



2004-05

DIGITAL CAMERA





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The clear advantage

*Leica is a registered trademark of Leica Microsystems IR GmbH. The Leica DC lenses are manufactured using measurement instruments and quality assurance systems that have been certified by Leica Camera AG based on the company's quality standards.

- MEGA OIIS

With digital cameras there is more to picture quality than pixels and lenses. Panasonic has taken picture quality to new levels by equipping LUMIX cameras with image stabilisation technology originally developed for video cameras.

MEGA 0.I.S., our advanced optical image stabiliser

minimises the jitter from shaky hands that causes many photos to look blurry and poorly focused. Even many professionals are impressed.



However, MEGA 0.I.S. is not the only reason LUMIX photos go a step beyond in beauty. The Leica DC lens, heir to the optical technology that makes Leica Camera AG one of the world's most respected lens makers, helps provide superb image rendering and rich tonal expression. To faithfully record the pure images seen by the lens, LUMIX is equipped with the Venus Engine II, the cutting-edge digital image processing LSI from Panasonic.

These industry-leading technologies team up to deliver clear, exquisitely beautiful images plus a super-fast camera response that means you almost never miss a good photo opportunity.

LUMIX digital cameras exceed previous notions of image, beauty, and performance.







Atiba Jefferson



Michal Linhart

LUMIX

FZ



DMC-FZ20









DMC-FX7



LC





DMC-LC70



DMC-LC1

Take the shake out of every shot. Good-Bye Hand-Shake!



MEGA 0.1.S.



Blurry zoom shots

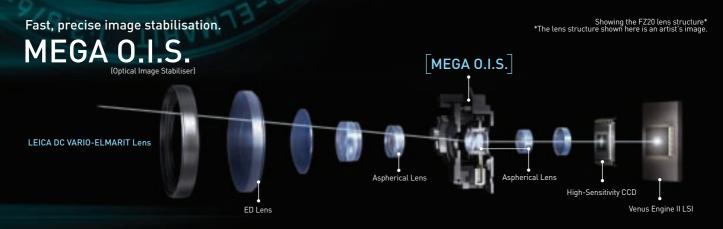


Blurry shots in dimly lit rooms

MEGA 0.1.S.







Hand-Shake Ruins More Photos Than Anything Else

Has this ever happened to you? Just as your baby struck the cutest smile, or the 1st place runner stepped over the finish line — you caught it all in a photograph, only to find out later that it was totally ruined by blurring. This can destroy even the greatest shots. Many people think it's due to poor focusing, but the real problem is hand-shake.

Several Reasons Why Hand-Shake Happens

Digital cameras are wonderfully light and compact, but that also makes them shake more easily when you press the shutter button. In fact, even larger models that are easier to hold can shake when you're using a powerful zoom setting. Compared to shooting with a tripod, handheld zoom shots often contain considerable jitter. And there's even more to think about. Since you're often using the camera's LCD monitor instead of a viewfinder to frame your shots, you hold the camera farther away from your body. Even a pro finds it difficult to avoid hand-shake with this posture.

Hand-Shake Is Hiding Just About Everywhere

There are so many shots that lend themselves to hand-shake – like ones you take in the spur of the moment, in a dimly lit room, with only one hand, at night, or with your zoom – and it is so sad to see important shots come out blurry.



Blurry macro shots





Blurry spur-of-the-moment shots



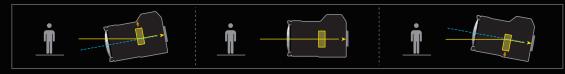


Blurry shots of night scenery



Advanced Panasonic Technologies Take Out the Shake

Jitter from shaky hands is far and away the biggest single cause of blurry shots. LUMIX cameras help solve this problem with advanced MEGA 0.I.S. (optical image stabiliser) technology. A built-in gyrosensor detects any hand-shake and a signal is relayed to a high precision control circuit built into the Venus Engine II LSI, which instantly calculates the compensation needed. A linear motor then shifts the 0.I.S. lens as necessary to guide incoming light from the image straight to the CCD. Panasonic's highly evolved Venus Engine II LSI makes this process even faster and more accurate. This helps extend the MEGA 0.I.S. correction range all the way to 3 or 4 steps below (slower than) the shutter speed that is generally considered to be the limit for handheld shooting, which is calculated by the formula "1/focal length (1 divided by the focal length)." In addition to giving you clear, sharp shots, MEGA 0.I.S. also expands your shooting possibilities.



The O.I.S. lens is driven by a linear motor, providing quick, precise optical correction for the hand-shake detected by the gyrosensor.

Two Image Stabilisation Modes to Meet Different Shooting Needs

In new LUMIX models there are two different 0.I.S. modes to meet different shooting needs. This image stabilisation system is a Panasonic original. It was developed to help compensate for camera movement, but its main goal is to achieve the highest possible image quality in the resulting photo. MEGA 0.I.S. helps you get the clearest shots possible.

Compensates for jitter all the time. **Mode 1**



In this mode, image stabilisation is continuously on. It helps you to compose shots in the LCD monitor and to see the focusing condition more clearly. Maximum correction for higher quality images.



This image stabilisation mode, a Panasonic original, was developed to help you obtain some of the clearest photographs possible, despite unintentional hand-shake. It corrects the image the moment you press the shutter button, providing maximum compensation in all directions. Since the light is received near the centre of the lens, this mode gives you clearer, sharper pictures and higher resolution.

High-speed response gets the shot, in real-life colours. Hello Vivid Memories!

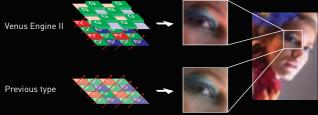




High-speed, high-precision image processing LSI. Venus Engine II

High-Resolution Processing with Minimal Colour Bleeding

In the previous generation of LUMIX models, we improved diagonal resolution by 50% over earlier models by extracting luminance signals from all of the pixels – red, green and blue. Our new LUMIX cameras go a step further. By further adding the luminance signal from the green pixels in areas with horizontal and vertical lines, we have raised horizontal and vertical resolution by 10% compared to the former Venus Engine while preserving the superb diagonal resolution. The result is fine, detailed image rendering with no colour bleeding.



*Images are simulated and are provided to show the nuances in feature performance.

Adding to the Beauty with Digital Processing

The many advantages of the Venus Engine II extend even into the optical area to raise the limits of lens performance. The digital correction capability of this advanced LSI corrects colour aberration in telephoto shots and vignetting, which are inherent in every optical lens. This combines with the high optical precision of the Leica DC lens to achieve

even higher image quality. In addition, the Soft Skin Detail function detects skin areas and activates a low-pass filter and digital toning process to improve complexions when shooting portraits.

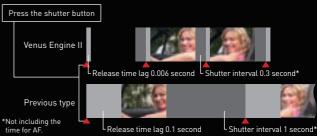


Natural, True-to-Life Colour

Our new 12-axis independent colour adjustment achieves more precise colour reproduction than the conventional 4-axis (red, green, yellow and blue) adjustment.

Super-Fast Shutter Response

We slashed the shutter release time lag to about 0.006 second minimum by increasing both the circuit speed itself and the point at which the shutter release signal is detected. We also shortened the shutter interval to around 0.3 second minimum*. These improvements help make LUMIX extremely quick and responsive, a camera that's truly a pleasure to use.



Shutter response figures vary depending on the model.

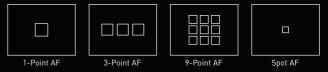
Take a Series of Shots Sufficiently

The Venus Engine II offers fast, consecutive shooting at 3 or 4 frames per second* with full resolution. The new Unlimited Consecutive Shooting function** lets you keep on shooting until the memory card is full. You can take a series of shots, then choose the one you like best and delete the rest.

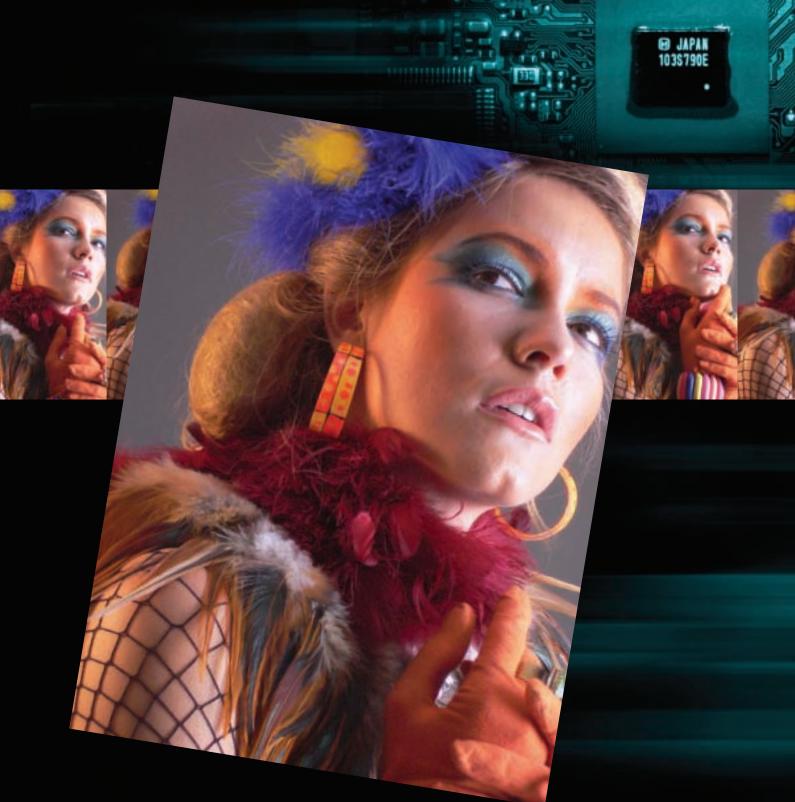
*4 frames per second for FZ3 (Max. 13 images in Standard mode) and FX2 (Max. 10 images in Standard mode). 3 frames per second for FZ20 and FX7 (Max. 7 images in Standard mode).
**Depending on memory card size, battery power, picture size, and compression. The consecutive shooting speed varies depending on the memory card.

A Choice of Auto-Focus Distance Metering Methods

The auto focus (AF) system in new LUMIX models goes well beyond conventional 1-point and spot distance metering. It adds 3-point metering that prevents the system from mistakenly focusing on the area between two subjects, and 9-point metering that helps assure proper focusing no matter how the subject is framed. The 3-point metering mode also focuses more quickly, making it easier to get clear, sharp shots of a subject moving horizontally.



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Leica DC Lens

The Elmarit and Summicron lenses made by Leica Camera AG are highly acclaimed. Some of the same cutting-edge technologies that make these lenses so exceptional have been adapted to the digital camera. The LEICA DC VARIO-ELMARIT and LEICA DC VARIO-SUMMICRON – two lenses that follow in the Leica tradition of excellence. Although small in size, they have a large, bright aperture, meeting the stringent quality standards established by Leica.

Minimal Spherical Aberration

The use of several aspherical lenses virtually eliminates spherical aberration. The result is extremely precise image rendering with minimal distortion, even in wide-angle shots.

Sharp Resolution All the Way to the Edges

Even enlarged images captured with a Leica DC lens are crisp and clear right to the edges.

Less Flare or Ghosts

A Leica multi-coating process applied to the lens helps to prevent the fogging caused by flare and ghosts that can result from excessive light.

*Leica is a registered trademark of Leica Microsystems IR GmbH. The Leica DC lenses are manufactured using measurement instruments and quality assurance systems that have been certified by Leica Camera AG based on the company's quality standards.



The problem: Hand-shake when zooming. The solution: MEGA 0.I.S.





The FZ20 is the best camera I've ever used because the MEGA O.I.S. is truly mega. When I'm shooting sports, like NBA games or skateboarding, I often find myself working in low light. MEGA O.I.S. really makes a difference. It also works great for action shots without a tripod, everyday scenes, and even portraits, making every picture come to life. With the help of what I think is some of the best glass in the industry, the Leica DC lens takes this camera to the next level. It gives you great auto focusing and a superb optical zoom. Plus, you get the right look and exposure thanks to all the different scene modes. It really lets you shoot like a pro. This camera is mega-amazing.



-K (Black)

MEGA Optical Zoom



-S (Silver)

5 Megapixels 12x Optical Zoom (48x with Digital Zoom) MEGA Optical Image Stabiliser



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Ultra-large-diameter ED lens, 12x optical zoom, and MEGA

12x optical zoom and F2.8 brightness across the entire zoom range

The DMC-FZ20 offers the superb image rendering of the LEICA DC VARIO-ELMARIT lens, heir to Leica Camera AG leading optical technology. The 12x optical zoom lens system (equivalent to 36 mm to 432 mm in a 35 mm film camera) comprises 13 lenses in 8 groups, including 3 aspherical lenses, and boasts F2.8 brightness across the entire zoom range. The FZ20 also provides 4x digital zooming*. Combined with the 12x optical zoom, this gives you up to 48x zoom power for ultra-long-distance telephoto shots. *With digital zooming, there's a significant decrease in resolution

ED lens minimises chromatic aberration

The FZ20 goes a step further by using ED (extra-low dispersion) glass in its lens system to minimise chromatic aberration and reduce the refraction differences among light of different wavelengths. This helps to suppress the colour bleeding that may occur in telephoto shots, giving you crisp, vivid images.



Light axis White light 🚪

•Non-ED lens: The refraction differences among different colours (with their different wavelengths) can result in colour bleeding.





A single dial for a variety of shooting situations.

Mode Dial



P Program AE Mode This mode determines the optimal aperture and shutter speed settings for you.

A Aperture Priority AE Mode You can set the aperture between F2.8 and F8.0 to create a softer focus.

S Shutter Priority AE Mode

Set the shutter speed between 8 and 1/2,000 sec to freeze or express movement.





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Manual Exposure Assist

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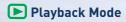
This function shows how much

your setting differs from the setting the camera considers optimal.

M Manual Exposure Mode Manual Exposure Mode gives you full control over the aperture and shutter speed.

Macro Mode You can focus on subjects as close as about 5 cm from the lens*. with the lens at the wide-angle position

H Moving-Image Mode



SCN1/SCN2

You can select two scene modes from the menu screen and assign them to these dial positions.

From the LCD, select the setting that matches the scene. Scana Moda

PORTRAIT
X SPORTS
TA SCENERY
STORE IN DURING
🛞 Fireworks Mode
T Party Mode
🕃 Snow Mode

Soft Skin Detail Function

In Portrait or Night Portrait mode, this function adjusts the skin colours to make complexions more attractive.

AF Distance Metering

Select from spot metering, 1-point, 3-point, and 9-point metering. The 3-point metering mode also focuses more quickly, making it easier to get clear, sharp shots of a subject moving horizontally.

AF Assist Lamp

Provides extra lighting as a focusing aid for slightly dark situations where AF focusing would ordinarily be difficult.

3 Light Metering Modes

In Intelligent Multiple Metering mode, the FZ20 measures the light at points across the entire image to achieve a balanced exposure setting. You can also choose Centre Weighted mode or Spot mode.

DMC-FZ20

0.I.S.

Super-Fast Shutter Response with the Venus Engine II

Improved multi-task image processing in the Venus Engine II LSI has further accelerated response speed, giving you more comfortable shooting with a shutter release time lag of about 0.008 second minimum and a shutter interval of around 0.4 second mimimum* *Not including the time for AF.



MEGA BURST Consecutive Shooting

You can snap off consecutive shots at 3 frames per second with full resolution* In addition, the new Unlimited** Consecutive Shooting function lets you continue shooting until the memory card is full. *Max. 7 images in Standard mode/4 images in Fine mode. **Depending on memory card size, battery power, picture size, and compression. The consecutive shooting speed varies depending on the memory card.





Sports Mode (shutter speed: 1/800 sec. aperture: F4.6)



Portrait Mode (shutter speed: 1/500 sec. aperture: F4.6)



Ring-Operated Manual Focus

To manually focus a subject with the FZ20, simply flick the Focus button on the side of the lens to MF (manual focus), then turn the focus ring. The One-Shot AF function in the MF mode also lets you focus automatically for a single shot by pressing the v button.



Captures beautiful, low-light images from up to 7 m* away. **Outstanding Flash Shots**

The FZ20 is equipped with a built-in multifunctional flash that features Auto, Auto/Red-Eye Reduction, Slow Sync./Red-Eye Reduction, and Forced On/Off. The flash intensity can be adjusted within a range of ±2 EV. If desired, you also can mount the optional DMW-FL28 external flash onto the FZ20. *At the ISO Auto setting.



(Functions for More Shooting Fun)

Continuous AF: Clear, sharp focus even for moving subjects.

Highlight Display:

A flashing indicator on the LCD shows any parts of the images that have been overexposed.

White Balance Adjustment:

±10 steps of 150 Kelvin each (except Auto mode)

Real-Time Histograms: Check the exposure level in graph form.

Composition Guide Lines: Help to balance photo compositions.

Auto Bracketing: ±1/3-1 EV step, 3 frames

Picture Adjustment:

•Sharpness •Saturation •Contrast •Noise Reduction (each in 3 steps)

Colour Effect Mode: •Black & White •Cool •Warm •Sepia

ISO Sensitivity Settings: •Auto •80 •100 •200 •400

Flip Animation: Create your own animations frame-by-frame.

made with the camera.

Night Portrait Mode (shutter speed: 1/13 sec, aperture: F2.8)

You can use either a 10-second or 2-second setting.Ł

Zoom Auto Review:

Automatically displays an enlarged view of the image just shot.

Colour EVF:

Self-Timer:

Equipped with diopter adjustment, the EVF lets you see your subject in full-colour.

TIFF Format Compatible:

Saves image data without compressing it, so there's almost no quality degradation.

PictBridge Compatible:

The PictBridge standard lets you print directly on a compatible digital printer. Print size, layout, date and other settings can be



(Options to Broaden Your Creative Possibilities)

Wide Conversion Lens DMW-LWZ10

Allows shooting at 0.8x with F2.8 brightness across the entire 29 mm to 58 mm range (35 mm lens equivalent). Lets you take photos with the desired perspective.



Tele Conversion Lens DMW-LTZ10

Allows shooting at 1.5x with F2.8 brightness across the entire 324 mm to 648 mm range (35 mm lens equivalent). Lets you take powerful telephoto shots.

Remote Shutter DMW-RS1

Lets you shoot by remote control, so you don't have to press the camera's shutter button. Convenient for special situations like using a tripod.

(Standard Accessories)

•Battery Charger •Battery Pack •SD Memory Card (16 MB) •Lens Cap •Lens Hood •Lens Hood Adaptor •AV Cable •AC Cable •USB Connection Cable •Strap •CD-ROM



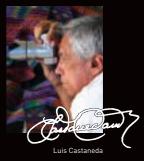
The problem: Telephoto shots are shaky with small zoom cameras. The solution: MEGA 0.I.S.





Manual (shutter speed: 1/50 sec, aperture: F2.8)

I cover a wide range of fields, from travel photography to the arts, so I like the versatility of the new LUMIX FZ3. I was pleasantly surprised by its 3.1-megapixel resolution, and its firmware will help the average user produce remarkable results. This little camera offers manifold possibilities to control the final exposure at the moment of shooting. It has very good response, wonderful colour rendition, and sharpness. When I tried it in an actual live ballet performance, I found the new Venus Engine II to be both fast and accurate. And the O.I.S. (optical image stabiliser) helps you to take clear, jitter-free images. In fact, I've been able to get very sharp handheld shots with the maximum focal length of 420 mm at 1/15 sec.



Small Size, Powerful Zoom



LUMIX

3.1 Megapixels **12**x Optical Zoom (48x with Digital Zoom) MEGA Optical Image Stabiliser





*Leica is a registered trademark of Leica Microsystems IR GmbH. The Leica DC lenses are manufactured using measurement instruments and quality assurance systems that have been certifind by Leica Chamera AG based on the company's quality standards.

LIUYNIIS

An optical 12x zoom in a light and compact body. Plus MEGA 0.I.S.

A small camera with 12x optical zoom and full-range F2.8 brightness

The LEICA DC VARIO-ELMARIT lens on the DMC-FZ3 is small and lightweight yet delivers the same zoom power as a big, heavy 400 mm-class lens. This lens system consists of 13 lenses in 8 groups with 3 aspherical lenses. With outstanding F2.8 brightness across the entire zoom range, this fine lens renders exquisite images, even when the subject is a far away. In addition, when using 4x digital zoom together with this 12x optical zoom, you've got ultra-powerful 48x zooming* that approximates a huge 1680 mm lens on a 35 mm camera. *As digital magnification increases, resolution significantly decreases.

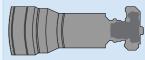


PHOTO Film camera with a 400 mm-class lens

SPORTRA

SCENERY



A single, easy-to-use dial for beautiful shots in almost any situation. Mode Dial

V Simple Mode



All settings are made automatically, so it's easy to take beautiful photos even if you have never used a digital camera before. Just aim and press the shutter button. When shooting directly into a light source, press the cursor button. This will turn

on the backlighting compensation mode so the subject doesn't appear too dark.

P Program AE Mode

This mode determines the optimal aperture and shutter speed settings for you.

A Aperture Priority AE Mode

You can set the aperture between F2.8 and F8.0 to create a softer focus.

S Shutter Priority AE Mode

Set the shutter speed between 8 and 1/2,000 sec to freeze or express movement.

M Manual Exposure Mode

Manual Exposure Mode gives you full control over the aperture and shutter speed.

Macro Mode

You can focus on subjects as close as about 5 cm from the lens*
*When shooting with the lens at the wide-angle position.

This function shows how much your setting differs from the setting the camera considers optimal.

Manual Exposure Assist

Playback Mode

H Moving-Image Mode

SCN

This position lets you look at the menu screen and select the most suitable scene mode.

On the LCD, choose the setting that best matches the situation.

Scene Mode

Portrait Mode

This mode helps you take beautiful portraits by adjusting the exposure and colouration to produce natural, true-to-life skin tones.

🔁 Night Portrait Mode

The MEGA 0.1.S. minimises hand-shake at slow shutter speeds, to clearly capture subjects such as people and night landscapes.

K Sports Mode

Uses a higher shutter speed to catch fast-moving subjects.

A Panning Mode

To capture a moving subject in clear detail while the background appears to flow by, Panning mode lets the camera detect hand-shake and then automatically compensates for vertical jitter only.

Scenery Mode

This mode provides quick focusing and crisp detail, for beautiful photos of scenery.

Night Scenery Mode

Lets you capture beautiful photos of lit-up landscapes or buildings at night.

Fireworks Mode

Slows the shutter speed to capture fireworks with vivid beauty.

T Party Mode

Uses MEGÅ 0.1.S. to let you capture clear, jitter-free shots of subjects and natural, true-to-life colours - even in dim lighting.

B Snow Mode

Prevents subjects from looking washed out in scenes with bright surroundings.

Soft Skin Detail Function

In Portrait or Night Portrait mode, this function adjusts the skin colours to make complexions more attractive.

*Leica is a registered trademark of Leica Microsystems IR GmbH

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Super-Fast Shutter Response with the Venus Engine II

Improved multi-task image processing in the Venus Engine II LSI has further accelerated response speed, giving you more comfortable shooting with a shutter release time lag of about 0.008 second minimum and a shutter interval of around 0.3 second mimimum* *Not including the time for AF







Party Mode (shutter speed: 1/20 sec, aperture: F2.8)



Scenery Mode (shutter speed: 1/400 sec, aperture: F4.6)

MEGA BURST Consecutive Shooting

You can snap off consecutive shots at 4 frames per second with full resolution* In addition, the new Unlimited** Consecutive Shooting function lets you continue shooting until the memory card is full.

*Max. 13 images in Standard mode/7 images in Fine mode. **Depending on memory card size, battery power, picture size, and compression. The consecutive shooting speed varies depending on the memory card.



TIFF Format Compatible:

Saves image data without compressing it, so there's almost no quality degradation.

PictBridge Compatible:

The PictBridge standard lets you print directly on a compatible digital printer. Print size, layout, date and other settings can be made with the camera. PictBridge

(Standard Accessories)

•Battery Charger •Battery Pack •SD Memory Card (16MB) •Lens Cap •Lens Hood •Lens Hood Adaptor •AV Cable •AC Cable •USB Connection Cable •Strap •CD-ROM



(Functions for More Shooting Fun)

AF Distance Metering: •Spot •1-point •3-point •9-point

AF Assist Lamp: Provides extra lighting as a focusing aid for slightly dark situations where AF focusing would ordinarily be difficult.

Continuous AF: Clear, sharp focus even for moving subjects.

Light Metering: •Intelligent Multiple •Centre Weighted •Spot

Highlight Display: A flashing indicator on the LCD shows any parts of the images that have been overexposed.

Flash*: •Auto •Auto/Red-eye Reduction •Slow Sync./Red-eye Reduction • Forced On/Off *The flash intensity can be adjusted within a range of ± 2 EV.

White Balance Adjustment: ±10 steps of 150 Kelvin each (except Auto mode)

Real-Time Histograms: Check the exposure level in graph form.

Composition Guide Lines: Help to balance photo compositions.

Auto Bracketing: ±1/3-1 EV step, 3 frames

Colour Effect Mode: •Black & White •Cool •Warm •Sepia

Flip Animation: Create your own animations frame-by-frame.

ISO Sensitivity Settings: •Auto •80 •100 •200 •400



The problem: A tiny camera shakes more easily. The solution: MEGA 0.I.S.







Night Portrait Mode (shutter speed: 1/8 sec, aperture: F2.8



With its beautiful design and large display, the FX7 first impressed me as a great camera for women. But I was skeptical about its abilities. That made my surprise even greater when I found out that I was actually holding a very practical camera. Its great optics give you sharp pictures in backlit scenes and minimal barrel distortion. The O.I.S. function does a great job of correcting hand-shake, and its creative modes function almost flawlessly. The two things that delighted me most were the total speed of the camera, including data transfer to the SD Memory Card, and white balance in auto mode. Simply put, the FX7 is an everyday friend, takes up little space, and gives you above-standard results thanks to its high resolution.



Stylish & Compact with 2.0" LCD



4 Megapixels **3**x Optical Zoom MEGA Optical Image Stabiliser

LUMALX

Stylish & Compact with 2.5" LCD



5 Megapixels 3x Optical Zoom MEGA Optical Image Stabiliser





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Panasonic DMC-FX7

5 megapixels in a compact bo

FX7

Thanks to the large screen, everyone gets a good look. 2.5" Polycrystalline TFT LCD Display*

The DMC-FX7 features a 2.5" LCD monitor – surprisingly large for such a compact camera. This high-quality, 114,000-pixel display makes it easy to see your subject. For easier viewing when shooting outdoors on a sunny day, press the Power LCD button to boost the backlighting by about 40%. *The DMC-FX2 has a 2.0" LCD monitor with 130,000-pixel resolution.



▲ Actual Size

A single, easy-to-use dial for beautiful shots in most any situation. **Mode Dial**



Simple Mode

All settings are made automatically, so it's easy to take beautiful photos even if you've never before used a digital camera. Just aim and press the shutter button. When shooting directly into a light source, press the cursor button. This will turn on the backlighting compensation mode so the subject doesn't appear too dark.

Normal Picture Mode (Program AE)

The camera automatically sets the aperture and shutter speed according to the subject's brightness. You can also adjust the white balance, ISO sensitivity, and other settings* to make your photos look their very best. *Settings for these options can be adjusted in all modes except Simple and Moving-Image modes.

Macro Mode

Enjoy dynamic, macro close-ups. You can focus on subjects as close as about 5 cm from the lens*.

H Moving-Image Mode

Playback Mode

SCN

This position lets you look at the menu screen and select the most suitable scene mode.



Scenery Mode



Night Portrait Mode

Self-Portrait Mode

MEGA O.I.S. ON

Night Scenery Mode (shutter speed: 1/8 sec, aperture: F5



dy - the small camera with MEGA 0.I.S.

Super-Fast Shutter Response with the Venus Engine II

Improved multi-task image processing in the Venus Engine II LSI has further accelerated response speed, giving you more comfortable shooting with a shutter release time lag of about 0.008 second minimum and a shutter interval of around 0.4 second minimum. *Not including the time for AF. The shutter release time lag for the FX2 is about 0.006 second minimum, and the shutter interval is around 0.3 second minimum.



On the LCD, choose the setting that best matches the situation. **Scene Mode**



Self-Portrait Mode

Simply aim the camera at yourself and the LED will light up to tell you when you're in focus. Then, after you press the shutter button, you can see the results right away on the LCD.

Portrait Mode

🖎 Sports Mode

🔁 Night Portrait Mode

Scenery Mode

🔛 Night Scenery Mode

Lets you capture beautiful photos of lit-up landscapes or buildings at night.

Fireworks Mode Slows the shutter speed to capture fireworks with vivid beauty.

T Party Mode

Uses MEGA 0.1.S. to let you capture clear, jitter-free shots of subjects and natural, true-to-life colours - even in dim lighting.

Snow Mode Prevents subjects from looking washed out in scenes with bright surroundings.

Soft Skin Detail Function

In Portrait, Self-Portrait or Night Portrait mode, this function adjusts the skin colours to make complexions more attractive.

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MEGA BURST Consecutive Shooting

You can snap off consecutive shots at 3 frames per second with full resolution*. In addition, the new Unlimited** Consecutive Shooting function lets you continue shooting until the memory card is full. *Max. 7 images in Standard mode/4 images in Fine mode. The FX2 takes consecutive shots at 4 frames per second Max. 10 images in Standard mode/5 images in Fine mode.

**Depending on memory card size, battery power, picture size, and compression. The consecutive shooting speed varies depending on the memory card.



Digital Zoom* and Optical Zoom for 12x Zoom Power

Use the 4x digital zoom together with the 3x optical zoom to enjoy up to 12x zoom power, which approximates a 420 mm zoom lens on a 35 mm camera.

*As digital magnification increases, resolution significantly decreases.

Economy Mode

This mode saves battery power by turning off the LCD after a certain amount of idle time. There are two economy levels to choose from. Level 1: LCD turns off when the camera has been idle for 15 seconds. Level 2: Same as Level 1, plus the LCD turns off when the camera has been idle for 5 seconds after you've taken a shot.

(Functions for More Shooting Fun)

AF Distance Metering: •Spot •1-point •3-point •9-point

AF Assist Lamp:

Provides extra lighting as a focusing aid for slightly dark situations where AF focusing would ordinarily be difficult.

Flash:

•Auto •Auto/Red-eye Reduction •Slow Sync./Red-eye Reduction •Forced On/Off

White Balance Adjustment: ±10 steps of 150 Kelvin each (except Auto mode)

Colour Effect Mode: •Black & White •Cool •Warm •Sepia

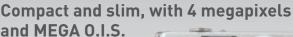
PictBridge Compatible:

The PictBridge standard lets you print directly on a compatible digital printer. Print size, layout, date and other settings can be made with the camera.

PictBridge

(Standard Accessories)

•Battery Charger •Battery Pack •Battery carrying case •SD Memory Card (16 MB) •AV Cable •AC Cable •USB Connection Cable •Strap •CD-ROM





2.0" Polycrystalline TFT LCD Display

MEGA Optical Image Stabiliser Colour: -S (Silver)

3x Optical Zoom



Save all your important memories — two AA batteries is all it takes.

Runs on 2 AA Batteries

80 & LC70

3x Optical Zoom LEICA DC VARIO-ELMARIT Lens





A single, easy-to-use dial for beautiful shots in most any situation. **Mode Dial**

Simple Mode
 Macro Mode

 Normal Picture Mode (Program AE)
 Portrait Mode

🔁 Night Portrait Mode

Playback Mode

🚵 Landscape Mode

H Moving-Image Mode

G Economy Mode

This mode saves battery power by reducing the LCD's brightness 40% and by turning off the LCD after a certain amount of idle time. There are two economy levels to choose from.

Level 1 : LCD turns off when the camera has been idle for 15 seconds.
 Level 2 : Same as Level 1, plus the LCD turns off when the camera has been idle for 5 seconds after you've taken a shot.

Extended Shooting from Two AA Batteries

The DMC-LC80 and DMC-LC70 can be powered by two AA alkaline batteries. You can find these batteries almost anywhere, so it's easy to pick up spares when the power starts running low. You can take about 160 photos on two alkaline batteries, or about 320 on two rechargeable nickel-metal hydride (Ni-MH) batteries*. Use Economy mode, and you can take even more.

Number of Photos Possible (approx.)

	AA (LR6) alkaline batteries	Ni-MH rechargeable batteries
Normal Shooting*	160 25% more	320 30% more
Economy mode** (Level 2)	200	420

MEGA BURST Consecutive Shooting

Up to 5 images at 3.3 frames/second in Standard mode/Up to 3 images in Fine mode [[C70]. Up to 9 images at 2.7 frames/second in Standard mode/Up to 5 images in Fine mode [LC80].

(Functions for More Shooting Fun)

White Balance Adjustment: ±5 steps of 300 Kelvin each (except Auto mode)

Real-Time Histograms: Instant confirmation of shooting performance.

stant confirmation of shooting performance.

Composition Guide Lines: These guide lines help to balance your photo composition.

Flash:

•Auto •Auto/Red-eye Reduction •Slow Sync./Red-eye Reduction •Forced On/Off

Auto Bracketing: ±1/3 –1 EV step, 3 frames

ISO Sensitivity Settings*: •Auto •50 •100 •200 •400 *The LC80 has an ISO80 setting instead of the ISO50 setting.

Picture Adjustment: •Natural •Standard •Vivid

Colour Effect Mode: •Black & White •Cool •Warm

Zoom Auto Review: Right after you shoot, see an enlarged view of the image.

Self-Timer: You can use either a 10-second or 2-second setting.

Trimming & Resizing:

These let you trim the image, or reduce the amount of image data.

AF Trigger:

Lets you pre-focus on a specific area before you take the shot.

(Standard Accessories)

•Battery Charger •2 Ni-MH Rechargeable Batteries •SD Memory Card (16 MB) •AV Cable •AC Cable •USB Connection Cable •Strap •CD-ROM



* Based on the CIPA standard. Using the supplied batteries and SD Memory Card. ** Same conditions as CIPA standards, except that LCD automatic OFF is activated. The CIPA (Camera & Imaging Products Association) created standards for measuring battery life.CIPA measurement method: Switch on the power and LCD, begin shooting in 30 seconds, switch between telephoto and wideangle every 30 seconds, fire the flash every other shot. After each series of 10 shots, turn the camera off until the battery cools. Ambient conditions: 23°C temperature and 50% humidity.

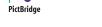
The feel of a 35mm camera, the performance of a digital.

Direct Manual Operation

5 Megapixels 3.2x Optical Zoom LEICA DC VARIO-SUMMICRON Lens







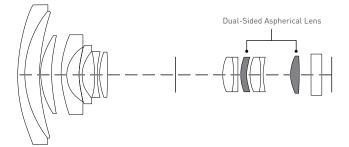
The breathtaking elegance of the LEICA DC VARIO-SUMMICRON lens

A Lens Worthy of the Summicron Name

Offering a focal distance equivalent to a 28 mm to 90 mm lens on a 35 mm camera, the LEICA DC VARIO-SUMMICRON lens boasts a wideopen aperture value of F2.0 at the wide setting and F2.4 at the telephoto setting. The exquisite rendering of this fine lens, heir to Leica Camera AG's world-renowned optical technology, makes the LUMIX DMC-LC1 stand apart from the competition.

Aspherical Lenses and Multi-Coating

The LC1 has 13 lenses in 10 groups, including two dual-sided aspherical lenses that minimise aberration. A special multi-coating on each lens surface reduces ghosts and flare. The result is sharp, clear, vivid images with outstanding contrast, colour and depth.



Select Manual Focus and Shoot Like a Professional

Hybrid Auto Focus System

The LC1 combines an image feedback AF system with an AF sensor system. Their quick, precise focusing makes it easy to capture sharp, detailed images.

Manual Focus

You can manually focus from 30 cm to infinity. A Manual Focus Assist function magnifies the image to check the focus.

Exposure control to match your shooting intentions

Program AE Mode

The optimal exposure is set automatically.

Aperture Priority AE Mode Lets you set the aperture between F2.0 and F11 (in 1/3 EV steps).

Shutter Priority AE Mode

Lets you set the shutter speed between 8 and 1/2,000 sec (in 1 EV steps).

Manual Exposure Mode

You can manually set both the aperture and shutter speed. Enjoy full manual control plus a Manual Exposure Assist function.

(Functions for More Shooting Fun)

Flash Light Adjustment/Bounce Lighting:

Flash intensity can be adjusted ± 2 EV in 1/3 EV steps. An external flash (DMW-FL28) is available as an option. You can use the "bounce" lighting technique to soften shadows or lighten skin tones

2.5" Polycrystalline TFT LCD Display (Transflective Type): With its clear, high-resolution images, this 211,000-pixel monitor gives you easy, comfortable shooting.

Real-Time Histograms: Check the exposure level in graph form.

Composition Guide Lines: Help to balance photo compositions.

Light Metering: •Intelligent Multiple •Center Weighted •Spot

Picture Adjustment: •Sharpness •Saturation •Contrast (each in 3 steps) White Balance Adjustment:

±5 steps of 300 Kelvin each (except Auto and Black & White modes)

Auto Bracketing: ±1/6 –1EV step, 3 or 5 frames

RAW file mode: This mode records data directly from the CCD, with no processing. *RAW format files are used in some imaging applications, including ArcSoft PhotoImpression (included). The RAW format is supported by the newest Camera Raw plug-in for Adobe Photoshop CS. See

High-Speed USB 2.0 Interface: Transfer data to a PC at 480 Mbps.

Remote Shutter (Included): Especially useful when shooting at slow shutter speeds. MC Protector (Included):

Helps you to protect the lens from scratches and other damage.

(Standard Accessories)

•Battery Charger/AC Adaptor •Battery Pack •SD Memory Card (16 MB) •AC Cable •DC Cable •Lens Cap •Lens Hood •Hood Cap •AV Cable •USB Connection Cable •MC Protector •Remote Shutter •Strap •CD-ROM

Sí

Options that give you more comfort, more creativity, more fun.

Conversion lenses that help you get the picture.

Wide Conversion Lens

Allows shooting at 0.8x with F2.8 brightness across the entire 29 mm to 58 mm range*. Use it to capture wide indoor shots or vast landscapes, with levels of clarity, detail and sensitivity that convey the emotion behind the scene. *35 mm lens equivalent







50 mm

35 mm

29 mm

Tele Conversion Lens

Allows shooting at 1.5x with F2.8 brightness across the entire 324 mm to 648 mm range* Enjoy remarkably clear, vivid, expressive shots of distant objects, with even greater power and dynamism from your 12x zoom. *35 mm lens equivalent



DMW-LWZ10

(0.8x) (for FZ20)









*Some accesories are not available in some countries

Still Image Recording Capacity and Moving Image Recording Time

FZ20 / FX7																					
Pixels Capacity		16MB			32MB			64MB			128MB	;		256MB			512MB			1GB	
Still Image	TIFF*	Fine	Standard	TIFF*	Fine	Standard	TIFF*	Fine	Standard	TIFF*	Fine	Standard	TIFF*	Fine	Standard	TIFF*		Standard	TIFF*	Fine	_
2,560 x 1,920	0	5	11	1	12	24	3	25	49	8	51	100	15	102	200	32	205	403	61	395	775
2,048 x 1,536	1	9	17	3	19	37	6	39	75	12	79	153	24	157	306	50	317	616	96	610	1,185
1,600 x 1,200	2	14	28	4	31	59	10	63	121	20	128	244	40	255	487	81	515	982	157	991	1,889
1,280 x 960	3	22	41	7	47	86	15	96	176	31	195	356	62	290	709	126	785	1,492	243	1,511	2,748
640 x 480	13	69	113	28	145	236	58	298	484	118	602	979	236	1,200	1,950	476	2,418	3,929	916	4,650	7,557
1,920 x 1,080	2	13	25	4	28	54	9	58	110	18	118	223	37	236	445	75	476	898	145	916	1,727
Moving Image													-								
320 x 240 30 fps		75 sec 25 sec			160 sec 55 sec			350 sec 120 sec			720 sec 240 sec			1,450 se 480 sec			2,950 se 1,020 se			5,700 s 1,950 s	
FZ3																					*FZ20 only
Still Image	TIFF	Fine	Standard	TIFF	Fine	Standard	TIFF	Fine	Standard	TIFF	Fine	Standard	TIFF	Fine	Standard	TIFF	Fine	Standard	TIFF	Fine	Standard
2,016 x 1,512	1	9	17	3	19	37	6	39	75	12	79	153	25	157	306	51	317	616	98	610	1,185
1,600 x 1,200	2	14	28	4	31	59	10	63	121	20	128	244	40	255	487	81	515	982	157	991	1,889
1,280 x 960	3	22	41	7	47	86	15	96	176	31	195	356	62	390	709	126	785	1,429	243	1,511	
640 x 480	13	69	113	28	145	236	58	298	484	118	602	979	236	1,200	1,950	476	2,418	3,929	916	4,650	
1,920 x 1,080	2	13	25	4	28	54	9	58	110	18	118	223	37	236	445	75	476	898	145	916	1,727
Moving Image		75			1/0			250			700		1	1 (50			2.050		1	5 700 -	
320 x 240 30 fps		75 sec 25 sec			160 sec 55 sec			350 sec 120 sec			720 sec 240 sec			1,450 sec			2,950 se 1,020 se			5,700 s 1,950 s	
30 lps		Zo sec			oo sec			120 Sec			240 Sec			400 Sec			1,020 Se	C		1,700 5	ec
FX2																					
Still Image	Fine		standard	Fine	e	itandard	Fine		standard	Fine		Standard	Fin	e <u>s</u>	tandard	Fin	ne c	tandard	Fine		Standard
2,304 x 1,728	8		16	17		33	35		69	71		139	143		278	28		561	554		1,079
1,600 x 1,200	14		28	31		59	63		121	128		244	255		487	51		982	991		1,889
1,280 x 960	22		41	47		86	96		176	195		356	390		709	78	5	1,429	1,51		2,748
640 x 480	69		113	145		236	298		484	602		979	1,20		1,950	2,4		3,929	4,65		7,557
1,920 x 1,080	13		25	28		54	58		110	118		223	236		445	47	6	898	916		1,727
Moving Image									_												
320 x 240 10 fps		75 sec			160 se			350 se			720 sec			1,450 se			2,950 se			5,700 s	
30 fps		25 sec			55 sec			120 se	0		240 sec	C		480 sec	:		1,020 se	ec.		1,950 s	Sec
LC80 Still Image	Fine	6	tandard	Fine		tandard	Fine		tandard	Fine		tandard	Fire		tandard	Ei-		tandard	Fine		Standard
2,560 x 1,920	6	3	13	Fine 14		27	29		56	Fine 58	3	115	Fine 117		229	Fin 230		462	Fine 454		889
2,048 x 1,536	10		20	22		43	45		88	91		178	181		354	365		714	702		1,373
1,600 x 1,200	17		34	36		72	74		149	150		301	300		600	604		1,209	1,16	2	2,325
1,280 x 960	22		43	47		90	96		184	195		372	390		743	785		1,497	1,51		2,878
640 x 480	69		129	145		270	298		553	602		1,118	1,20	0	2,229	2,41	8	4,491	4,65		8,636
1,920 x 1,080	17		34	36		72	74		149	150		301	300		600	604	4	1,209	1,16	2	2,325
Moving Image																					
320 x 240 10 fps		75 sec			160 sec			350 sec			720 sec			1,450 se			2,950 se			5,700 s	
30 fps		25 sec			55 sec			120 sec			240 sec	2		480 sec			1,020 se	C		1,950 s	ec
LC70																_					
Still Image	Fine	S	tandard	Fine	e S	tandard	Fine	S	tandard	Fine	S	tandard	Fine		tandard	Fin		tandard	Fine		Standard
2,304 x 1,728	8		16	17		34	35		70	72		142	144		283	291		571	559		1,099
1,600 x 1,200	17		34	36		72	74		149	150		301	300		600	604		1,209	1,16		2,325
1,280 x 960	22		43	47		90	96		184	195		372	390		743	785		1,497	1,51		2,878
640 x 480	69		129	145		270	298		553	602		1,118	1,20		2,229	2,41		4,491	4,65		8,636
1,920 x 1,080 Moving Image	17	1	34	36	-	72	74	1	149	150	-	301	300	1	600	604	• :	1,209	1,16		2,325
10 fpc		75 sec			160 sec			350 sec			720 sec			1,450 se		1	2,950 se	c		5.700 s	ec
320 x 240 30 fps		25 sec			55 sec			120 sec			240 sec			480 sec			1,020 se			1,950 s	
LC1																					
Pixels Capacity			16MB					321	ИВ				6	4MB					128MB		
Still Image	RAW	Supe	r Fine	Fine	Standa	d RA	N Sup	ber Fine	Fine	Stand	ard	RAW S	Super Fin	e Fin	e Sta	ndard	RAW	Super F		ne	Standard
2,560 x 1,920	1		3	5	11	2		7	12	24		5	15	25		50	11	30		51	101
2,048 x 1,536	-		4	9	18	-		9	19	37		-	19	39		77	-	40		19	156
1,600 x 1,200	-		7	14	29	-		15	31	61		-	32	63		125	-	65		28	252
1,280 x 960	-		11	22	43	-		24	47	90		-	49	96		184	-	100		95	372
640 x 480	-		37	69	129	-		78	145	270		-	161	298		553	-	326		02	1,118
1,920 x 1,080 Moving Image	-		6	13	26	-		14	28	55		-	29	58		113		60	1	18	230
10 fpc			75 sec					160	sec				35	0 sec					720 sec		
320 x 240 30 fps			25 sec					55 :						0 sec					240 sec		
Capacity																					
Pixels			256ME					512						IGB							
Still Image	RAW		r Fine	Fine	Standa	_		ber Fine		Stand			Super Fin			ndard					
2,560 x 1,920	23		51	102	202	46		123	206	408		89	237	397		785					
2,048 x 1,536	-		30	159	312	-		161	320	628		-	310	616		,209					
1,600 x 1,200	-		31	255	503	-		264	515	1,01		-	508	991		,950					
1,280 x 960	-		50	390	743	-		403	785	1,49		-	2 5 1 9	1,51		,878					
640 x 480	-		50 20	1,200 236	2,229 459	-		1,309 241	2,418 476	4,49 924		-	2,518 465	4,65		,636					
1,920 x 1,080 Moving Image	-		20	230	437		1	241	476	924		-	400	913	, 1 1	,778					
interning intrage			4.450								_		E 7	00							
10 fpc			1.4hll ca					2 951	sec												
320 x 240 10 fps 30 fps			1,450 se 480 se					2,950						00 sec 50 sec							

These figures vary depending on the subject being photographed.

Specifications

Specificat	FZ20	FZ3	FX7	FX2
	FZZU LEICA DC VARIO-ELMARIT	۲۲۵ LEICA DC VARIO-ELMARIT	EICA DC VARIO-ELMARIT	FAZ LEICA DC VARIO-ELMARIT
Lens	LEICA DU VARIO-ELMARTI 13 elements in 8 groups (3 aspherical lenses, 1 ED lens)	LEICA DE VARIO-ELMARIT 13 elements in 8 groups (3 aspherical lenses)	LEICA DC VARIO-ELMARIT 7 elements in 6 groups (3 aspherical lenses)	2 EICA DC VARIO-ELMARTI 7 elements in 6 groups [3 aspherical lenses]
Zoom Focal Distance	Optical: 12x, Digital: 4x f=6.0 — 72.0 mm (35 mm Equiv.: 36 — 432 mm)	Optical: 12x, Digital: 4x f=4.6 — 55.2 mm (35 mm Equiv.: 35 — 420 mm)	Optical: 3x, Digital: 4x f=5.8 — 17.4 mm (35 mm Equiv.: 35 — 105 mm)	Optical: 3x, Digital: 4x f=5.8 — 17.4 mm (35 mm Equiv.: 35 — 105 mm)
Focusing Area	Normal: Wide 30 cm/Tele 200 cm — infinity Macro/A/S/M: Wide 5 cm/ Tele 200 cm — infinity	Normal: Wide 30 cm/Tele 120 cm — infinity Macro/Simple/A/S/M: Wide 5 cm/ Tele 120 cm — infinity	Normal: 50 cm — infinity Macro/Simple: Wide 5 cm/ Tele 30 cm — infinity	Normal: 50 cm — infinity Macro/Simple: Wide 5 cm/ Tele 30 cm — infinity
AF Distance Metering AF Assist Lamp	1 point/3 points/9 points/Spot Yes	1 point/3 points/9 points/Spot Yes	1 point/3 points/9 points/Spot Yes	1 point/3 points/9 points/Spot Yes
Optical Image Stabiliser	MEGA 0.I.S. (Mode1/Mode2)	MEGA 0.I.S. (Mode1/Mode2)	MEGA 0.I.S. (Mode1/Mode2)	MEGA 0.I.S. (Mode1/Mode2)
Conversion lens Compatibility	Yes	-	-	-
Camera Effective Pixels	5.0 Megapixels	3.1 Megapixels	5.0 Megapixels	4.0 Megapixels
Image Sensor	1/2.5", 5.36 Mega Total Pixels CCD Primary Colour Filter	1/3.2", 3.34 Mega Total Pixels CCD Primary Colour Filter	1/2.5", 5.36 Mega Total Pixels CCD Primary Colour Filter	1/2.5", 4.23 Mega Total Pixels CCD Primary Colour Filter
Focus	Auto Focus System, Normal/Macro (Dial), Continuous AF On/Off, Manual Focus (Ring), One-Shot AF	Auto Focus System, Normal/Macro (Dial), Continuous AF On/Off, AF Trigger (Shutter/Focus button)	Auto Focus System, Normal/Macro (Dial)	Auto Focus System, Normal/Macro (Dial)
ISO Sensitivity White Balance	Auto/80/100/200/400 Auto/Daylight/Cloudy/Halogen/Flash/White Set, White Balance Adjustment [150 K step, -1500 — +1500 K] (except Auto mode)	Auto/80/100/200/400 Auto/Daylight/Cloudy/Halogen/Flash/White Set, White Balance Adjustment [150 K step, -1500 -+1500 K] (except Auto mode)	Auto/80/100/200/400 Auto/Daylight/Cloudy/Halogen/White Set, White Balance Adjustment (150 K step, -1500 — +1500 K) (except Auto mode)	Auto/64/100/200/400 Auto/Daylight/Cloudy/Halogen/White Set, White Balance Adjustment (150 K step, -1500 — +1500 K) (except Auto mode)
Exposure	Program AE, Aperture Priority AE, Shutter Priority AE, Manual, Program Shift (P mode)	Program AE, Aperture Priority AE, Shutter Priority AE, Manual	Program AE	Program AE
Exposure Compensation	1/3 EV step, -2 — +2 EV	1/3 EV step, -2 — +2 EV	1/3 EV step, -2 — +2 EV	1/3 EV step, -2 — +2 EV
Backlight Compensation	-	Yes (at Simple mode)	Yes (at Simple mode)	Yes (at Simple mode)
Auto (AE) Bracketing		±1/3 EV — 1 EV step, 3 frames	±1/3 EV — 1 EV step, 3 frames	±1/3 EV — 1 EV step, 3 frames
Light Metering	Intelligent Multiple/Center Weighted/Spot P (Program AE), A (Aperture Priority AE),	Intelligent Multiple/Center Weighted/Spot P (Program AE), A (Aperture Priority AE),	Intelligent Multiple Normal Picture, Simple, Macro,	Intelligent Multiple Normal Picture, Simple, Macro,
Scene Mode	P (Frogram Ae), A (Aperune Fronty AE), S (Shutter Priority AE), M (Manual Exposure), Macro, SCN1/SCN2 (Portrait, Sports, Scenery, Night Scenery, Panning, Night Portrait, Fireworks, Party, Snow), Moving-image, Playback	S (Shutter Priority AE), A (Aper Green Fronty AE), Macro, Simple, SCN (Portrait, Sports, Scenery, Night Scenery, Panning, Night Portrait, Fireworks, Party, Snow), Moving-image, Playback	Norma Picture, Simple, Macro, SCN (Portrait, Sports, Scenery, Night Scenery, Night Portrait, Fireworks, Party, Snow, Self-portrait), Moving-image, Playback	Norma Picture, Simple, Macro, SCN (Portrait, Sports, Landscape, Night Landscape, Night Portrait, Fireworks, Party, Snow, Self-portrait), Moving-image, Playback
Shutter Speed	8 — 1/2,000 sec	8 — 1/2,000 sec	8 – 1/2,000 sec	8 – 1/2,000 sec
Aperture Self Timer	Wide: F2.8 — F8.0, Tele: F2.8 — F8.0 10 sec/2 sec	Wide: F2.8 — F8.0, Tele: F2.8 — F8.0 10 sec/2 sec	Wide: F2.8/F5.6 (2 steps), Tele: F5.0/F10 (2 steps) 10 sec/2 sec	Wide: F2.8/F5.6 (2 steps), Tele: F5.0/F10 (2 steps) 10 sec/2 sec
Picture Adjustment	Contrast: Low, Standard, High Sharpness: Low, Standard, High Saturation: Low, Standard, High Noise Reduction: Low, Standard, High	Natural, Standard, Vivid	Natural, Standard, Vivid	Natural, Standard, Vivid
Colour Effect Mode		Cool, Warm, Black & White, Sepia Still Image: JPEG (Design rule for Camera File system, based on Exif 2.2 standard),	Cool, Warm, Black & White, Sepia Still Image: JPEG (Design rule for Camera File system, based on Exif 2.2 standard),	Cool, Warm, Black & White, Sepia Still Image: JPEG(Design rule for Camera File system, based on Exif 2.2 standard),
Recording Format	PDOF corresponding Picture with audio: JPEG (Design rule for Camera File system, based on Exif 2.2 standard) + QuickTime Motion images: QuickTime Motion JPEG	PDOF corresponding Picture with audio: JPEG (Design rule for Camera File system, based on Exif 2.2 standard) + QuickTime Motion images: QuickTime Motion JPEG	DPOF corresponding Picture with audio: JPEG (Design rule for Camera File system, based on Exif 2.2 standard) + QuickTime Motion images: QuickTime Motion JPEG	DPOF corresponding Motion images: QuickTime Motion JPEG
Recording Image Size	2,560 x 1,920 pixels, 2,048 x 1,536 pixels, 1,600 x 1,200 pixels, 1,280 x 960 pixels, 640 x 480 pixels, 1,920 x 1,080 pixels, 320 x 240 pixels (Motion Image) TIFF/Fine/Standard	2,016 x 1,512 pixels, 1,600 x 1,200 pixels, 1,280 x 960 pixels, 640 x 480 pixels, 1,920 x 1,080 pixels, 320 x 240 pixels (Motion Image) TIFF/Fine/Standard	2,560 x 1,920 pixels, 2,048 x 1,536 pixels, 1,600 x 1,200 pixels, 1,280 x 960 pixels, 640 x 480 pixels, 1,920 x 1,080 pixels, 320 x 240 pixels (Motion Image) Fine/Standard	2,304 x 1,728 pixets, 1,600 x 1,200 pixets, 1,280 x 960 pixets, 640 x 480 pixets, 1,920 x 1,080 pixets, 320 x 240 pixets (Motion Image) Fine/Standard
Image Quality Motion Image	320 x 240 pixels 30 fps, 10 fps Max. recording time depends on memory card capacity.	320 x 240 pixels 30 fps, 10 fps Max. recording time depends on memory card capacity.	320 x 240 pixels 30 fps, 10 fps Max. recording time depends on memory card capacity.	320 x 240 pixels 30 fps, 10 fps Max. recording time depends on memory card capacity.
Burst Shooting Mode	Full-Resolution Image, 3 frames/sec or 2 frames/sec Max. 7 images (Standard mode) /4 images (Fine mode)	Full-Resolution Image, 4 frames/sec or 2 frames/sec Max. 13 images (Standard mode) /7 images (Fine mode)	Full-Resolution Image, 3 frames/sec or 2 frames/sec Max. 7 images (Standard mode) /4 images (Fine mode)	Full-Resolution Image, 4 frames/sec or 2 frames/sec. Max. 10 images (Standard mode) /5 images (Fine mode)
Unlimited Consecutive shooting	Yes (Depending on memory card size, battery power, picture size, and compression.)	Yes (Depending on memory card size, battery power, picture size, and compression.)	Yes [Depending on memory card size, battery power, picture size, and compression.]	Yes [Depending on memory card size, battery power, picture size, and compression.]
Still Image Rec. with Audio	5 sec	5 sec	5 sec	-
Audio Dubbing	Max. 10 sec	Max. 10 sec	Max. 10 sec	
Built-in Flash	Auto, Auto/Red-eye Reduction, Slow Sync./ Red-eye Reduction, Forced On/Off Flash output Adjustment [1/3 EV step, -2 -+2 EV], 0.3 - 7.0 m [ISO AUT0]	Auto, Auto/Red-eye Reduction, Slow Sync./ Red-eye Reduction, Forced On/Off Flash output Adjustment [1/3 EV step, -2 - +2 EV], 0.3 - 4.6 m [ISO AUTO]	Auto, Auto/Red-eye Reduction, Slow Sync./ Red-eye Reduction, Forced On/Off 0.3 — 4.0 m (Wide/ISO Auto) 0.3 — 2.2 m (Tele/ISO Auto)	Auto, Auto/Red-eye Reduction, Slow Sync./ Red-eye Reduction, Forced On/Off 0.3 — 4.0 m (Wide/ISO Auto) 0.3 — 2.2 m (Tele/ISO Auto)
External Flash Viewfinder	Hot Shoe 0.33" Color EVF (114,000 Pixels) Field of View: approx. 100%	- 0.33" Color EVF (114,000 Pixels) Field of View: approx. 100%	-	-
LCD Monitor	2.0" Polycrystalline TFT LCD Display (130,000 Pixels) Field of View: approx. 100%	1.5" Polycrystalline TFT LCD Display (114,000 Pixels) Field of View: approx. 100%	2.5" Polycrystalline TFT LCD Display (114,000 Pixels) Field of View: approx. 100% Power LCD mode	2.0" Polycrystalline TFT LCD Display (130,000 Pixels) Field of View : approx. 100% Power LCD mode
Recording Media Microphone	SD Memory Card, MultiMediaCard Yes	SD Memory Card, MultiMediaCard Yes	SD Memory Card, MultiMediaCard Yes	SD Memory Card, MultiMediaCard
Speaker	Yes	Yes	Yes (Only beep)	-
Interface	DC Input, AV Output (NTSC/PAL), USB	DC Input, AV Output (NTSC/PAL), USB	DC Input, AV Output (NTSC/PAL), USB	DC Input, Video Output (NTSC/PAL), USB
Direct Print Power	PictBridge Li-ion Battery Pack (7.2 V, 680 mAh) (Included) Battery Charger/AC Adaptor (Input: 110 – 240 V AC) (Optional)	PictBridge Li-ion Battery Pack (7.2 V, 680 mAh) (Included) Battery Charger/AC Adaptor (Input: 110 – 240 V AC) (Optional)	PictBridge Li-ion Battery Pack (3:7 V, 710 mAh) (Included) Battery Charger/AC Adaptor (Input: 110 — 240 V AC) (Optional)	PictBridge Li-ion Battery Pack (3.7 V, 710 mAh) (Included) Battery Charger/AC Adaptor (Input: 110 — 240 V AC) (Optional)
Battery life (approx.)	240 pictures (CIPA standard*) 270 pictures (with EVF**)	260 pictures (CIPA standard*) 280 pictures (with EVF**)	120 pictures (CIPA standard*)	130 pictures (CIPA standard*)
Dimensions	127.6 x 87.2 x 106.2 mm	108 x 68.4 x 84.8 mm	94.1 x 50.0 x 24.2 mm	94.1 x 50.0 x 24.2 mm
(approx.)(W x H x D) Weight (approx.)	(Not including protruding parts) 520 g (Body)/556 g (with Battery and SD Memory Card)	(Not including protruding parts) 290 g (Body)/326 g (with Battery and SD Memory Card)	(Not including protruding parts) 135 g (Body)/153 g (with Battery and SD Memory Card)	(Not including protruding parts) 130 g (Body)/148 g (with Battery and SD Memory Card)
Standard Accessories	320 g (Booy)/330 g (with Battery and SU Memory Lard) Battery Charger, Battery Pack, SD Memory Card (16 MB), Lens Cap, Lens Hood, Lens Hood Adapter, AV Cable, AC Cable, USB Connection Cable, Strap, CD-ROM (SD Viewer for DSC, ArcSoft PhotoBase, ArcSoft PhotoImpression, ArcSoft PhotoImpression,	270 g lbsoyl/226 g lwmh Battery and SU Memory Lard] Battery Charger, Battery Pack, SD Memory Card [16 MB], Lens Cap, Lens Hood, Lens Hood Adaptor, AV Cable, AC Cable, USB Connection Cable, Strap, CD-ROM (SD Viewer for DSC, ArcSoft PhotoBase, ArcSoft PhotoImpression, ArcSoft PhotoImpression,	135 g (Body) (133 g (with Battery and 50 Memory Card) Battery Charger, Battery Pack, Battery carrying case, SD Memory Card (16 MB), AV Cable, AC Cable, USB Connection Cable, Strap, CD-ROM (SD Viewer for DSC, ArcSoft PhotoBase, ArcSoft PhotoImpression, ArcSoft PhotoImpression,	130 g (Isoayi) 148 g (with Battery and SU Memory Lard) Battery Charger, Battery Pack, Battery carrying case, SD Memory Card (16 MB), Video Cable, AC Cable, USB Connection Cable, Strap, CD-ROM (SD Viewer for DSC, ArcSoft PhotoBase, ArcSoft PhotoImpression, ArcSoft PhotoBase, ArcSoft PhotoImpression,
* Charting and diving a			econds after turning on the power; shooting once eve	

* Shooting conditions: 23 °C with 50% humidity; LCD on; using the enclosed bateries and SD Memory Card; starting to shoot 30 seconds after turning on the power; shooting once every 30 seconds with the flash in full operation for every other shot; changing the zoom setting from telephoto to wide, or wide to telephoto, for each shot; and temporarily turning the power off after each 10 shots (long enough to lower the battery temperature). ** LCD OFF, Other condition is same as CIPA standard. * SD Viewer for DSC: Requires Microsoft® Windows® 985, Windows® 2000, or Windows® 2000, P. ArcSoft PhotoBase, PhotoImpression, Panorama Maker: Requires Microsoft® Windows® 98, Windows® 985E, Windows® Me, Windows® 2000, Windows® 2000, Windows® 2000, Windows® 2000, Windows® 2000, Windows® 2000, Windows® 98, Windows® 985, Windows® 98, Windows® 085E, Windows® 05 9 - OS X. Ulead Photo Explorer: Requires Microsoft® Windows® 2000, Windows® 2000,

	LC80	LC70	LC1
Long	LEICA DC VARIO-ELMARIT	LEICA DC VARIO-ELMARIT	LEICA DC VARIO-SUMMICRON
Lens	7 elements in 6 groups (3 aspherical lenses)	7 elements in 6 groups (3 aspherical lenses)	13 elements in 10 groups (2 dual-sided aspherical lenses)
Zoom	Optical: 3x, Digital: 3x	Optical: 3x, Digital: 3x	Optical: 3.2x, Digital: 3x
Focal Distance	f=5.8 — 17.4 mm (35 mm Equiv.: 35 — 105 mm) Normal: 50 cm — infinity	f=5.8 — 17.4 mm (35 mm Equiv.: 35 — 105 mm) Normal: 50 cm — infinity	f=7.0 — 22.5 mm (35 mm Equiv.: 28 — 90 mm)
ocusing Area	Macro/Simple: Wide 10 cm/ Tele 50 cm – infinity	Macro/Simple: Wide 10 cm/ Tele 50 cm — infinity	AF: 60 cm — infinity MF/AF-Macro: 30 cm — infinity
AF Distance Metering	1 point/Spot (Spot mode)	1 point/Spot (Spot mode)	1 point/Spot (Spot mode)
AF Assist Lamp	-		-
Optical Image Stabiliser	-	-	-
Conversion lens Compatibility	-	-	Yes
Camera Effective Pixels	5.0 Megapixels	4.0 Megapixels	5.0 Megapixels
mage Sensor	1/2.5", 5.36 Mega Total Pixels CCD, Primary Colour Filter	1/2.5", 4.23 Mega Total Pixels CCD, Primary Colour Filter	2/3", 5.2 Mega Total Pixels CCD, Primary Colour Filter
Focus	Auto Focus System, Normal/Macro (Dial), Spot AF On/Off (Spot mode), AF Trigger (Shutter/Focus button)	Auto Focus System, Normal/Macro (Dial), Spot AF On/Off (Spot mode), AF Trigger (Shutter/Focus button)	Hybrid Auto Focus System with AF sensor, Normal/Macro, Spot AF On/Off, Manual Focus (Ring)
S0 Sensitivity	Auto/80/100/200/400	Auto/50/100/200/400	Auto/100/200/400
White Balance	Auto/Daylight/Cloudy/Halogen/White Set, White Balance Adjustment (300 K step, -1500 — +1500 K) (except Auto mode)	Auto/Daylight/Cloudy/Halogen/White Set, White Balance Adjustment (300 K step, -1500 — +1500 K) (except Auto mode)	Auto/Daylight/Cloudy/Halogen/Flash/B & W/White Set, White Balance Adjustment (300 K step, -1500 — +1500 K) (except Auto and B & W modes)
Exposure	Program AE	Program AE	Program AE, Aperture Priority AE, Shutter Priority AE, Manual, Program Shift (P mode)
Exposure Compensation	1/3 EV step, -2 — +2 EV	1/3 EV step, -2 — +2 EV	1/3 EV step, -2 — +2 EV
Backlight Compensation	Yes (at Simple mode)	Yes (at Simple mode)	-
Auto (AE) Bracketing	±1/3 EV — 1 EV step, 3 frames	±1/3 EV — 1 EV step, 3 frames	±1/6 EV — 1 EV step, 3 frames or 5 frames
Light Metering	Intelligent Multiple/Spot (Spot mode)	Intelligent Multiple/Spot (Spot mode)	Intelligent Multiple/Center Weighted/Spot
Scene Mode	Simple, Normal Picture, Economy, Macro, Portrait, Landscape, Night Portrait, Moving-image, Playback	Simple, Normal Picture, Economy, Macro, Portrait, Landscape, Night Portrait, Moving-image, Playback	
Shutter Speed	8 - 1/2,000 sec	8 — 1/2,000 sec	Program AE/Aperture Priority AE: 2 — 1/4,000 sec Shutter Priority AE/Manual: 8 — 1/2,000 sec
Aperture Self Timer	Wide: F2.8/F8.0 (2 steps), Tele: F4.9/F14 (2 steps)	Wide: F2.8/F8.0 (2 steps), Tele: F4.9/F14 (2 steps) 10 sec/2 sec	Wide: F2.0 — F11, Tele: F2.4 — F13.2 10 sec/2 sec
Picture Adjustment	10 sec/2 sec	Natural, Standard, Vivid	Contrast: Low, Standard, High Sharpness: Low, Standard, High
Colour Effect Mode	Cool, Warm, Black & White	Cool, Warm, Black & White	Saturation: Low, Standard, High
	Still Image: JPEG (Design rule for Camera	Still Image: JPEG (Design rule for Camera	Still Image: JPEG (Design rule for Camera
Recording Format	File system, based on Exif 2.2 standard), DPOF corresponding Picture with audio: JPEG (Design rule for Camera File system, based on Exif2.2 standard) + QuickTime Motion images: QuickTime Motion JPEG	File system, based on Exif 2.2 standard), DPOF corresponding Picture with audio: JPEG (Design rule for Camera File system, based on Exif 2.2 standard) + QuickTime Motion images: QuickTime Motion JPEG	File system, based on Exif 2.2 standard), DPOF corresponding Picture with audio: JPEG (Design rule for Camera File system, based on Exif 2.2 standard) + QuickTime Motion images: QuickTime Motion JPEG
Recording Image Size	Control of the second sec	2,304 x 1,728 pixels, 1,600 x 1,200 pixels, 1,280 x 960 pixels, 640 x 480 pixels, 1,920 x 1,080 pixels, 320 x 240 pixels [Motion Image]	2,660 x 1,920 pixels, 2,048 x 1,536 pixels, 1,600 x 1,920 pixels, 1,280 x960 pixels, 640 x 480 pixels, 1,220 x 1,080 pixels, 320 x 240 pixels [Motion Image]
Image Quality	Fine/Standard	Fine/Standard	RAW/Super Fine/Fine/Standard
Motion Image	320 x 240 pixels 30 fps, 10 fps Max. recording time depends on memory card capacity.	320 x 240 pixels 30 fps, 10 fps Max. recording time depends on memory card capacity.	320 x 240 pixels 30 fps, 10 fps Max. recording time depends on memory card capacity.
Burst Shooting Mode	Full-Resolution Image, 2.7 frames/sec or 1.5 frames/sec (except for ISO 400 setting) Max. 9 images (Standard mode)/5 images (Fine mode)	Full-Resolution Image, 3.3 frames/sec or 2 frames/sec Max. 5 images (Standard mode) /3 images (Fine mode)	Full-Resolution Image, 2.7 frames/sec or 1.0 frame/sec Max. 9 images (Standard mode) /5 images (Fine mode)
Unlimited Consecutive shooting	-	-	-
Still Image Rec.	5 sec	5 sec	5 sec
vith Audio Audio Dubbing	Max. 10 sec	Max. 10 sec	Max. 10 sec
Built-in Flash	Auto, Auto/Red-eye Reduction, Slow Sync./ Red-eye Reduction, Forced On/Off 0.3 — 4.8 m [Wide/ISD Auto], 0.5 — 2.8 m [Tele/ISO Auto]	Auto, Auto/Red-eye Reduction, Slow Sync./ Red-eye Reduction, Forced On/Off 0.3 — 4.8 m (Wide/ISO Auto), 0.5 — 2.8 m (Tele/ISO Auto)	Auto, Auto/Red-eye Reduction, Forced ON/Off, Forced ON/Red-eye Reduction, Slow Sync./Red-eye Reduction, Slow Sync.Flash output Adjustment [1/3 EV step, -2 — +2 EV], 0.5 — 4.8 m [Wide], 0.5 — 4.0 m [Tele] [ISO 100/ISO AUTO]
External Flash	-	-	Yes (Metz SCA 3502 Compatible)
/iewfinder	Optical Viewfinder	Optical Viewfinder	0.44" Color EVF (235,000 Pixels) Field of View: approx. 100%
_CD Monitor	1.5" Polycrystalline TFT LCD Display (114,000 Pixels) Field of View: approx. 100%	1.5" Polycrystalline TFT LCD Display (114,000 Pixels) Field of View: approx. 100%	2.5" Polycrystalline TFT LCD Display (211,000 Pixels/Transflective Type) Field of View: approx. 100%
Recording Media	SD Memory Card, MultiMediaCard	SD Memory Card, MultiMediaCard	SD Memory Card, MultiMediaCard
dicrophone	Yes	Yes	Yes
Speaker	-	-	Yes DC Input, AV Output (NTSC/PAL), USB
nterface	DC Input, AV Output (NTSC/PAL), USB	DC Input, AV Output (NTSC/PAL), USB	(USB2.0 High Speed)
Direct Print	PictBridge/USB DIRECT-PRINT Ni-MH Rechargeable Battery x2 (Included)	PictBridge/USB DIRECT-PRINT Ni-MH Rechargeable Battery x2 (Included)	PictBridge/USB DIRECT-PRINT Li-ion Battery Pack (7.2 V, 1,400 mAh)
Power	AA Alkaline Battery x2 (Optional) AC Adaptor (Input: 110 — 240 V AC) (Optional)	AA Alkaline Battery x2 (Optional) AC Adaptor (Input: 110 — 240 V AC) (Optional)	(Included) Battery Charger/AC Adaptor (Input: 110 — 240 V AC) (Included)
Battery life approx.)	320 pictures (CIPA standard*), 850 pictures (LCD OFF**)	320 pictures (CIPA standard*) 850 pictures (LCD OFF**)	360 pictures (CIPA Standard*) 440 pictures (with EVF**)
Dimensions	87.5 x 64.1 x 35.3 mm	87.5 x 64.1 x 35.3 mm	134.7 x 81.5 x 101.5 mm
approx.](W x H x D)	(Not including protruding parts)	(Not including protruding parts)	(Not including protruding parts) 627 g (Body)/702 g (with Battery and SD Memory Card)
Weight (approx.) Standard Accessories	162 g (Body)/207 g (with Battery and SD Memory Card) Battery Charger, Ni-MH Rechargeable Battery x2, SD Memory Card (16 MB), AV Cable, AC Cable, USB Connection Cable, Strap, CD-ROM (SD Viewer for DSC, Ulead Photo Explorer, USB Driver)	162 g (Body)/207 g (with Battery and SD Memory Card) Battery Charger, Ni-MH Rechargeable Battery x2, SD Memory Card (16 MB), AV Cable, AC Cable, USB Connection Cable, Strap, CD-ROM (SD Viewer for DSC, Ulead Photo Explorer, USB Driver)	627 glBody/702 gl with Battery and SD Memory Card/ Battery Charger/AC Adaptor, Battery Pack, SD Memory Card (16 MB), AC Cable, DC Cable, Lens Cap, Lens Hood, Hood Cap, AV Cable, USB Connection Cable, MC Protector, Remote Shutter, Strap, CD-ROM (SD Viewer for DSC, ArcSoft PhotoBase, ArcSoft PhotoImpression, ArcSoft Panoram Maker,

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