September 11, 2014

RICOH WG-M1
The ultimate action camera of the WG series, equipped with an airtight waterproofed, shock-resistant body for all types of outdoor and underwater activities

RICOH IMAGING COMPANY, LTD. is pleased to announce the launch of the RICOH WG-M1 digital action camera. As the newest addition to the waterproof, shock-resistant WG series, this model features an ultra-wide-angle lens that lets users capture all kinds of underwater and outdoor activities in high-quality, true-to-life movies and images.

In order to provide brilliant performance in demanding, action scenes — both in the water and in the field — the RICOH WG-M1 is designed to be waterproof to a depth of 10 meters without requiring a protective underwater housing, shock-resistant against a fall from a height of two meters, and cold-resistant to temperatures as low as $-10°C$. With its ultra-wide-angle lens, it captures dynamic Full HD movie clips with a realistic sense of depth. Its approximately 14.0 effective megapixels means that it takes beautiful, high-resolution still images, while its high-speed continuous shooting capability records subjects in a series of images, at a speed of approximately 10 images per second. Reflecting the underlying theme of the WG series, its body features an outdoor-oriented design. It also provides a host of convenient features that allow the user to check real-time images during both still-image and movie shooting, including a 1.5-inch color LCD monitor and wireless LAN connection for operations using a smartphone. By coupling the WG-M1 with an array of camera-mount accessories, the user can respond more flexibly to a wide range of action scenes in sports and outdoor activities, and record them in dynamic, action-packed images and movies unlike anything you've seen before.

Main Features

1. Effortless underwater shooting without a housing

By simply mounting the included underwater lens protector on the airtight body, the WG-M1 assures outstanding waterproof performance to a depth of 10 meters, and for up to one hour of continuous operation (equivalent to IPX8 or JIS Class 8). It is also designed to be shock-resistant against a fall from a height of two meters,* dustproof (equivalent to JIS Class 6), and cold-resistant against temperatures as low as −10℃. All these features make the WG-M1 a truly dependable, heavy-duty action camera in harsh, demanding outdoor conditions. Since it doesn't require a cumbersome housing to protect the body, the user can not only enjoy underwater movies and images more freely, but also record sounds more clearly without muffling.**

Measured under RICOH IMAGING-original testing standards (from a height of two meters, onto a surface of 5cm-thick plywood), conforming to Method 516.5-Shock of the MIL-Standard 810F.
*** When the image size of 848 x 480 pixels (at 120fps) is selected, sound cannot be recorded.*

2. Full HD movie recording with a selection of creative tools

The WG-M1 provides Full HD movie recording in the H.264 recording format, capturing high-quality, extended movie clips (1920 x 1080 pixels, 16:9 proportions) at a frame rate of 30 frames per second.* Thanks to its digital shake reduction mode, the user is assured of flawless, blur-free movies, with a choice of four angle-of-view settings — Wide (approximately 137 degrees),** Medium,*** Narrow*** and Underwater. It also provides a host of creative tools to simplify complex movie-recording techniques, including "Motion detection," which automatically starts recording a movie when the camera detects a moving object within the image field; "Loop recording," which keeps recording movies while creating new files at five- or ten-minute intervals; "High-speed Movie,"**** which records movies specifically for slow-motion playbacks; and "Time Lapse Movie," which produces time-compressed movies using a time-lapse recording technique. In addition, a micro-HDMI terminal (type D) is provided on the camera body for the simultaneous output of movie clips and sound to external audio-visual devices.

* The maximum length of a single movie clip is 25 minutes.
** The angle of view may vary depending on the selected image size. The maximum angle of view in underwater movie recording is approximately 90 degrees.
*** The medium and narrow settings are selectable only when the image size of 1920 x 1080 pixels (at 30fps) is selected.
**** The image size is fixed at 848 x 480 pixels (at 120fps), while the recording duration is fixed at 60 seconds.

3. High-resolution still images captured by an ultra-wide-angle, 160-degree lens and approximately 14.0 effective megapixels

The WG-M1 delivers true-to-life, high-resolution still images, thanks to the combination of approximately 14.0 effective megapixels and a CMOS image sensor with outstanding high-sensitivity and low-noise characteristics and high-speed data readout. During still-image shooting, it offers a choice of four angle-of-view settings: Wide (160 degrees),* Medium,** Narrow** and Underwater. It also provides a high-speed continuous shooting mode to record a series of still images at a speed of approximately 10 images per second.

* The angle of view may vary depending on the selected image size. The maximum angle of view in underwater still-image recording is approximately 97 degrees.
** The medium and narrow settings are selectable only when image size of 10M or 14M is selected.

4. Functional, outdoor-oriented design
   Inheriting the design theme of the waterproof WG series, the WG-M1 offers a functional, heavy-duty design perfect for active outdoor shooting. It comes equipped with a 1.5-inch color LCD monitor for easy confirmation of the image composition during shooting and quick review of recorded images and movies during playback. Its large control buttons facilitate camera operations — including instant switching between still-image and movie modes — even when the user is wearing gloves. It also features a tripod socket on the bottom for the direct attachment of various accessories. The WG-M1 offers a choice of two body colors: black and orange.

5. Wireless LAN connection to support remote operation using smartphones
   By installing a WG-M1-dedicated application in a smartphone or tablet computer, the user can perform various camera functions from a distance: confirm the status of a subject or scene, release the WG-M1's shutter, and even check movie recordings in real time. The user can also browse and download images and movies recorded by the WG-M1 onto a smartphone or tablet computer for effortless editing using the tools provided by the application, then upload them to social networking and other websites to share them with friends.

6. Other features
   ・Face Detection AF & AE function, to automatically optimize focus and set exposure on the subject's face
   ・ WG adhesive mount, to attach the camera body to different surfaces using a powerful adhesive tape
   ・ Carabiner-equipped strap, to suspend the camera on a backpack or other object for easy carrying
   ・ Compatible with micro SD and micro SDHC memory cards

Optional Accessories

O-MA1531 WG Grip Adapter
This accessory provides a solid grip of the WG-M1 to facilitate one-handed shooting.

O-MA1532 WG Angle Adapter
With a combination of three parts, this accessory lets the user set the camera at the desired angle.

O-CM1532 WG Adhesive Mount 2
Designed to attach the camera to different surfaces using a powerful adhesive tape, this accessory provides a broader adhesive area than the standard WG adhesive mount included in the camera package. It also comes with a hook to attach a leash cord to prevent the accidental loss of the camera during the shooting of active sports, such as surfing and snowboarding.

O-CM1533 WG Wrist Strap Mount
Designed to attach the camera to the arm or tubular objects such as pipes, this accessory is convenient for the shooting of active sports such as surfing, snorkeling, skiing and snowboarding.

O-CM1534 WG Peg Mount
Designed to fix the camera on the ground, this accessory simplifies still-image/movie recording of golf swings and interval shooting on photo-shooting treks.

O-CM1535 WG Magnet Mount
Designed to attach the camera to metal objects with a powerful magnet, this accessory makes it easy to install and remove the camera.

O-CM1536 WG Helmet Strap Mount
Designed to attach the camera to a helmet using a strap, this accessory assists active movie shooting of road racing and mountain biking.

RICOH WG-M1 Specifications

Category	Sub	Value
Lens		RICOH lens, 6 elements in 6 groups (2 aspherical elements)
	Focal Length	3mm
	(in 35mm format equivalent)	Approx. 16.8mm
	Maximum field of view	Still image : Approx. 160°(4:3 wide) Movie : Approx. 137°(1280x960)
	Maximum Aperture	F2.8
Focus	Type	Fix focus length
	Focus Range	In air (Lens protector O-LP1531, Underwater lens protector O-LP1532) : 60cm-∞ Underwater (Underwater lens protector O-LP1532) : 80cm-∞
Field of view (FOV)		Wide, Medium, Narrow, Underwater
Motion Blur Reduction		Electronic image stabilization (movie only)
File format	Still	JPEG (conforms to Exif 2.3), conforms to DCF2.0
	Movie	MOV/H.264, 30fps/50fps/60fps/120fps
	Audio	PCM system, stereo sound
Number of Recorded pixels	Still	(4:3) 14M : 4320x3240, 5M : 2592x1944 (16:9) 10M : 4320x2432
	Movie	1920x1080(30fps), 1280x960(50fps), 1280x960(30fps), 1280x720(60fps), 1280x720(30fps), 848x480(60fps), 848x480(120fps)
Number of Effective pixels		Approx. 14 megapixels
Image Sensor		1/2.3 inch CMOS
Sensitivity (Standard Output Sensitivity)		Automatic (ISO 100-800)
White Balance		AWB, Daylight, Cloudy, Fluorescent, Underwater
Display		1.5 inch LCD, approx. 115,000 dots
Exposure Control	Metering System	AiAE, Face AE (not switchable)
Face detection		10 people's faces
Shooting modes		Still, Movie, Time Lapse, Loop recording, Motion detection
Playback modes		Photo playback, Movie playback
Drive modes	Still	Single, Burst Shot
Storage Media		Built-in memory (approx. 100MB) microSD / microSDHC Memory Card
Power Source		Rechargeable lithium-ion battery DB-65
	Battery life	Still : Approx. 350 pictures (using the rechargeable lithium-ion battery) *1 Movie recording : Approx. 150 minutes (using the rechargeable lithium-ion battery) *2 Playback : Approx. 400 minutes (using the rechargeable lithium-ion battery) *2
Interfaces		USB2.0 (high-speed compatible), HDMI port (Type D)
WireLess interface		Standard : 802.11b/g/n Frequency : 2.4GHz band Security : WPA2
Dimensions		Approx. 66.5（W）×42.5（H）×89.5（D）mm (excuding operating or protruding parts)
Weight		Approx. 190g (including battery, microSD memory card, and Lens protector O-LP1531) Approx. 151g (excluding battery, microSD memory card, and Lens protector O-LP1531)
Accessories		Rechargeable lithium-ion battery, Power adapter, USB cable, Carabiner strap, Quick start guide, Operating Manual (CD-ROM), WG Flat Adhesive Mount, Lens protector, Underwater lens protector

*1 Recording capacity shows approximate number of shots recorded during CIPA-compliant testing. Actual performance may vary depending on operating conditions.

*2 According to the result of RICOH IMAGING in-house testing.

Storage for RICOH WG-M1

	Still image			Movie						
	14M [4 : 3] (4320 x 3240)	5M [4 : 3] (2592x1944)	10M [16 : 9] (4320x2432)	1920x1080	1280x960		1280x720		848x480	
				30fps	50fps	30fps	60fps	30fps	60fps	120fps
Built-in Memory	24	64	32	0:00:46	0:00:46	0:01:15	0:00:52	0:01:38	0:01:38	0:00:52
1GB	229	602	304	0:07:54	0:07:54	0:12:24	0:08:48	0:15:59	0:15:59	0:08:47
2GB	463	1216	614	0:16:03	0:16:03	0:25:13	0:17:51	0:32:23	0:32:22	0:17:51
4GB	911	2391	1208	0:31:39	0:31:39	0:49:40	0:35:11	1:03:45	1:03:43	0:35:10
8GB	1828	4800	2424	1:03:37	1:03:36	1:39:45	1:10:43	2:08:02	2:07:57	1:10:40
16GB	3616	9491	4793	2:05:52	2:05:50	3:17:20	2:19:54	4:13:15	4:13:06	2:19:49
32GB	7348	19287	9740	4:15:52	4:15:49	6:41:07	4:44:24	8:34:43	8:34:25	4:44:13
	shots			time						

<Note>
•The maximum length is 25 minutes for movie.
•The maximum time which can be recorded as 848x480 120fps Movie mode is 60 seconds per file. (The movie will be played 4 times longer(4min.))

System Requirements for RICOH WG-M1

USB interface				
Windows®	Windows Vista®	Windows® 7	Windows® 8	Windows® 8 .1
Macintosh	Mac OS X 10.6	OS X 10.7	OS X 10.8	OS X 10.9

Supported OS must be pre-installed in PC and updated to the latest version. USB port must be standard equipped.