



HDR-PJ650 **NEW**

- Maak altijd heldere video's van professionele kwaliteit met Balanced Optical SteadyShot.
- Bekijk en deel uw favoriete herinnering waar u ook bent, met de ingebouwde projector met een helderheid van 20 lumen.
- Leg levendige scènes vast met de Exmor® R CMOS sensor – hij maakt zelfs foto's met een resolutie van 20MP.

Technische specificaties

Camera	
Camera Type	Digital HD Video Camera Recorder
Colors	(B)Black
Imaging Sensor	
Imaging Sensor	1/3.91 type(4.6mm) back-illuminated "Exmor R" CMOS Sensor
Processor	BIONZ® image processor
Pixel Gross	Approx.5430K pixels
Effective Picture Resolution(movie)	Approx.5020K pixels(16:9)/Approx.3760K pixels(4:3) *1
Effective Picture Resolution(still)	Approx.5020K pixels(16:9)/Approx.3760K pixels(4:3)
Color Filter System	ClearVid™ array
Recording	
Media Type	internal Flash Memory
	Memory Stick PRO Duo™ (Mark 2)
	Memory Stick PRO-HG Duo™
	Memory Stick XC-HG Duo™
	SD/SDHC/SDXC Memory Card(Class 4 or Higher)
Internal Media	Flash Memory 32GB *2
Still Image File Format	DCF Ver.2.0 compatible, Exif Ver.2.3 compatible, MPF Baseline compatible
Still Image Mode	JPEG
Still Image Max Effective	20.4 megapixels

Still Image Size(Movie Mode)	L:20.4 megapixels 16:9 (6016x3384), 15.3 megapixels 4:3 (4512x3384)
	M:10.0 megapixels 16:9 (4224x2376), 5.0 megapixels 4:3 (2592x1944)
	S:2.1 megapixels 16:9 (1920x1080), 0.3 megapixels 4:3 (640x480)
Still Image Size(Photo Mode)	L:20.4 megapixels 16:9 (6016x3384), 15.3 megapixels 4:3 (4512x3384)
	M:10.0 megapixels 16:9 (4224x2376), 5.0 megapixels 4:3 (2592x1944)
	S:2.1 megapixels 16:9 (1920x1080), 0.3 megapixels 4:3 (640x480)
Still Image Size(Sweep Panorama)	-
Video Format	AVCHD format ver.2.0 compatible:MPEG4-AVC/H.264
	MPEG2-PS:MPEG-2 (Video)
	MP4: MPEG-4 AVC/H.264
Video Mode(Resolution)	HD:1920x1080/50p(PS), 25p(FX,FH), 50i(FX,FH), 1440x1080/50i (HQ,LP)
	STD:720x576/50i
	MP4: 1280x720 25p
Movie Recording Rate(Average Bit Rate/VBR) *3 *4	HD PS:Approx.28Mbps/FX:Approx.24Mbps/ FH:Approx.17Mbps/HQ:Approx.9Mbps/L P:Approx.5Mbps
	STD HQ:9Mbps
	MP4: Approx.6Mbps
Video Actual (Pixel)	Approx.5,020K pixels(16:9), Approx.3,760K pixels(4:3) *1
Video Signal	HDTV
	PAL color, CCIR standards
Progressive Mode	HD:50p/25p, Progressive recording
	MP4: 25p, Progressive recording
Recording and Playback Times(in Internal Media)(5.1ch) *5 *6	HD PS:Approx.2h15m(Approx.2h15m)
	HD FX:Approx.2h40m(Approx.2h40m)
	HD FH:Approx.3h40m(Approx.3h40m)
	HD HQ:Approx.6h30m(Approx.4h55m)
	HD LP:Approx.11h15m(Approx.9h15m)
	STD HQ:Approx.6h45m(Approx.6h15m)
Recording and Playback Times(in Internal Media)(2ch) *5 *6	HD PS:Approx.2h20m(Approx.2h20m)
	HD FX:Approx.2h45m(Approx.2h45m)
	HD FH:Approx.3h45m(Approx.3h45m)
	HD HQ:Approx.6h40m(Approx.5h)
	HD LP:Approx.11h40m(Approx.9h35m)
	STD HQ:Approx.7h(Approx.6h25m)
	MP4: Approx.9h55m(Approx.9h55m)
Number of Recording Pictures(in Internal Media) *7	20.4 megapixels 16:9(6016x3384) : Approx.3,450 pictures
	15.3 megapixels 4:3(4512x3384) : Approx.4,650 pictures

	10.0 megapixels 16:9(4224x2376) : Approx.6,300 pictures
	5.0megapixels 4:3(2592x1944) : Approx.11,500 pictures
	2.1 megapixels 16:9(1920x1080) : Approx.34,000 pictures
	0.3 megapixels 4:3(640x480) : Approx.40,000 pictures
	0.2 megapixels 16:9(640x360) : Approx.40,000 pictures
Photo Capture from Movie	2.1 megapixels 16:9 (1920x1080)
	0.3 megapixels pixels 4:3 (640x480)
	0.2 megapixels pixels 16:9 (640x360)
Dual Record *8	20.4 megapixels 16:9(6016x3384)
	10.0 megapixels 16:9(4224x2376)
	2.1 megapixels 16:9(1920x1080)
Audio Format	Dolby® Digital 5.1ch, Dolby® Digital 5.1Creator *9
	Dolby® Digital 2ch Stereo, Dolby® Digital Stereo Creator *9
	MPEG-4 AAC-LC 2ch *10
Microphone/Speaker	Built-in Zoom Microphone Clear Phase Stereo Speaker
Mic Level Control	Yes(31steps)
Wind Position	-
Auto wind noise reduction	Yes(On/off)
Play List Edit	-
Optics/Lens	
Lens Type	G™ Lens
Lens Stabilization	Balanced Optical SteadyShot
Aperture	F1.8-F3.4
Optical Zoom	12x
Extended Zoom	20x
Digital Zoom *11	160x
Focal Distance	f = 2.9-34.8mm f = 1/8-1 3/8inch
FOV	-
Focal Length(35mm equivalent)(Movie Mode)	f=26.8-321.6mm(16:9),f=32.8-393.6mm(4:3) *1
	f=1 1/16-12 3/4inch(16:9),f=1 5/16-15 1/2inch(4:3) *1
Focal Length (35mm equivalent) (Photo Mode)	f=26.8-321.6mm(16:9),f=32.8-393.6mm(4:3)
	f=1 1/16-12 3/4inch(16:9),f=1 5/16-15 1/2inch(4:3)
Filter Diameter	46mm 1 13/16inch
Minimum Focus Distance	Approx.1cm(Wide),Approx.80cm(Tele),A pprox.25cm(Tele Macro)
	Approx.13/32inch(Wide),Approx.31 1/2inch(Tele),Approx.9 7/8inch(Tele Macro)
Aperture Blade	-

Viewfinder	
Type	0.5cm(0.2 type)/Color 201,600dots equivalent
Field of View	100%
LCD Display	
LCD Type	7.5cm(3.0 type) Xtra Fine LCD™ display(921K) Wide(16:9)
Touch Panel	Yes
Angle Adjustment	Opening Angle:max.90 deg., Turning Angle:max.270 deg.
Brightness Control *12	Yes(Menu)
Coverage	100%
Histogram	-
Grid Display	Grid Line *13
Display Panel	
Display Panel	-
Projector	
Light Output	Up to 20 lumen
Resolution Output	640 x 360
Screen Coverage	10 type - 100 type
Throw Distance	Approx. 0.5m(1.6feet) or over
Endurance (Battery Life)	Approx. 100min(Supplied Battery)
Projector Input	Yes (HDMI micro) *14
Focus Control	
Focus System	Contrast AF
Focus Points	-
AF Modes	Auto/Manual(Touch Panel/Dial)
Focus Area	Full range Focus/Spot Focus
Manual Focus Assist	Magnified display for precise manual focus
	Peaking Display
Focus Features	Tracking Focus
Tele Macro	Yes
Exposure System	
Metering Modes	Multi-segment/Spot
Exposure Compensation	AE Shift(Dial/Touch Panel)
Exposure Settings	Auto
	Flexible Spot(Touch Panel)
	Manual(Dial/Menu)
LOW LUX Mode	Yes
Scene Mode(s)	Auto/Twilight/Twilight Portrait(Photo Mode only)/Sunrise & Sunset/Fireworks/Landscape/Portrait/Spotlight/Beach/Snow
D-RangeOptimizer	Yes
Backlight Compensation	Yes(Auto)
Noise Reduction	Yes
White Balance Mode	Auto/Onepush/Outdoor/Indoor
WB Shift	Yes
Minimum Illumination	Standard:6 lux(1/50 Shutter Speed)
	Low Lux:3 lux(1/25 Shutter Speed)
	-
Auto Iris Control	F1.8-F10

Manual Iris Control	F1.8-F10
Manual Exposure Assist	Zebra Pattern Display
Drive System	
Drive Mode	Photo Mode:Single-shot/Self-timer
Self-timer	Approx.10sec.(Still Image/Golf Shot)
Shutter Speed Auto Control Range	1/6-1/10000
Shutter Speed(Standard)	1/50-1/10000
Shutter Speed(Manual Iris Control)	1/50-1/10000
Shutter Speed(Manual Shutter)	1/6-1/10000
Shutter Speed(Smooth Slow Rec)	1/215-1/10000
Convenience Features	
Built-in USB Cable	Yes(USB Charge Available)
Multi Selector	-
Manual/Auto Lens Cover	Auto
S/S & Zoom button on LCD	Yes(Touch Panel)
Red Eye Reduction	Yes(Off/On)
Fader Effect(s) *15	White/Black
Digital Picture Effects/Picture Effects	-/-
Date/Time Stamp	Yes(Rec Date and Time, Camera info, Coordinates)
Erase/Protect	Yes/Yes
Media/Battery Indicator	Yes(recordable time, free and used media space)/Yes(recordable time, remaining capacity)
On Screen Main Indicators	Intelligent Auto Status
	Zoom Position
	Flash Status
	Recording/Playback/Editing Media
	Recording Status
	Recording Mode
	Recording Image Quality(HD/MP4/STD)
	Photo Size
	GPS Tracking Status
	Shooting Mode Status
Multiple Language Display	English
	French
	German
	Spanish
	Italian
	Portugese
	Simplified Chinese
	Traditional Chinese
	Dutch
	Thai
	Hugarian
	Czech
	Polish
	Turkish
	Greek
	Roma
Still Image Playback Options	Slide Show
Video Playback Options	Highlight Playback(HD Movie Only)

	Highlight Playback Save and Share(Translate into STD quality)
	Highlight Scenario(Save/Playback/Erase)
	Highlight BGM(Preinstalled 4 music files)
Built-in Video Light Coverage	Approx.30cm-150cm
	Approx.11 7/8 inch-59 1/8 inch
Remote Control	Yes
Self Recording	Yes
One Touch Disc Burn	-
Color Slow Shutter	-
Easy Handycam/Help Function	-/-
Advanced Features	
Wi-Fi(built-in)	-
Interval Recording	-
Closer Voice	Yes
AGCLimit	Yes
Audio Level Display	Yes
3D Depth Adjustment(Recording)	-
3D Depth Adjustment(Playback)	-
Power Save	Yes
Built-in"PlayMemories Home(Lite Version)"	-
Pre-installed "PMB Portable"	-
Cinematone	Yes
S-Master	Yes
Assignable Dial	Yes(Focus/Exposure/Iris/Shutter Speed/AE Shift/WB Shift Set)
Embedded GPS	Yes(Current Position Display(Your Location))
Face Detection	Yes
Priority Setting(for Face Detection)	Auto/Child Priority/Adult Priority
Smile Shutter *8	Dual Capture/Always On/Off
Golf Shot	Yes
Smooth Slow Rec	Yes
Image Stabilization	Balanced Optical SteadyShot™ image stabilization w/ Active mode (Wide to Tele)
Intelligent Auto	Portrait/Baby/Walk/Tripod/Backlight/Landscape/Spotlight/Twilight/Macro/Low light/Auto wind noise reduction
View&Index	Event/MAP
Panorama	-
NightShot® infrared System	-
x.v.Color™	Yes
Water Proof	-
Dust Proof *16	-
Shockproof *16 *17	-
Airplane Mode	Yes
Flash	
Flash Type	Built-in Flash
Flash Metering System	Pre-flash TTL
Flash Modes	Auto/Forced/Prohibited
Flash Compensation	Yes(3 steps)

Flash Coverage	Approx.0.3m-1.5m
	Approx.11 7/8 inch-59 1/8 inch
Interface	
Wi-Fi	-
Memory Card Slot	Memory Stick PRO Duo™ and SD/SDHC/SDXC compatible
STD Output	Composite Video Out(AV CABLE(sold separately))
HD Output	HDMI Out(micro)(supplied)
3D HD Output	-
USB Port(s)	TypeA(built-in)/USB2.0 Hi-speed (mass-storage/MTP)
Multi/Micro USB Terminal *18	Yes
BRAVIA Sync	Yes
PhotoTV HD	Yes
DVDDirect	-
Headphone Jack	Stereo Minijack
Microphone Input	Stereo Minijack
Direct Copy	Yes
Accessory Shoe	Yes(Multi Interface Shoe)
PictBridge Compatible	-
DC IN	Yes
Remote Terminal	integrated into Multi/Micro USB Terminal *19
HDMI Terminal	Yes (HDMI micro) *20
Projector Input	Yes (HDMI micro) *14
A/V Remote Terminal	-
Weights and Measurements	
Dimensions(Approx.)(WxHxD including supplied battery) *21 *22	Approx.67mm x 72.5mm x 134mm(Approx.92mm x 80.5mm x 156mm(including Lens Hood))
	Approx.2 3/4inch x 2 7/8inch x 5 3/8inch(Approx.3 5/8inch x 3 1/4inch x 6 1/4inch(including Lens Hood))
Weight(Approx) (Main unit only)	Approx.450g
	Approx.15oz
Weight(Approx.) (Total) *23	Approx.540g(NP-FV50(supplied battery))
	Approx.585g(NP-FV70)
	Approx.685g(NP-FV100)
	Approx.1lb3oz(NP-FV50(supplied battery))
	Approx.1lb4oz(NP-FV70)
	Approx.1lb8oz(NP-FV100)
Power	
Battery Type	InfoLITHIUM® with AccuPower™ Meter System (V Series) *24
Charge on camcorder(Charging time with supplied Battery) *25	Yes(Approx. 2h 35min)
Power Consumption (in View Finder Operation) *26	HD:2.9W
	STD:2.7W
	MP4:2.7W
Power Consumption (in LCD Operation) *26	HD:3.1W
	STD:2.9W
	MP4:2.9W

Power Consumption (in Display Panel Operation) *26	-
Power Requirements	6.8V/7.2V (battery pack); 8.4V (AC Adaptor)
In the Box	
Supplied Accessory *27	Rechargeable Battery Pack(NP-FV50) (1)
	AC Adaptor (1)
	Power Cord (1)
	Operation Guide(1)
	HDMI(micro) Cable (1)
	USB Connection Support Cable (1)
	Lens Hood (1)
	Step Down Ring (1)
	Remote Commander(RMT-835 with Battery(CR2025)) (1)
Optics/Lens(details)	
Steady Shot Mode:Active(16:9)	f=27.8-556.1mm
Camera(details)	
Auto Non Flicker	Yes
Gain Control	Auto
Auto(Auto Slow Shutter ON)	-
Auto(Auto Slow Shutter OFF)	-
Scene Selection	1/6-1/10,000
LOW LUX	1/25-1/10,000
Manual Iris Control(Photo Mode)	1/6-1/425
Manual Shutter Control(Photo Mode)	1/6-1/425
Auto Control	Exposure,Color,Focus
Face Touch	Yes
Smile Sensitivity	Yes(3steps)
Imaging Sensor(details)	
Recording pixels(photo, 16:9)	Max. 20 400 000 pixels
Effective(movie, 16:9)	Approx. 5 020 000 pixels
Panel(details)	
blank	7.5cm(3.0 type) Xtra Fine LCD™ display(921K) Wide(16:9) (1920x480)
Projection(details)	
Projection type	DLP
Light source	LED(R/G/B)
Focus	Manual
Color repeatability	16 700 000
Contrast ratio	1500:01:00
Projector Input	Yes (Only from Projector input terminal)
USB Charging(details)	
blank	DC 5 V 500 mA/1.5 A
USB Power Supply	
blank	-
Convenience Features(details)	
TV Connect Guide	-
Image Management File Repair	Yes
Fast Playback	About 5 times/10 times/30 times/60 times
Slow Playback	Forwad:1/5 speed, Reverse:1/2 speed

Date&Time, Summer Time, Area Set	Yes
Auto Date&Time, Area Adjustment by GPS	Yes
Quick Format(Initialize)	Internal Media/Memory Card
Full Format (Erase All completely)	Internal Media
Internal Media --> Memory card	Yes(Multiple/by Event)
Memory card --> Internal Media	-
Dimensions(details)	
blank	-
Others(details)	
Conversion Lens Mode(w/ Optional Lens)	Tele Conversion
Wi-Fi(w/ optional Wireless adaptor)	Send to Smartphone
	Send to Computer
	Control with Smartphone
XLRBox	-
5.1ch Center Mic Ready(w/ Optional microphone)	Yes(w/ Optional Shoe Adaptor)
Demonstration Mode	Yes