1oz [Straight Viewfinder model standalone] approx. 1,795g/63.3oz [Pick-up Finder 2 model standalone] approx. 1,795g/63.3oz [Finder Window model standalone]
Weight (underwater)	approx. 555g/19.6oz [45°Viewfinder model] approx. 520g/18.3oz [Straight Viewfinder model] approx. 435g/15.3oz [Pick-up Finder 2 model] approx. 435g/15.3oz [Finder Window model] (including MRS60 Port II, Magnet Ring 60 Set, camera, EF-S60mm lens and batteries)
Depth Rating	75m/246feet (with any INON Port)
Material	Corrosion resistant aluminum alloy (housing body)
Color	Charcoal gray (teflon molybdenum coating)
Accessories	Lock Ring Tool for X-2 Finder Unit, Main O-ring (spare), Double Ring, Fiber Optics Fixing Rubber (spare), Double Optical D Connector Screw, Double Optical D Connector, INON Grease, Allen Wrench 1.5mm, Allen Wrench 2.5mm, Allen Wrench 3mm



#### The concept is "Capture the Moment"

The Canon EOS 60D is full blown digital SLR with APS-C sized 18.0 Megapixel CMOS sensor, a new high performance DIGIC 4 Image Processor and 9 points cross-type AF system. The EOS 60D supports high quality full HD movie (1920 x 1080) with its EOS HD video mode which is now used for TV program or filming movies. The INON X-2 for EOS60D housing is exclusively designed for the EOS 60D, built on the concept of "Capture the Moment" and further refined its stress-free control layout succeeding from predecessor X-2 for EOS50D/40D for intuitive operation underwater thanks to joint development with professional photographers. INON offers an underwater camera system in total with S-TTL Auto strobe, viewfinder, MRS Port, LED flashlight and wide range of arm products all from INON to capture the decisive moment.

#### Lightweight and compact ultraprecise cast aluminum body

The X-2 for EOS60D is made from corrosion resistance aluminum alloy by ultraprecise cast manufacturing technique to fuse design, weight and durability in higher dimension. The cast manufacturing technique enables thin body plate with complicated curved design which is not possible with machining. Lightweight and durable aluminum alloy body has acquired reliability, durability and controllability even in severe underwater.



#### Stress-free control layout to "Capture the Moment"

Cast manufacturing allows flexible design to realize unique features for trouble-free imaging, where your right thumb and mid finger securely hold a housing without effort, index finger can naturally access to the shutter release lever and adjusting aperture or shutter speed can be easily obtained without seeing those dials during checking composition through its viewfinder. The INON X-2 for EOS60D pursues intimate controllability to "Capture the Moment" in addition to accessibility to all necessary controls / dials for underwater photography.

\* For the concept of "Capture the Moment", Quick Control Button, Multi Controller which requires to check the LCD panel, and Quick Control Dial lock release button are not accessible.



#### Proven and reliable waterproof design

Buttons, dial levers are not directly attached on the aluminum alloy housing body but installed via brass bearings to prevent the aluminum housing body from galling caused by sliding of buttons and movement of dial levers to secure waterproof property. Only minimum parts replacement can refresh these controls even you need to change bearings. Buttons and dial levers carry oil bearing type INON yellow O-rings to prevent accidental flooding due to lack of grease. Also their size is thicker than required to





**X-2 for EOS60D FW**  
(with Finder Window)



**X-2 for EOS60D PF2**  
(with Pick-up Finder 2)



**X-2 for EOS60D 45VF**  
(with 45° Viewfinder Unit)



**X-2 for EOS60D STVF**  
(with Straight Viewfinder Unit)



**X-2 for EOS60D FL**  
(without Finder Unit)

enhance waterproof property. Every rotating dials and levers carry double O-rings to ensure you smooth movements and reliable sealing.

#### Fully compatible with S-TTL Auto strobe system

Flooding-free four Optical D Connectors are equipped as standard feature to benefit simple yet reliable S-TTL Auto of Z-240/D-2000/S-2000 simply by plug-in Optical D Cable Type L. Transmitting built-in flash light to fiber optics with minimum loss is an essential factor to benefit accuracy of S-TTL Auto. The X-2 for EOS60D housing is equipped with a mirror inside to induce built-in flash light to Optical D Connectors properly to provide stable and accurate S-TTL Auto exposure control.



#### Interchangeable four viewfinders

INON offers four different finder units. You can remove/install a finder unit by yourself with supplied tool to choose appropriate finder unit depending on subject/shooting condition.



Straight Viewfinder Unit  
45° Viewfinder Unit



Pick-up Finder 2 Unit


































Finder Window Unit

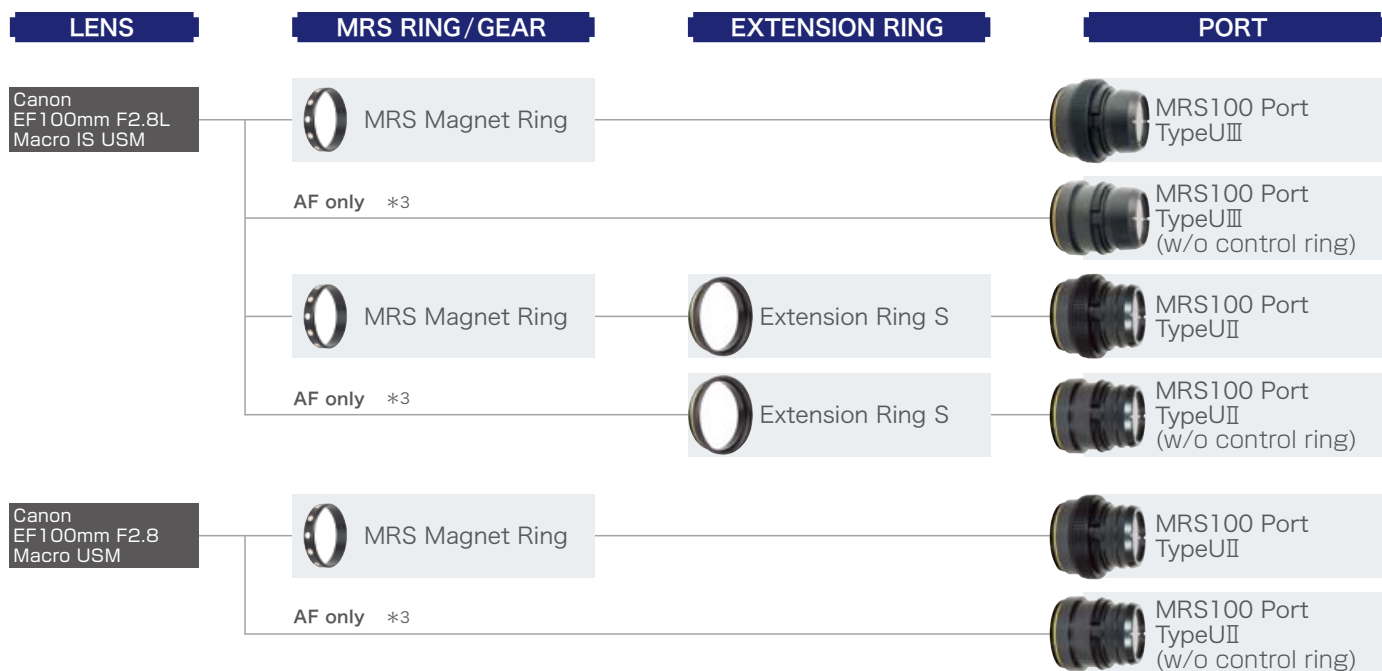
#### Wide variety of lens port to support from ultra macro to fish-eye imaging

Wide variety of lens system are supported including Canon EF8-15mm F4L Fisheye USM wide zoom lens, macro lenses such as EF-S60mm F2.8 Macro USM, EF100mm F2.8L Macro IS USM and so on. All compatible lens ports carry glass element of optical lens (multi-coated) to exploit high quality image captured by the EOS 60D. INON macro lens ports offers unique MRS (Magnetic Rotary System) which turns lens barrel by magnetic attraction as you turn the outer control ring where you feel as like to adjust focusing by focusing ring directly on land. Of course INON UFL-MR130 EFS60 Underwater Micro Semifisheye Relay Lens is compatible so you can make unique footage with EOS HD movie function.

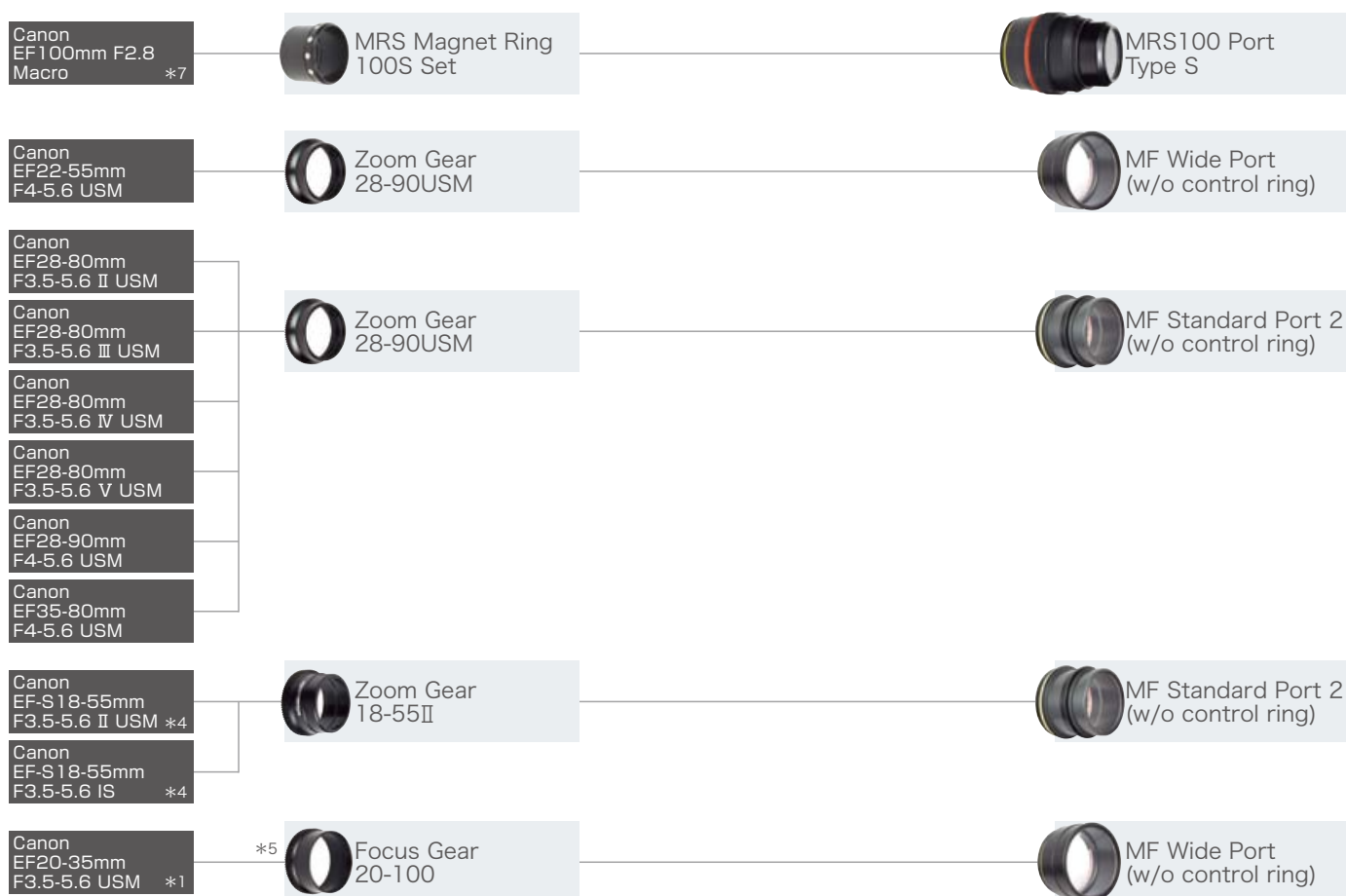




LENS	MAGNET RING/GEAR	EXTENSION RING	PORT
Canon EF8-15mm F4L Fisheye USM	 Zoom Gear 8-15	 Extension Ring 18	*9  Dome Port 2 +Shade 2 Set *9  Dome Port 115
Tokina AT-X 107 DX Fisheye	 Zoom Gear AT-X107	 Extension Ring S	*6  Dome Port 2 +Shade 2 Set
Tokina AT-X 107 NH Fisheye hood removed	 Zoom Gear AT-X107	 Extension Ring S	*6  Dome Port 2 +Shade 2 Set *6  Dome Port 115
SIGMA 10mm F2.8 EX DC FISHEYE HSM	AF only	*8  Extension Ring S	 Dome Port 2 +Shade 2 Set
Canon EF15mm F2.8 Fisheye	 Focus Gear15-50		 Dome Port 2 +Shade 2 Set
Canon EF20mm F2.8 USM *1	 Focus Gear20-100	*2  MF Extension Ring M (w/o control ring)	 Dome Port 2 +Shade 2 Set  MF Wide Port (w/o control ring)
Canon EF24mm F2.8	 Focus Gear15-50		 MF Flat Port (w/o control ring)
Canon EF28mm F2.8 *1			
Canon EF35mm F2			
Canon EF-S18-55mm F3.5-5.6 IS II *4	 Zoom Gear18-55II		 MF Standard Port 2 (w/o control ring)
Canon EF-S60mm F2.8 Macro USM	 MRS Magnet Ring 60 Set		 MRS60 Port II   MRS60 Port II (w/o control ring)
	AF only *3		
Canon EF50mm F2.5 Compact Macro	 Focus Gear15-50		 MF Standard Port 2 (w/o control ring)
Canon EF180mm F3.5L Macro USM	 MRS Magnet Ring	 Extension Ring M	 MRS100 Port Type S



### [Discontinued Lens]



\*1 When shooting with wider aperture setting, image quality may degrade on peripheral part. Use smaller aperture setting.

\*2 Minimum focus distance gets little bit longer. Commercially available close-up lens No.2 like Canon Close-up Lens 500D/72mm etc. would be recommended to attach on the lens front to compensate it.

\*3 Auto focus (AF) only. For manual focus operation, optional MRS Control Ring(60/60Ⅱ/100UⅡ/100UⅢ/

Olympus 50) and compatible Magnet Ring is necessary.

\*4 When shooting at zoom wide end with wider aperture setting, peripheral part of an image may get degraded. Use smaller aperture setting.

\*5 Supports zoom operation. Manual focus (MF) is not supported and only auto focus shooting is available.

\*6 Shade Sponge D70 is attached on inner side of the Dome Port 2 or Dome Port 115 to block built-in flash light to prevent the flash light from exposing on an image. The optional Zoom Gear AT-X107 (to control

zooming), comes with a Shade Sponge D70.

\*7 Non USM old style lens.

\*8 Shade Sponge 7mm is attached on inner side of the Extension Ring S to block built-in flash light to prevent the flash light from exposing on an image.

\*9 Shade Sponge D80 is attached on inner side of the Dome Port 2 or Dome Port 115 to block built-in flash light to prevent the flash light from exposing on an image. The optional Zoom Gear 8-15 (to control zooming), comes with a Shade Sponge D80.

## Serious Compact

### Underwater Housing for Panasonic LUMIX GF2

# X-2 for GF2

Dedicated underwater housing for Panasonic mirrorless system camera LUMIX GF2. The housing supports advantageous features of the GF2 to benefit convenience and high performance underwater delivering you high quality and rich stills and movies.

#### [X-2 for GF2 Main Features]

Size	W180mm / 7.1in x H153mm / 6.0in x D92mm / 3.6in (W186mm / 7.3in x H162mm / 6.3in x D95mm / 3.7in) *( ) including projecting parts.
Weight (air)	approx. 1,340g / 47.3oz
Weight (underwater)	approx. 287g / 10.1oz (including Pancake Port, camera, 14mm/F2.5 lens and batteries)
Depth Rating	75m/246feet (with any INON Port)
Material	Corrosion resistant aluminum alloy (housing body)
Color	White, Black
Accessories	Main O-ring (spare), Fiber Optics Fixing Rubber (spare), INON Grease, Allen Wrench 2.5mm, Allen Wrench 3mm, Allen Wrench 5mm



X-2 for GF2 WT

#### Robust corrosion resistant aluminum alloy body

A housing body is made from lightweight and rigid corrosion-resistant aluminum alloy providing comfortable controllability even in high water pressure in addition to reliability and durability. The front body is manufactured by ultra-precision casting technique while the rear body is machined from an aluminum block. The total body is designed to enhance advantages of both manufacturing procedure to balance form, underwater weight and strength.



#### Proven and reliable waterproof design

To secure waterproof property, buttons and dial levers are not directly attached on a housing body but installed via brass bearings to prevent the aluminum housing body from galling caused by sliding of buttons and movement of dial levers. If bearings become worn, they can be replaced with minimum necessary parts. Buttons and dial levers carry oil bearing type INON yellow O-rings as same as housing body O-ring to prevent accidental flooding due to lack of grease. Also their size is thicker than required to enhance waterproof property. Bearings for dials have double O-ring structure for stable movement and further waterproof performance.



#### Body design for reliable and stress-free handling

The X-2 for GF2 has ideal body size not too compact to naturally hold and access to controls with wearing gloves for unimpeded underwater shooting. The body design allows you to put right hand fingers on the integrated grip naturally to hold the housing securely without effort. The position and angle of the shutter release lever has been carefully examined based on user's position and hand location at the moment of taking a picture where the user checks the LCD monitor on the back of the housing, to support natural and smooth operation of the shutter release lever to suppress camera shake.



#### Stress-free control layout

Buttons and dials are carefully arranged for quick access to them underwater without changing right hand position. Large LCD monitor window provides visual contact with camera's control buttons to enhance intuitive operation as like on land even underwater.



\* The iA button and touch panel are not accessible since they are rarely used underwater. The Rear dial can be rotated from housing control but cannot be pressed. However almost all settings by the Rear dial can be also managed by the Q.MENU button and Cursor buttons.



**X-2 for GF2 BK**

#### Ample inner space for comfortable camera installation/removal

A camera is precisely fixed in the housing at the tripod-screw and both shoulder strap eyelets. Since neither of front nor side of the camera contacts with the housing, water-pressure never cause any unexpected operation of the camera. You can put the camera in the housing even with an optional leather panel kit or thick LCD monitor protector being attached. Spacious inner construction allows you to put fingers between the camera and the housing to pull out the camera easily by one hand, and further helps to gain buoyancy to have less underwater weight. The built-in flash can be completely closed by a housing control lever to prevent accidental damage on the built-in flash unit when removing the camera.



#### Fully compatible with S-TTL Auto strobe system

Flooding-free four Optical D Connectors are equipped as standard feature to benefit simple yet reliable S-TTL Auto with maximum four external strobes supporting accurate exposure simply by pressing the shutter release button even in high power multi-lighting circumstances allowing you to focus on artistic intention or composition. Effective and reliable transmission of the built-in flash light is the key factor to enhance optimum accuracy of the S-TTL Auto exposure system. The X-2 for GF2 housing is equipped with a guide rail to hold the built-in flash at ideal pop-up position to ensure you with stable S-TTL Auto exposure.



### Options

#### Leak sensor installation

Installation of the Leak Sensor which warns you with red LED and buzzer in case of accidental flooding.



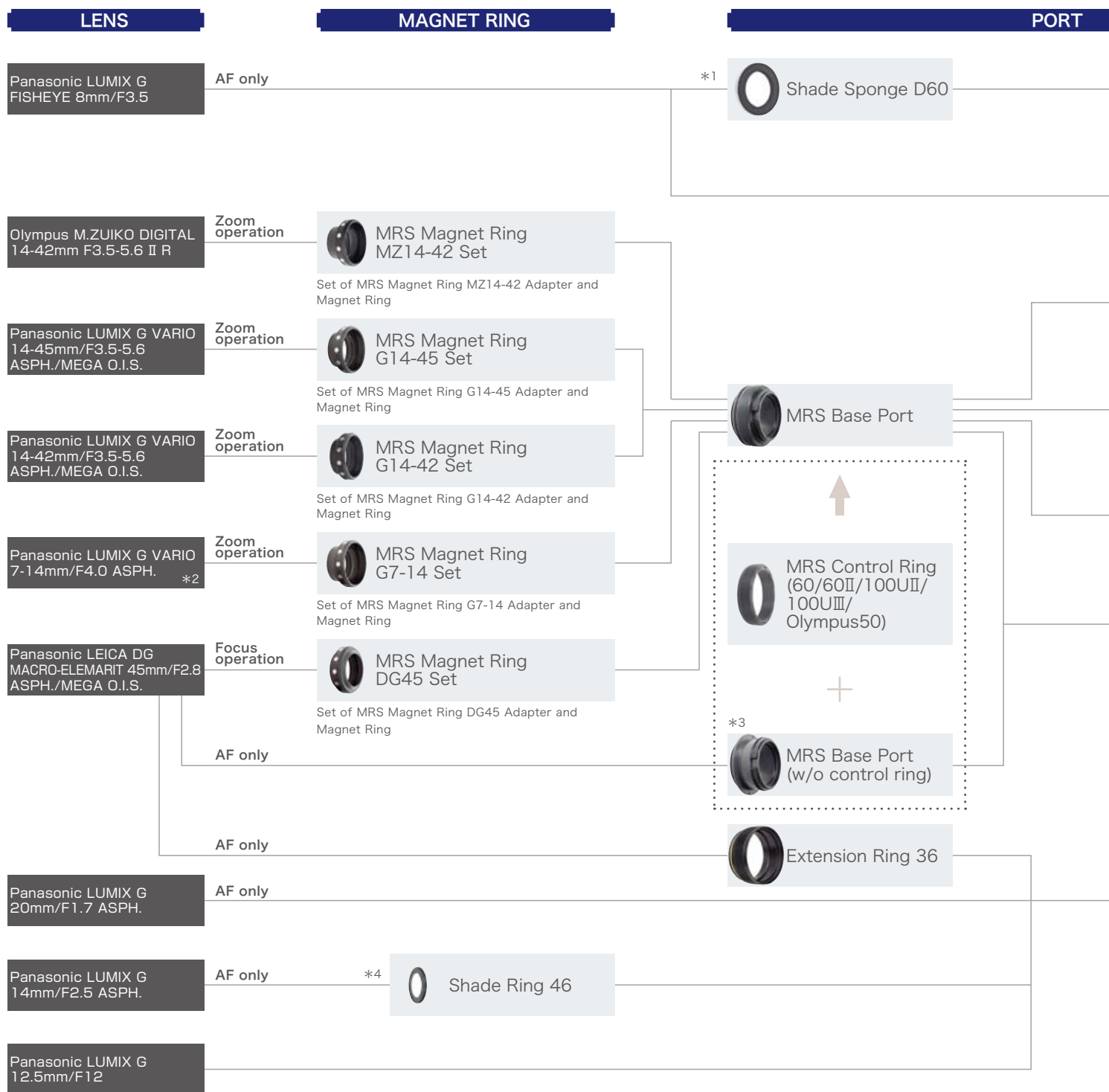
#### Lens Monitor Hood X-2

A hood with a lens for the LCD monitor of the X-2 for GF2 / X-2 for GF1 housing to enhance visibility of the LCD monitor by blocking unnecessary light from behind or reflection. Attached on the housing by dedicated metal adapter to support easy installation/removal.

#### Wide variety of lens ports from ultra macro to fisheye

Compatible lens ports support a variety of lenses; Panasonic 45mm/F2.8 Macro, 14mm/F2.5 Pancake, 20mm/F1.7 Pancake, 14-45mm/F3.5-5.6 Zoom, 14-42mm/F3.5-5.6 Zoom, 7-14mm/F4 Zoom, 8mm/F3.5 Fisheye and 3D imaging 12.5mm/F12. All lens ports including dome port use optical lens with multi coating to take full advantage of optical performance of LUMIX / LEICA lenses. Olympus 14-42mm F3.5-5.6 II R Zoom lens is also usable. With combined M67 series close-up lens, UWL-H100 28M67 Type2 wide conversion lens or UFL-M150 ZM80 underwater micro-fisheye lens attached on compatible lens port, various shooting chances are with you. Zooming operation and 45mm/F2.8 Macro lens focusing operation use INON patented MRS (Magnetic Rotary System) Port utilizing magnetic attraction to turn lens barrel with light torque as like controlling a lens on land. Each lens port for Panasonic 45mm/F2.8 Macro, 14-42mm/F3.5-5.6 Zoom, 14-45mm/F3.5-5.6 Zoom, 7-14mm/F4 Zoom and Olympus 14-42mm F3.5-5.6 II R Zoom is consist of two components; an universal base port and specific front port for each different lens model where only optional front port is required to use other lens model.





## Port Accessory



MF Rear Port Cap

A rear cap for a port (except for Front Port) and Extension Ring. When transporting or during storage, this cap protects O-ring and screw mount. The cap is designed to equalize with ambient pressure when transporting in an aircraft.



Front Port Rear Cap

A rear cap for a Front Port which has smaller screw mount. When transporting or during storage, this cap protects O-ring and screw mount. The cap is designed to equalize with ambient pressure when transporting in an aircraft.



Housing Body Cap

A cap for port mount of a housing to protect O-ring contact surface. The cap is designed to equalize with ambient pressure when transporting in an aircraft.





## ATTACHMENT LENS



Dome Port 2  
+Shade 2 Set

\*1



Dome Port 115



Front Port Flat 5



Front Port Wide



M67 Adaptor for  
Front Port Wide



Front Port  
Dome 115



Front Port Macro



Pancake Port

\*5



UFL-M150 ZM80  
Underwater Micro  
Fisheye Lens



UWL-H100 28M67  
Wide Conversion  
Lens Type2

\*6



Dome Lens Unit II  
for UWL-H100

\*7



UCL-330  
Close-up Lens

\*7



UCL-165M67  
Close-up Lens

- \*1 Shade Sponge D60 is attached on inner side of the Dome Port 2 to block built-in flash light to prevent the flash light from exposing on an image. The Dome Port 115 comes with the Shade Sponge D60.
- \*2 When shooting with wider aperture setting, image quality may degrade on peripheral part. Use smaller aperture setting.
- \*3 Upgradable to MRS Base Port with optional MRS Control Ring (60/60II/100UII/100UIII/Olympus 50).
- \*4 The Shade Ring 46 is attached in front of the compatible lens to prevent built-in flash light from exposing on an image.
- \*5 Optional M27-M67 Mount Converter for UFL-M150 ZM80 is necessary.
- \*6 Vignetting at wide end even underwater. Crop an image after shooting or zoom to telephoto side until no vignetting is observed.
- \*7 Vignetting on image corners on land and underwater at zoom range from wide end to middle. Zoom to telephoto side to eliminate vignetting.



### Dome Port Cover

A cover for the Dome Port 2+Shade 2 Set.  
Made from neoprene to protect lens surface.



### Dome Lens Unit Cover

A neoprene rubber cover for the Dome Port  
115 and Front Port Dome 115 to protect  
lens surface.



### Snap-on Lens Cap M67

A plastic lens cap to protect lens surface of  
close-up lenses and ports carrying M67 screw  
mount. Larger inner tabs support easy and  
speedy installation/removal.

■ Compatible Port: MRS60 PortII, MRS 100  
Port TypeUIII, MRS 100 Port TypeUII, Front  
Port Flat 5, Front Port Macro, Pancake Port



### Holder II Grip Set

A base stay with grip for a SLR housing to attach a strobe arm. The Holder II Grip Set is firmly attached on a housing by two tripod screws. The padded Holder supports back of right hand which holds the housing directly and the Grip on the left is designed to access to focus/zoom dials by left fingers with holding it. Both of them are adjustable to accommodate to a variety of hand sizes.

■ Weight: 410g(14.5oz)[air] / approx.196g(6.9oz) [under surface]

■ Compatible Housing: X-2 for EOS60D, X-2 for GF2



### Grip Base M1

A base arm designed for midsize underwater housing for micro four thirds digital camera. Firmly attached on a housing with two tripod screws. The Z Joint is directly attached on the top end of the arm to hold a strobe and wide variety of INON arm system is compatible with this product to expand your system with strobe/LED flashlight. It is easy to set-up multiple lighting system with dual strobe configuration by attaching extra D Holder.

■ Weight: 260g(9.2oz)[air] / approx.150g(5.3oz) [underwater]

■ Compatible Housing: X-2 for GF2



### Shoe Base Adapter X-2

An adapter to attach the Shoe Base on top of the X-2 series housing enabling to hold Z-240/D-2000/S-2000 strobe or LE series LED flashlight combined with Z Joint or Light Holder product.

■ Weight: 10g(0.4oz)[air] / approx.6g(0.2oz) [underwater]

■ Compatible Housing: X-2 for EOS60D, X-2 for GF2



### UFL-MR130 EFS60

#### Underwater Micro Semifisheye Relay Lens

An underwater micro semi-fisheye conversion lens specifically designed for Canon EF-S60mm F2.8 Macro USM which is for APS-C format digital SLR. The UFL-MR130 EFS60 is combined with the MRS60 Port II instead of its water-proof front glass element. The compact diameter 24mm subject side lens captures distinctive ultra wide underwater image (underwater 130.172°). Ultra wide angle with minimum 0cm focusing distance of the UFL-MR130 EFS60 enables you to capture tiny subject in entire image together with back ground underwater scenery.

■ Compatible Housing: X-2 for EOS60D



Compatible lens	Canon EF-S60mm F2.8 Macro USM
Compatible port	INON MRS60 Port II
Size (Diameter x Length)	63.5mm / 2.5in x 312mm / 12.3in
Weight (air)	500g / 17.6oz
Practical depth rating	75m / 246ft
Material / Surface Finishing	Corrosion-resistant aluminum alloy / Rigid black alumite / Inner reflection-free coating
Glass material / Surface Finishing	Optical glass /double face coating
Lens Construction	14 elements in 11 groups
Max. Incident angle	130.172° (underwater)



#### Photo data

Lens: UFL-MR130 EFS60 Underwater Micro Semifisheye Relay Lens

■ Housing: X-2 for EOS50D/40D, MRS60 Port II

■ Camera: Canon EOS 50D, EF-S60mm Macro

■ Strobe: Z240 x2

■ F20, 1/40sec, ISO400

■ Subject: Banded Shrimpgoby

■ Location: Koh Tao, THAILAND

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# INON

<http://www.inon.jp>

INON Inc. 2-18-9 Dai, Kamakura, Kanagawa 247-0061, Japan

For product inquiry [E-mail query@inon.co.jp](mailto:query@inon.co.jp)