



# Clifton Cameras Product Specification

## Panasonic Lumix DMC-FZ2000 Digital Camera Full Spec

IMAGE SENSOR	Sensor size	1-type High Sensitivity MOS sensor
Total pixels	20.9 megapixels	
Camera effective pixels	20.1 megapixels	
Color filter	Primary color filter	
LENS	Aperture	F2.8 - 4.5 / 9 diaphragm blades (F2.8 - 11.0 (W), F4.5 - 11.0 (T))
Optical zoom	20x	
Focal length	f = 8.8 - 176mm	
		(26 - 520mm in 35mm equiv. in 4:3)
		(24 - 480mm in 35mm equiv. in 3:2)
		(25 - 500mm in 35mm equiv. in 16:9)
		(31 - 620mm in 35mm equiv. in 1:1)
		(36 - 720mm in 35mm equiv. in 4:3, 3:2, 16:9 4K PHOTO recording)
		(38 - 760mm in 35mm equiv. in 1:1 4K PHOTO recording)
		(25 - 500mm in 35mm equiv. in 16:9 video recording / O.I.S. Off / Level Shot function Off)
		(27 - 540mm in 35mm equiv. in 16:9 video recording / O.I.S. On / Level Shot function Off)
		(30 - 600mm in 35mm equiv. in 16:9 video recording / O.I.S. On / Level Shot function On)
		(36 - 720mm in 35mm equiv. in 4K video recording)
Extra Optical Zoom (EZ)	28.1x (3:2 / 10M (M)), 40x (3:2 / 5M (S))	
Intelligent Zoom	40x	
Lens	LEICA DC VARIO-ELMARIT	



16 elements in 11 groups

(5 aspherical lenses (8 aspherical surfaces) / 4 ED lenses / 1 UHR lens)

Changing of zoom speed      5-speed zoom

Optical image stabilizer      5-Axis HYBRID O.I.S. +\*

\* 5-Axis compensation works in video recording except for 4K video, variable frame rate video or dolly zoom video recording.

Digital zoom      Max. 4x (When digital zoom is used simultaneously with Intelligent Zoom, you can only increase the zoom ratio up to 2x.)

Zoom in motion picture      Yes

Built-in ND filter      1/4, 1/16, 1/64, Auto

RECORDING SYSTEM      Recording file format      Still image      JPEG (DCF, Exif 2.3), RAW, DPOF

Motion picture      MOV (Audio format LPCM), MP4 (Audio format LPCM / AAC 2ch), AVCHD (Audio format: Dolby Digital 2ch)

System frequency      59.94Hz, 50.00Hz, 24.00Hz

Aspect ratio      4:3, 3:2, 16:9, 1:1

Image quality      RAW, RAW+Fine, RAW+Standard, Fine, Standard

Color space      sRGB, AdobeRGB

File size (Pixels)      Still image      [4:3] 4864x3648(L) / 3456x2592(M) / 2432x1824(S)

[3:2] 5472x3648(L) / 3888x2592(M) / 2736x1824(S)

[16:9] 5472x3080(L) / 3840x2160(M) / 1920x1080(S)

[1:1] 3648x3648(L) / 2592x2592(M) / 1824x1824(S)

Motion picture (\*1)      MOV      59.94Hz [4K] 3840x2160      29.97p, 100Mbps (IPB) (LPCM)

23.98p, 100Mbps (IPB) (LPCM)

[Full HD] 1920x1080      59.94p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

29.97p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

23.98p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

50.00Hz [4K] 3840x2160      25.00p, 100Mbps (IPB) (LPCM)



[Full HD] 1920x1080 50.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

25.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

24.00Hz [C4K] 4096x2160 24.00p, 100Mbps (IPB) (LPCM)

[4K] 3840x2160 24.00p, 100Mbps (IPB) (LPCM)

[Full HD] 1920x1080 24.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

MP4 59.94Hz [4K] 3840x2160 29.97p, 100Mbps (IPB) (LPCM) / 100Mbps (IPB) (AAC)

23.98p, 100Mbps (IPB) (LPCM) / 100Mbps (IPB) (AAC)

[Full HD] 1920x1080 59.94p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

29.97p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

23.98p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

59.94p, 28Mbps (IPB) (AAC)

29.97p, 20Mbps (IPB) (AAC)

[HD] 1280x720 29.97p, 10Mbps (IPB) (AAC)

50.00Hz [4K] 3840x2160 25.00p, 100Mbps (IPB) (LPCM) / 100Mbps (IPB) (AAC)

[Full HD] 1920x1080 50.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

25.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

50.00p, 28Mbps (IPB) (AAC)

25.00p, 20Mbps (IPB) (AAC)

[HD] 1280x720 25.00p, 10Mbps (IPB) (AAC)

24.00Hz [C4K] 4096x2160 24.00p, 100Mbps (IPB) (LPCM)

[4K] 3840x2160 24.00p, 100Mbps (IPB) (LPCM)

[Full HD] 1920x1080 24.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)

AVCHD Progressive

AVCHD 59.94Hz [Full HD] 1920x1080 59.94p, 28Mbps (IPB) (Dolby)



59.94i, 24Mbps (IPB) (Dolby) (Sensor output is 30.00fps)

59.94i, 17Mbps (IPB) (Dolby) (Sensor output is 60.00fps)

23.98p, 24Mbps (IPB) (Dolby)

50.00Hz [Full HD] 1920x1080                      50.00p, 28Mbps (IPB) (Dolby)

50.00i, 24Mbps (IPB) (Dolby) (Sensor output is 25.00fps)

50.00i, 17Mbps (IPB) (Dolby) (Sensor output is 50.00fps)

Continuous recordable time (Motion picture) (\*1) AVCHD [FHD/60i] [FHD/50i]: Approx. 115 min (rear monitor), 105 min (LVF)

Actual recordable time (Motion picture) (\*1) AVCHD [FHD/60i] [FHD/50i]: Approx. 60 min (rear monitor), 55 min (LVF)

Wi-Fi FUNCTION    Wi-Fi    IEEE 802.11b/g/n, 2412 MHz - 2462 MHz (1-11 ch), Wi-Fi / WPA / WPA2, Infrastructure mode

NFC            No

QR code connection                      Yes

Password-less connection                Yes (ON / OFF selectable)

VIEWFINDER        Type        OLED Live View Finder (2,360k dots)

Field of view                                Approx. 100%

Magnification                                Approx. 2.18x / 0.74x (35mm camera equiv. in 4:3)

Eye point    Approx. 20 mm from eyepiece lens

Diopter adjustment    -4.0 - +4.0 (dpt)

Eye sensor                                    Yes

Eye sensor adjustment                    High / Low

FOCUS    Focusing area                                Normal: Wide 30 cm - infinity / Tele 100 cm - infinity

AF Macro / MF / Intelligent Auto / Motion picture: Wide 3 cm - infinity / Tele 100 cm - infinity

Focus mode                                    AF / AF Macro / Macro Zoom \* Each available with AFS (Single) / AFF (Flexible) / AFC (Continuous) / MF

DFD technology                                Yes

Post Focus                                    Yes



Focus Stacking Yes

AF mode Face/Eye Detection / Tracking / 49-Area / Custom Multi / 1-Area / Pinpoint

(Full area touch is available)

AF detective range EV -4 - 18 (ISO100 equivalent)

AF assist lamp Yes

AF lock Yes (AF/AE LOCK button)

Others One Shot AF, Shutter AF, Half Press Release, Quick AF, AF Sensitivity, Continuous AF (during motion picture recording), Eye Sensor AF, AF+MF, MF Assist, Touch MF Assist, Focus Peaking, Touch AF/AE Function, Touch Pad AF, Touch Shutter, Low Light AF, Starlight AF

EXPOSURE CONTROL Light metering mode Multiple / Center Weighted / Spot

Exposure mode Program AE, Aperture Priority AE, Shutter Priority AE, Manual

ISO sensitivity (Standard output sensitivity) Still image Auto / Intelligent ISO / 80\* / 100\* / 125 / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600\* \* Extended ISO

(Changeable to 1/3 EV step) (ISO Auto in M mode)

Motion picture Auto / 125 / 200 / 400 / 800 / 1600 / 3200 / 6400

(Changeable to 1/3 EV step)

Exposure compensation 1/3 EV step  $\pm 5$ EV ( $\pm 3$ EV for motion picture)

AE lock Yes (AF/AE LOCK button)

WHITE BALANCE White balance Auto / Daylight / Cloudy / Shade / Incandescent / Flash / White Set 1, 2, 3, 4 / Color temperature setting 1, 2, 3, 4

White balance adjustment Blue/Amber bias, Magenta/Green bias

Color temperature setting 2500 - 10000K in 100K

SHUTTER Shutter speed (Approx.) Still image Mechanical shutter type: 1/4,000 - 60, Bulb (Max. 2 minutes)

Electronic shutter type: 1/16,000 - 1

Motion picture 59.94Hz: 1/16,000 - 1/30, 50.00Hz: 1/16,000 - 1/25, 24.00Hz: 1/16,000 - 1/24 (When using Synchro Scan)

Creative Video M mode / MF mode: 1/16,000 - 1/2

Self timer 10sec, 3 images / 2sec / 10sec



Remote control	Remote control with Bulb function by DMW-RSL1 (Optional)	
BRACKET	AE bracket	3, 5, 7 images in 1/3, 2/3 or 1 EV step, max. $\pm 3$ EV, single/burst
Aperture bracket	3, 5 or all positions in 1 EV step	
Focus bracket	1 to 999 images, focus steps can be set in 10 levels	
PANORAMA SHOT	Yes (Standard / Wide)	
BURST SHOOTING	Burst speed (Approx.)	[Mechanical shutter]
AFS:	H: 12 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)	
AFC:	H: 7 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)	
	[Electronic shutter]	
SH:	50 frames/sec	
AFS:	H: 12 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)	
AFC:	H: 7 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)	
Number of recordable images	More than 30 images (when there are RAW files with the particular speed)	
	More than 80 images (when there are no RAW files)	
	(Depending on memory card type, aspect, picture size and compression)	
4K PHOTO MODE	4K PHOTO mode (*1)	4K Burst: 30 frames/sec
	4K Burst (S/S): 30 frames/sec	
	4K Pre-Burst: 30 frames/sec, approx. 2 seconds	
	(Depending on memory card size and battery power)	
Exif information	Yes	
Marking function	Yes (in 4K Burst (S/S) mode)	
Loop rec function	Yes (in 4K Burst (S/S) mode)	
FLASH	Shooting distance	0.5 - 13.2m (Wide / ISO Auto), 1.0 - 7.9m (Tele / ISO Auto)
Flash mode	Auto*, Auto/Red-eye Reduction*, Forced On, Forced On/Red-eye Reduction, Slow Sync., Slow Sync./Red-eye Reduction, Forced Off *For iA, iA+ only.	
Flash output adjustment	1/3EV step $\pm 3$ EV	



Flash synchronization 1st Curtain Sync., 2nd Curtain Sync.

Synchronization for flash dimming and exposure compensation Yes

Wireless control Yes (When using DMW-FL200L / FL360L / FL580L (Optional))

REAR MONITOR Type TFT LCD monitor with static touch control

Monitor size Free-angle 7.5cm (3.0-inch) / 3:2 aspect / Wide viewing angle / AF coating

Pixels Approx. 1,040k dots

Field of view Approx. 100%

Monitor adjustment Brightness, Contrast, Saturation, Red-Green, Blue-Yellow

PHOTO STYLE Photo style Standard / Vivid / Natural / Monochrome / Scenery / Portrait / Custom / Cinelike D\* / Cinelike V\* / V-Log L\*\*

\*When Creative Video mode is selected. \*\*Upgrade Software Key DMW-SFU1(Optional) is required.

Picture adjustment Contrast, Sharpness, Noise Reduction, Saturation\*, Hue, Color Tone\*\*, Filter Effect\*\*

\*Except for Monochrome mode. \*\*For Monochrome mode only.

CREATIVE CONTROL Expressive / Retro / Old Days / High Key / Low Key / Sepia / Monochrome / Dynamic Monochrome / Rough Monochrome\* / Silky Monochrome\* / Impressive Art / High Dynamic / Cross Process / Toy Effect / Toy Pop / Bleach Bypass / Miniature Effect / Soft Focus\* / Fantasy / Star Filter\* / One Point Color / Sunshine\*  
\*Photo only.

CREATIVE VIDEO MODE Exposure mode Program AE/ Aperture-Priority / Sutter-Priority / Manual Exposure

Variable frame rate 59.94Hz MOV/FHD/100Mbps/29.97p, MP4(LPCM)/FHD/100Mbps/29.97p:

2fps, 15fps, 26fps, 28fps, 30fps, 32fps, 34fps, 45fps, 60fps, 75fps, 90fps, 96fps, 120fps

MOV/FHD/100Mbps/23.98p, MP4(LPCM)/FHD/100Mbps/23.98p:

2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps, 72fps, 84fps, 96fps, 120fps

AVCHD/FHD/24Mbps/29.97p:

2fps, 15fps, 26fps, 28fps, 30fps, 32fps, 34fps, 45fps, 60fps

AVCHD/FHD/24Mbps/23.98p:

2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps

50.00Hz MOV/FHD/100Mbps/25.00p, MP4(LPCM)/FHD/100Mbps/25.00p:

2fps, 12fps, 21fps, 23fps, 25fps, 27fps, 30fps, 37fps, 50fps, 62fps, 75fps, 96fps, 120fps



AVCHD/FHD/24Mbps/25.00p:

2fps, 12fps, 21fps, 23fps, 25fps, 27fps, 30fps, 37fps, 50fps

24.00Hz MOV/FHD/100Mbps/24.00p, MP4(LPCM)/FHD/100Mbps/24.00p:

2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps, 72fps, 84fps, 96fps, 120fps

Dolly zoom Yes

MOTION PICTURE FUNCTION Master pedestal level 31 steps

Luminance level 0-255 / 16-235 / 16-255

Synchro scan Yes

Time code Count Up: Rec Run/Free Run selectable, Time Code Mode: Drop frame/Non-drop frame selectable (When system frequency [59.94Hz] is selected.)

SS/Gain operation Shutter Duration/ISO / Angle/ISO / Shutter Duration/dB

Color bars / 1kHz test tone Yes (SMPTE / EBU / ARIB) / Yes

Cinelike gamma Cinelike D / Cinelike V

V-Log L Yes \*Upgrade Software Key DMW-SFU1(Optional) is required.

OTHER FUNCTIONS Level Gauge, Real-time Histogram, Guide Lines (3 patterns), Center Marker (Still image / motion picture), Highlight display (Still image / motion picture), Zebra Pattern (Still image / motion picture)

PLAYBACK Playback function 30-thumbnail display, 12-thumbnail display, Calendar display, Zoomed playback (Max. 16x), Slideshow (All / Picture Only / Video Only), Playback Mode (Normal / Picture Only / Video Only), Location Logging, RAW Processing, 4K PHOTO Bulk Saving, Light Composition, Clear Retouch, Title Edit, Text Stamp, Video Divide, Time Lapse Video, Stop Motion Video, Resize, Cropping, Rotate, Rotation Display, Favorite, Print Set, Protect, Face Recognition Edit, Picture Sort, Delete Confirmation

IMAGE PROTECTION / ERASE ProtectionSingle / Multi

Erase Single / Multi / All / Except Favorite

PRINT Direct print PictBridge compatible

INTERFACE Recording media SD Memory Card, SDHC Memory Card, SDXC Memory Card

(Compatible with UHS-I UHS Speed Class 3 standard SDHC / SDXC Memory Cards)

USB USB 2.0 Micro-B

HDMI (\*2)Monitor-through 4:2:2 8-bit / 4:2:2 10-bit (When 4:2:2 10-bit mode is selected, it is not possible to record motion picture or still picture on the SD memory card in the camera unit.)

Information display ON/OFF (selectable)





Automatic down-conversion (4K --> 1080p only)

Playback microHDMI TypeD / VIERA Link, Audio: LPCM / Stereo

59.94Hz: Auto / 4K / 1080p / 1080i / 720p / 480p

50.00Hz: Auto / 4K / 1080p / 1080i / 720p / 576p

24.00Hz: Auto / C4K / 4K / 1080p

Audio video output No

Remote input  $\phi$ 2.5mm for remote

External microphone input  $\phi$ 3.5mm for external microphone

Headphone output  $\phi$ 3.5mm for headphone

Microphone Stereo, Wind-cut: OFF / Standard / High

Speaker Monaural

LANGUAGE OSD language Please refer to "OSD" Sheet

POWER Battery Li-ion Battery Pack (7.2V, 1200mAh, 8.7Wh) (included)

Battery life (CIPA standard) (\*3) Approx. 350 images (rear monitor), 270 images (LVF)

DIMENSIONS / WEIGHT Dimensions (W x H x D) 137.6 x 101.9 x 134.7 mm / 5.42 x 4.01 x 5.30 inch  
(excluding protrusions)

Weight Approx. 966g / 2.13 lb (SD card, Battery, Body)

Approx. 915g / 2.02 lb (Body only)

OPERATING ENVIRONMENT Operating temperature 0oC to 40oC (32oF to 104oF)

Operating humidity 10%RH to 80%RH

STANDARD ACCESSORIES Software □ The software to edit and playback images on computer is not bundled with DMC-FZ2000. To do this, PHOTOfunSTUDIO is available for download at Panasonic website using computer connected to the Internet.

[http://panasonic.jp/support/global/cs/soft/download/d\\_pfs99pe.html](http://panasonic.jp/support/global/cs/soft/download/d_pfs99pe.html) (For Windows)

□ The software to process RAW file on computer is not bundled with DMC-FZ2000. To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using computer connected to the Internet.

<http://www.isl.co.jp/SILKYPIX/english/p/> (For Windows / Mac)



Standard accessories      Battery Charger, Battery Pack, USB Cable, Lens Hood, Lens Cap, Lens Cap String,  
Hot Shoe Cover, Shoulder Strap

□ The DMC-FZ2000 Operating Instructions for advanced features is available for download at Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet.