More GXR enjoyment: New wide-angle zoom with large-format CMOS sensor

RICOH LENS A16 24-85mm F3.5-5.5
RICOH LENS S10 24-72mm F2.5-4.4 VC
GR LENS A12 28mm F2.5
GR LENS A12 50mm F2.5 MACRO
GR LENS A12 28-300mm F3.5-5.6 VC
GXR MOUNT A12
For your next camera, accept no creative limitations.
Compact, high-performance lens design at a level only possible with the interchangeable unit system

It is the lens that gives life to the photograph. In interchangeable lens camera systems up to now, the distance from the mount and the back of the lens to the sensor image plane was subject to requirements for flange back distance and back focal length. This made it difficult to achieve both compactness and high optical performance. Eliminating the lens mount, however, means that the back focal length can be freely defined for the GXR, enabling it to use the most optically efficient lens designs with the minimum size. In addition, combining the lens and image sensor increases design flexibility so camera units can be developed based on a variety of concepts.

A highly airtight system so no worrying about dust when changing lenses

GXR camera units eliminate a problem that plagues interchangeable lens digital cameras: dust adhering to the image sensor. With the GXR’s highly airtight structure, the inside of the camera is not exposed when lenses are changed. Even in difficult shooting environments where sand and other particles are a concern, camera units can be changed without hesitation.

*This does not apply to lens mount unit GXR MOUNT A12.

*When the electronic shutter is used, maximum speed is 1/8000 sec.

The “VC” designation indicates that this unit has the Vibration Correction function developed independently by Ricoh. *All lens focal lengths in this catalog are converted into 35 mm camera equivalents.
Camera unit

RICOH LENS A16 24-85mm F3.5-5.5

16.20 million pixels
CMOS 23.6mm x 15.7mm
HD movies 1280 x 720P
24-85mm wide-angle zoom
Max 3 frames without dead shots

RICOH LENS A16 24mm-85mm F3.5-5.5, 1/410sec, F5.0, ISO200, EV+1.5, WB: MANUAL, no trimming, wide-angle 24mm
A large-format CMOS sensor with approx. 16.20 million effective pixels.
A 3.5x optical zoom perfect for everything from portraits to landscapes.

Perfect as your regular lens.
A 24mm-85mm lens boasting superior resolution

For both expansive landscapes and narrow interior shots, 24mm is a powerful setting. For an intent look at another person, 85mm gives you the perspective of a focused gaze. This 3.5x optical zoom can handle almost all the subjects you encounter from day to day. The optics feature a 9-group, 11-element configuration. The optimized lens placement—integrating three aspherical lenses (six surfaces)—effectively corrects for various types of distortion across the entire zoom range. The result is high resolution from edge to edge. In addition, the configuration of nine rounded aperture blades enables both highly precise aperture control and beautiful bokeh.

Catch every shutter chance. Finely honed shooting functions

With ISO bracketing you can record three images with different ISO sensitivities. This lets you capture the moment together with multiple exposure variations. There is also a function for maintaining the same shooting settings. By keeping the shutter release button pressed halfway after taking a picture, you can continue shooting with the same settings (focus, exposure, white balance, etc.). For example, when you want to shoot portraits by clicking the shutter each time someone’s expression changes, this function makes it easy by eliminating focus and AE time lags for each shot.

Large-format CMOS sensor with 16.20-million-pixel high resolution

This is the first time a large-format 23.6mm×15.7mm CMOS sensor has been used in a lens in the RICOH LENS series. The approximately 16.20 million effective pixels provide superior resolving power for reproducing the finest details of your subject. Image processing engine Smooth Imaging Engine IV gives rich tonal gradations and effective noise processing for high image quality.

More shooting freedom and pleasure. Enhanced functions for shooting/expression

This unit brings together all of the key functions that Ricoh has developed to date for image quality, shooting flexibility, and photo expression. At the same time, it greatly expands those functions with “RAW only” image recording, electronic level movement direction support, addition of copyright information, etc. The result is a high level of perfection and freedom when used as your regular camera unit.

*RICOH LENS A16 24-85 F3.5-5.5 does not have macro shooting, macro target, auto macro, or macro minimum shooting distance display functions. *The internal flash cannot be used because vignetting would occur at the bottom of the image. For flash shooting, use the GF-1 external flash unit.

RICOH LENS A16 24-85mm F3.5-5.5 – Other Major Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focal length</strong></td>
<td>15.7mm – 55.5mm (35 mm format equivalent: 24-85mm)</td>
</tr>
<tr>
<td><strong>Aperture (f-number)</strong></td>
<td>F3.5 – F5.5</td>
</tr>
<tr>
<td><strong>Focus range</strong></td>
<td>Approx. 25cm – Infinity *From front of lens</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>11 elements in 9 groups</td>
</tr>
<tr>
<td><strong>Filter size</strong></td>
<td>55 mm</td>
</tr>
<tr>
<td><strong>Zoom</strong></td>
<td>Optical zoom: 3.5x, Digital zoom: photographs 4.0x, movies 3.6x, Auto resize zoom: approx. 6.8x (VGA)</td>
</tr>
<tr>
<td><strong>Number of pictures shot in Continuous</strong></td>
<td>Noise reduction off: 3 pictures, Noise reduction on: 2 pictures</td>
</tr>
<tr>
<td><strong>Number of pixels recorded</strong></td>
<td>Photographs: 4928×2768, 4352×3264, 4928×3264, 3264×3264, 3456×1944, 3072×2304, 3456×2304, 2304×2304, 2592×1944, 2048×1536, 1280×960, 640×480, Movies: 1280×720, 640×480, 320×240</td>
</tr>
<tr>
<td><strong>Battery life</strong></td>
<td>Based on CIPA standard DB-90: Approx. 400 shots</td>
</tr>
<tr>
<td><strong>Dimensions (W × H × D)</strong></td>
<td>Camera unit only: 71.4mm W×70.5mm H×93.3mm D (excluding projections; according to CIPA guidelines)</td>
</tr>
<tr>
<td></td>
<td>When mounted on camera body: 113.9mm W×74.7mm H×98.5mm D (excluding projections; according to CIPA guidelines)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Camera unit only: Approx. 350g, Mounted on camera body: Approx. 550g (including battery, SD memory card)</td>
</tr>
</tbody>
</table>
High resolution and high contrast all the way to the edge.
A wide-angle lens with a large image sensor to make full use of GR imaging power.

Camera unit

GR LENS A12 28mm F2.5

- 12.30 million pixels
- CMOS 23.6mm x 15.7mm
- 28mm fixed focal length
- 20cm minimum shooting distance
- HD movies 1280 x 720P
- Max 4 frames RAW continuous shooting
The speed of the reading of the CMOS sensor signal has been accelerated. These specs are well suited to the contrast AF technique in which the image sensor does the focus detection. The adoption of a new drive mode has also contributed to this camera unit’s quick, satisfying AF. When spot AF is selected, a “pinpoint” setting can be utilized for the AF area. The resulting smaller-than-normal AF area lets you precisely focus on a single point.

Use all the power of the lens. Large CMOS sensor
The 23.6 × 15.7 mm CMOS sensor has approximately 12.30 million effective pixels. This ample size will give a superior sense of atmosphere and three-dimensionality to your images in addition to providing the bokeh you want from a wide-angle lens. With the GR ENGINE III image processing engine also featured, this camera unit can shoot high-quality images with excellent tone gradations and resolution as well as low noise.

Quickly catch the subject. High-speed, high-precision AF
The speed of the reading of the CMOS sensor signal has been accelerated. These specs are well suited to the contrast AF technique in which the image sensor does the focus detection. The adoption of a new drive mode has also contributed to this camera unit’s quick, satisfying AF. When spot AF is selected, a “pinpoint” setting can be utilized for the AF area. The resulting smaller-than-normal AF area lets you precisely focus on a single point.

Manual focus ring enables subtle focus adjustments
With the manual focus ring, you can smoothly make fine focus adjustments after AF focusing is done. Focus quickly and easily even when moving up close to the subject and shooting at a wide-open F2.5 aperture to get beautiful bokeh.

GR LENS A12 28mm F2.5 – Other Major Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focal length</td>
<td>23.6 mm (35 mm format equivalent: 28 mm)</td>
</tr>
<tr>
<td>Aperture (f-number)</td>
<td>f/2.5 – f/22 (ND filter used for apertures of f/22 in auto shooting mode)</td>
</tr>
<tr>
<td>Focus range</td>
<td>Normal shooting: Approx. 20 cm – infinity (maximum magnification 1/2x)</td>
</tr>
<tr>
<td>Construction</td>
<td>9 elements in 6 groups (2 aspherical lens elements with 2 surfaces)</td>
</tr>
<tr>
<td>Filter size</td>
<td>40.5 mm</td>
</tr>
<tr>
<td>Zoom</td>
<td>4.0× digital zoom (3.6x for movies), 5.9× auto resize zoom (VGA)</td>
</tr>
<tr>
<td>Flash Range (built-in flash)</td>
<td>Approx. 20 cm – 3.0 m (ISO auto)</td>
</tr>
<tr>
<td>Number of pictures</td>
<td>Noise Reduction off or on (Weak): 4 pictures, Noise Reduction on (Strong): 3 pictures</td>
</tr>
<tr>
<td>(Picture Size: RAW)</td>
<td>Photographs: 4288 × 2416, 3776 × 2832, 4288 × 2848, 2848 × 2848, 3456 × 1944, 3072 × 2304, 3456 × 2304, 2304 × 2304, 2592 × 1944, 2048 × 1536, 1280 × 960, 640 × 480</td>
</tr>
<tr>
<td>Movies: 1280 × 720, 640 × 480, 320 × 240</td>
<td></td>
</tr>
<tr>
<td>Battery life</td>
<td>Based on CIPA standard, DB-90: approx. 320 shots</td>
</tr>
<tr>
<td>Dimensions (W × H × D)</td>
<td>Camera unit only:68.7 mm × 57.9 mm × 50.4 mm (excluding projections; according to CIPA guidelines)</td>
</tr>
<tr>
<td>Weight</td>
<td>Mounted on camera body:113.9 mm × 70.2 mm × 55.6 mm (excluding projections; according to CIPA guidelines)</td>
</tr>
<tr>
<td></td>
<td>Camera unit only: Approx. 210g Mounted on camera body: Approx. 410g (Including battery, SD memory card)</td>
</tr>
</tbody>
</table>

Sharp resolution across the entire image. Uncompromising optics
Shoot pan-focus utilizing the deep depth of field characteristic of a wide-angle lens. Create dynamic compositions by moving in close to the subject to emphasize perspective. Combining rapid shooting ability and power of expression, GR LENS A12 28mm F2.5 will also excel as your regular camera unit. The optics feature a newly developed 6-group, 9-element configuration. The use of two aspherical lenses as well as a special low-dispersion lens has made it possible to effectively correct for various types of aberrations. The result is images with superb center-to-edge sharpness worthy of a GR LENS. In addition, the adoption of a floating lens structure has made it possible to achieve superior optical performance at all focal distances.
Paired with a 23.6 mm × 15.7 mm image sensor, this GR LENS is a standard macro boasting superb definition and refined bokeh.

New system enables higher dimension of optical performance
The lens configuration has 8 groups and 9 elements. Making good use of the new system’s ability to have and accommodate back focal length, we were able to design the refractive capabilities of each element in a more efficient and practical manner than is possible for SLR interchangeable lenses. Partly thanks to the use of a large-diameter aspherical element, this lens achieves a superior level of edge-to-edge resolution and image quality unimaginable for its small size. In addition, there is little vignetting so richly luminous, natural-form bokeh extends to the edge. The floating structure corrects various types of aberrations that tend to occur in close-up photography. Even at the minimum shooting distance, this lens gives excellent definition and sharpness worthy of the GR LENS name.

Maximum 1/2x magnification and a focus ring for full-fledged close-up photography
Close-up photography at a maximum magnification of 1/2x is possible, with the minimum shooting distance approximately 7 cm from the front of the lens. A manual focus ring is also provided. If the body focus ring setting selected is AF+MF, after the AF focusing is done it is possible to turn the focus ring to make fine adjustments to the focus.

Beautifully shoot and relive the excitement. High definition (HD) movie function
Enjoy shooting HD movies. Image size is 1280×720, aspect ratio 16:9, and frame rate 24 frames/sec. Utilizing the high sensitivity (maximum ISO 3200) and the beautiful bokeh made possible by the F2.5 aperture and the large image sensor, it is possible to create impressive movies with a different feel than those of standard video cameras. The GXR body has an HDMI connector so for large-screen movie viewing it can be connected to TVs supporting HDMI.

High definition (HD) movie function
The CMOS sensor boasts 23.6 mm × 15.7 mm size for rich bokeh and approximately 12.30 million effective pixels for superior resolution. Supporting the exceptional optical performance of the GR LENS, this image sensor enables the photographer to obtain both crisp details and refined bokeh, and the wide dynamic range gives rich tonal gradations. The result is high image quality that demands printing in large format.

Beautiful bokeh and imaging power.
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For a diverse range of photo subjects.
“Everyday” zoom coverage from wide-angle to medium telephoto.

Excellent correction of various types of aberrations.
Sharp optical performance at all focal lengths

This 24-72 mm 3x optical zoom can handle a diverse range of subjects. The lens configuration has 7 groups and 11 elements, with 4 aspherical lens elements situated in optimum positions. Using special low-dispersion glass and other techniques, we have achieved high resolution and contrast at all focal lengths.

Approach subject detail from 1 cm range. Close-up photography

Close-up photography with a minimum shooting distance of 1 cm (wide-angle; distance from front of lens) is possible. When used in combination with the digital zoom, which provides greater magnification than standard shooting, it is possible to fill the frame with a subject of about 4.4×3.3 mm size.

High-sensitivity CCD achieves natural and high image quality

A 1/1.7-inch CCD is used as image sensor. Providing both high-sensitivity and low-noise, this CCD can handle the wide sensitivity setting range of ISO100 to 3200. Even when shooting at high ISO sensitivity, it is possible to obtain natural high-quality images with low levels of both color noise and luminance noise.

Distinct images without blurring.
Camera shake correction and high-sensitivity setting

The Ricoh-developed Vibration Correction function is effective for preventing the camera shake that can occur in situations such as night scenes and telephoto shooting. In addition, blurring from both camera shake and subject movement can be suppressed using Auto-Hi (high sensitivity auto), which can be set as high as ISO3200.

RICOH LENS S10 24-72mm F2.5-4.4 VC

The “VC” designation indicates that this unit has the Vibration Correction function developed independently by Ricoh.

Camera unit

RICOH LENS S10 24-72mm F2.5-4.4 VC

The VC designation indicates that this unit has the Vibration Correction function developed independently by Ricoh.
Great versatility in a 10.7x optical zoom with wide-angle to telephoto coverage

This 28-300 mm 10.7x optical zoom handles everything from expansive landscape shots to concerts and sports where you are far from the action. The lens configuration has 7 groups and 10 elements. The adoption of 4 aspherical lenses (5 surfaces) has made it possible to achieve clear photographs with high image quality at all focal lengths.

Ultra-high-speed continuous shooting at 4.3 frames/second in RAW mode and up to 120 frames/second maximum

Wield continuous shooting power at about 4.3 frames/second* at maximum pixels (10M) and at up to 120 frames/second (640 × 480) at the ultra-high-speed Hi setting. The M-continuous plus function is also included.

*When noise reduction is off. *The maximum number of images for continuous shooting in RAW mode is five.

Darkness conquered with MAX noise reduction and a new CMOS sensor

This camera unit achieves high image quality even at high ISO sensitivity levels by combining a back-illuminated CMOS sensor with a MAX noise reduction setting that divides the image into segments and optimizes noise processing for each.

The amount of time it takes to record an image will vary depending on the noise reduction setting.

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The amount of time it takes to record an image will vary depending on the noise reduction setting.
Leica M lens mount capability plus a large image sensor.
With this expansion unit, you can experience the rich variety of ways in which lenses portray

Universal mount accommodating Leica M lenses and more

GXR MOUNT A12 is compatible with the M mount, which supports a rich range of lenses that include many “gems” of the lens field. In addition to the ability to mount Leica M lenses, lenses with many more types of mounts can also be accommodated if a conversion adapter is used. Focusing is done manually. A checking device is included for use in confirming whether or not your lenses can be physically mounted.

Imaging excitement: 12 M pixels
with a large 23.6 x 15.7 mm CMOS sensor

Get beautiful bokeh, rich tone gradations, and high resolution. Through on-chip micro-lens optimization, we have also controlled the peripheral light falloff that can be a concern with classic lenses. The design optimizes for resolution, drawing out all of the sharpness of each lens.

Bring classic lenses back to life with functions for peripheral-light and aberration correction

Correction/compensation can be finely tuned to the characteristics of each lens. There is color shading correction and illumination correction for the image periphery and also distortion correction (barrel and pincushion type). Not only can you correct for the optical characteristics of the lens, you can also go the other way and emphasize those characteristics to enjoy creating a distinctive feel not found in the images of today’s lenses.

Assist function makes precise manual focusing possible

A focus assist function is included. Outlines and contrast are strengthened to assist the photographer in high-precision manual focusing. It is also possible to magnify the screen image when shooting. In addition to magnifying the central part of the image, it is possible to display the magnified area across the entire screen, making it much easier to focus accurately. The area to be magnified can be moved with the directional pad.

No noise and low vibration, with electronic shutter mode
the camera disappears

The focal plane shutter has a maximum speed of 1/4000 seconds. In manual exposure mode, bulb and time shooting are possible (up to 180 sec.). In addition, if you select “electronic shutter” in scene mode, you can use a fast 1/8000-second shutter speed. It is effective for scenes where you want to suppress sound and vibration.

*The electronic shutter is not suitable for shooting moving subjects or shooting with low-speed settings.

**GXR MOUNT A12 Major Specifications**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective pixels</td>
<td>Approximately 12.30 million</td>
</tr>
<tr>
<td>Image sensor</td>
<td>23.6 mm x 15.7 mm CMOS</td>
</tr>
<tr>
<td>Zoom</td>
<td>4.0x digital zoom (3.6x for movies), 5.9x auto resize zoom (VGA)</td>
</tr>
<tr>
<td>Focus mode</td>
<td>Manual focus</td>
</tr>
<tr>
<td>ISO sensitivity</td>
<td>Guide number: ISO 200 equivalent (9.6 mm equivalent)</td>
</tr>
<tr>
<td>Flash</td>
<td>Up to 4 pictures at ISO 200; 3 pictures at ISO 1000</td>
</tr>
<tr>
<td>Shutter speed</td>
<td>1/4000 - 180 sec., bulb, time (upper and lower limits vary according to shooting and flash mode) (Movies: 1/2000 - 1/30 sec.)</td>
</tr>
<tr>
<td>Number of pixels recorded</td>
<td>16:9/4288 x 2416, 3456 x 1944, 2592 x 1944, 2048 x 1536, 1280 x 960, 640 x 480</td>
</tr>
<tr>
<td>Movies</td>
<td>1280 x 720, 640 x 480, 320 x 240</td>
</tr>
<tr>
<td>Correction/compensation</td>
<td>Can be finely tuned to the characteristics of each lens</td>
</tr>
<tr>
<td>Distortion correction</td>
<td>Can be emphasized by the photographer to enjoy creating a distinctive feel not found in the images of today’s lenses.</td>
</tr>
</tbody>
</table>
the world.

Lens Mount Unit

GXR MOUNT A12

- **12.30 million pixels**
- **CMOS**
- **23.6mm×15.7mm**
- **1/4000 high-speed shutter**
- **M mount compatible**
- **HD movies 1280×720P**
- **Max 4 frames RAW continuous shooting**

*When the electronic shutter is used, maximum speed is 1/8000 sec.
*The lens shown in the photo is not included.

Color shading correction (R +4, B -4), no trimming.
What to say, and how to say it?
This system understands the photographer’s intentions.

Shooting functions to handle diverse scenes

Image settings adjustable to 9 levels | Freedom to create the best image quality.
Image settings include Vivid, Standard, Natural, Black & White, B&W (TE), and Setting. In addition, for Black & White, B&W (TE), and Setting, the range across which vividness, contrast, sharpness, and individual color settings can be adjusted has been broken down into nine levels. So it is now possible to fine tune image finishing in greater detail across a wider range.

ISO3200 high sensitivity | a strong ally in shooting dark scenes and preventing subject blur.
Depending on the camera unit being used, high sensitivity settings of up to ISO1600 or ISO3200 are possible. An image sensor with a high signal-to-noise ratio together with an advanced image processing engine make it possible to obtain natural-looking images with a low-noise feel even at high ISO settings. For the sensitivity setting, you can select Auto or Auto-Hi (high sensitivity auto), or specify the sensitivity yourself.

Multi-pattern auto white balance | Natural color reproduction.
The GXR segregates the image into multiple areas and applies the optimum white balance to each. For example, in cases such as where a person is photographed with flash in a room illuminated by incandescent light, even if the subject and background have different color temperatures, both are reproduced with natural colors.

Full press snap | Seize that shutter chance.
With this quick-shooting function, a one-push full-press of the shutter-release button instantly takes the shot, skipping the usual AF operation. It is possible to select from the following focus distances: 1 m, 1.5 m, 2 m, 2.5 m, 3 m, 3.5 m, 5 m, or infinity.
*Can only be used when focus is set to Multi AF or Spot AF.

M-continuous plus | Don’t miss the moment.
Shoot continuously by holding down the shutter release button. The moment you release your finger, multiple images shot up to then are recorded. Use HI when shooting speed is the priority and LO when resolution is the priority.

Firmware function | GXR evolution never stops.
Both new functions and enhanced functions are regularly provided via firmware updates. Examples of functions added in the past include the following scene mode options: miniaturize, high contrast B&W, soft focus, cross process, and toy camera.

Operability that sets free your desire to create

Settings read when camera unit attached | Flexible response to creative intent.
The GXR remembers shooting settings in both the body and the camera unit. It is possible to specify in advance which settings are to be used. Select the body settings if you want to shoot and process images in the same way regardless of the camera unit. Select the camera unit settings if you want to change settings for image creation in a style specific to the camera unit. This increases shooting flexibility and speed by saving the time and effort involved in redoing settings.

Precise focus checking with a 920,000-dot picture display
The GXR has a 3.0-inch, 920,000-dot VGA picture display. A wide color reproduction range with 100% sRGB coverage gives a high-reality image for both shooting and playback. Precise focus checking and a micro-thumbnail display with up to 81 images are possible. Various coatings are used to insure superior visibility and durability.

Three My Settings and the My Settings Box
The GXR provides three My Settings. In addition, up to six special-purpose and infrequently used My Settings can be saved in a My Settings Box and on an SD card. From there they can be quickly assigned to the mode dial as necessary.

ADJ. lever and two Fn buttons | Direct operability.
Frequently used functions can be assigned to the ADJ. lever. Press at the center to call up the registered functions and then press to the left or right to select a function. Use the + or – button to quickly complete the setting. In addition, there are two Fn buttons to which selected functions can be registered for switching with one push. Setting changes can be made directly without menu operations.

DIRECT screen | Speedy function settings via.
Pressing the DIRECT button located on the back of the body displays the current shooting settings. Since the settings are transparently displayed over the image, the image and the settings can be simultaneously checked. Then selecting an individual setting with the directional pad, a change can be quickly made. Background image density (four levels) can be changed by pressing the DISP. button while the DIRECT screen is displayed.
*For certain functions, setting changes cannot be made.

Other functions

• Pixel output interpolation algorithm effectively suppresses whiteout.
• Noise reduction improves image quality during high-sensitivity shooting.
• Distortion correction reduces the distortion that is characteristic of wide-angle lenses.
  *Done on certain camera units only
• Level compensation adjusts contrast and tone gradations after shooting.
• Pre-AF speeds up focusing.
• AE/AF target selection provides greater freedom in framing and creative use of light.
• Exposure bracketing and white balance bracketing enhance shooting certainty.
• Color bracketing simultaneous records black and white and tinted monochrome images, each with a different feel.
• Manual flash amount enables the control of subject and background light balance.
• Tilt indicator supports quick and accurate camera leveling.
• Flag function enables registration of up to 20 images for easy viewing later.
• Grid guide function provides three patterns for selection to suit the subject.
• Intuitive operation. 8-Directional pad handles diagonal movement

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A full line of accessories for a system to realize the photographer’s aspirations.

**[External TTL Flash GF-1]** Performing with light and shadow.

This is an external flash with G.No 20(24mm) -30(105mm) (ISO100m). It utilizes an original TTL flash technique to provide precise flash exposure with auxiliary flash. Also capable of bounce flash to softly and naturally illuminate the subject. With indirect light, the GF-1 enables the photographer to enjoy a wide range of creative shooting options only possible with an external flash. There are built-in wide-angle diffuser and catch-light panels. When the wide-angle diffuser panel is used, a coverage angle equivalent to 18 mm is possible. This hinged-type lens cap opens and closes automatically when the lens barrel extends and retracts. It increases shooting flexibility by eliminating the inconvenience of having to remove/attach the lens cap. There is also no more worry about lens cap loss. Buyonetype mount.

**[Wide Conversion lens DW-6]** For wide-angle shooting wider than the naked eye.

This is a convenient accessory for shooting at a wider wide-angle and for achieving a more extreme sense of distance. Magnification is 0.9x, and used at the maximum wide-angle setting it enables 19 mm ultra-wide-angle photography. Optimized for the optical system of the camera unit, the DW-6 consists of three glass lenses. *Optional accessories for RICOH LENS S10 24-72 mm. *For use, the hood & adapter (HA-3) are necessary. *When attached, the internal flash cannot be used because vignetting would occur.

**[LCD Viewfinder VF-2]** Small size and 920,000-dot high definition.

Attached to the hot shoe, the LCD viewfinder has a 100% field of view equivalent to approx. 920,000 dots. It provides a wealth of benefits to the photographer, such as eliminating the influence of sunlight to provide a consistently excellent field of view and helping control hand-motion blur by enabling a three-point hold. With a high-performance viewfinder optical system utilizing an aspherical lens, the VF-2 achieves a low-distortion field of view, a high image magnification ratio, and a wide diopter correction range (–1±3.5Dpt). The tilt capability is convenient for low-angle shooting. (Case included)

**[Teleconversion Lens TC-1]** Frame and capture your target.

This magnification 1.88x teleconversion lens extends the focal length of the camera unit lens, reaching 135 mm at maximum telephoto. Of course, a telephoto lens will bring far away subjects closer, but the photographer can also enjoy a variety of other effects, such as isolating one small area from the overall field of view, creating dramatic scenes, and imposing order on the image composition.

*Optional accessories for RICOH LENS P10 28-300mm F3.5-5.6 VC
*Optional accessories for RICOH LENS A12 28mm F2.5 MACRO
*For use, the hood & adapter (HA-3) are necessary. *When LC-2 is used, the hood & adapter (HA-3) cannot be used. *LC-2 is an option for RICOH LENS A16 24-48mm F3.5-5.5.

**System diagram**

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**GXR Optional Accessories**

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Model Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lens Hood 17</td>
<td>LH-1</td>
</tr>
<tr>
<td>Lens Hood 19</td>
<td>LH-2</td>
</tr>
<tr>
<td>External Viewfinder 17</td>
<td>GV-1</td>
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<tr>
<td>Mini External viewfinder 17</td>
<td>GV-2</td>
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<tr>
<td>Hood &amp; Adapter 21</td>
<td>HA-3</td>
</tr>
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<td>Wide Conversion Lens 14</td>
<td>DW-6</td>
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<tr>
<td>Teleconversion Lens 14</td>
<td>TC-1</td>
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<tr>
<td>External Flash 17</td>
<td>GF-1</td>
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<tr>
<td>External Viewfinder 17</td>
<td>VF-2</td>
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<tr>
<td>Cable Switch 17</td>
<td>CA-1</td>
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<td>Wrapping Sheet 17</td>
<td>WS-1</td>
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<td>Soft Case 17</td>
<td>SC-75B</td>
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<td>SC-75T</td>
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<td>ST-3</td>
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<td>Self-retaining Lens Cap 17</td>
<td>LC-3</td>
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<tr>
<td>Rechargeable Battery 18</td>
<td>EB-20</td>
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<td>Battery Charger 18</td>
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*1 Optional accessories for GXR LENS A12 28mm F2.5
*2 Optional accessories for RICOH LENS A12 24-30mm F3.5-5.5
*3 Optional accessories for RICOH LENS A16 24-48mm F3.5-5.5
*4 Optional accessories for RICOH LENS S10 24-72 mm
*5 For use, the hood & adapter (HA-3) are necessary. *When attached, the internal flash cannot be used because vignetting would occur.
*6 Vignetting may occur at all zoom positions other than maximum telephoto.
*7 Rechargeable battery DB-90 cannot be used with RICOH LENS A12 28mm F2.5
*8 SC-75T cannot be used as a case by itself. It must be used together with SC-75B.
*9 Optional accessories for GXR MOUNT A12
*10 Optional accessories for RICOH LENS A12 28mm F2.5 MACRO
*11 Optional accessories for RICOH LENS P10.38-300mm/F3.5-5.6 VC
< *GXR Major Specifications*>

<table>
<thead>
<tr>
<th>Mode</th>
<th>Sensor尺寸</th>
<th>GXR LENS A16 24-85mm F3.5-5.5 VC</th>
<th>GXR LENS A12 28mm F2.5</th>
<th>GXR LENS A12 50mm F2.5 MACRO</th>
<th>GXR MOUNT A12</th>
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<tbody>
<tr>
<td>Still</td>
<td>(Type II)</td>
<td>6.1 mm x 4.6 mm</td>
<td>6.1 mm x 4.6 mm</td>
<td>6.1 mm x 4.6 mm</td>
<td>6.1 mm x 4.6 mm</td>
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<tr>
<td>Movie</td>
<td>(Type II)</td>
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<td>5.9 mm x 4.7 mm</td>
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< *GXR LENS Specifications*>

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<tr>
<th>Lens</th>
<th>Focal Length</th>
<th>F-Stop</th>
<th>Min. Aperture</th>
<th>Max. Aperture</th>
<th>Focal Length</th>
<th>Min. Aperture</th>
<th>Max. Aperture</th>
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< *GXR Software*>

- CPU: Intel® Core2 Duo T9500 2.66GHz or higher
- Memory: 2GB or more
- Hard disk: 160GB or more
- Display: 1024x768 pixels or more
- Video playback: HDMI or DVI connection
- Internet connection: Internet connection is required

< *Storage Capacity for each Lens (Number of Images and Time)*>

<table>
<thead>
<tr>
<th>Mode</th>
<th>GXR LENS A16 24-85mm F3.5-5.5 VC</th>
<th>GXR LENS A12 28mm F2.5</th>
<th>GXR LENS A12 50mm F2.5 MACRO</th>
<th>GXR MOUNT A12</th>
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<tbody>
<tr>
<td>Burst</td>
<td>5 frames/sec.</td>
<td>10 frames/sec.</td>
<td>1 frame/sec.</td>
<td>1 frame/sec.</td>
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<td>Movie</td>
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< *RICOH LENS Specifications*>

<table>
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<tr>
<th>Lens</th>
<th>Focal Length</th>
<th>F-Stop</th>
<th>Min. Aperture</th>
<th>Max. Aperture</th>
<th>Focal Length</th>
<th>Min. Aperture</th>
<th>Max. Aperture</th>
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< *For more information, visit:* http://www.ricoh.com/r_dc*