

Specification sheet

Sensor

Sensor type

1.0-type (13.2 mm x 8.8 mm) Exmor® RS CMOS sensor, aspect ratio 3:2

Number of Pixels (Effective)

Approx. 20.1 megapixels

Number of Pixels (Gross)

Approx. 21.0 megapixels

Lens

Lens type

ZEISS® Vario-Sonnar T* lens, 10 elements in 9 groups (9 aspherical elements including AA lens)

F-number (Maximum Aperture)

F1.8 (W) - 2.8 (T)

ND-filter

Auto / On (3 steps) / Off

Focal length

f=8.8-25.7 mm

ANGLE OF VIEW (35MM FORMAT EQUIVALENT) (STILL IMAGE)

84 deg-34 deg (f = 24-70 mm²)³

Focus Range (From the Front of the Lens)

iAuto: AF (W: approx. 5cm to infinity, T: approx. 30cm to infinity), Program Auto: AF (W: approx. 5cm to infinity, T: approx. 30cm to infinity)

Optical zoom

2.9x (Optical Zoom during movie recording)

Clear Image Zoom (Still Image)

Still Image: 20M Approx. 5.8x / 10M Approx. 8.2x / 5.0M Approx. 11x / VGA Approx. 44x⁴

Clear Image Zoom (Movie)

4K: Approx. 4.35x; HD: Approx. 5.8x

Digital Zoom (Still Image)

20 M Approx. 11x/10 M Approx. 16x/5.0 M Approx. 23x/VGA Approx. 44x

Digital Zoom (Movie)

Digital Zoom Approx. 11

Aperture Type

Iris diaphragm (7 blades)

Digital Zoom

Still images: 20M approx. 11x, 10M approx. 16x, 5M approx. 23x, VGA approx. 44x,
Movie: approx. 11x*1

LCD

Screen type

7.5 cm (3.0 type)(4:3) / 1,228,800 dots / Xtra Fine / TFT LCD

Brightness Control

Manual (5 steps) / Sunny Weather

Adjustable Angle

Up: approx. 180 degrees, down: approx. 45 degrees

Display Selector (Finder/Lcd)

Auto / EVF

MF Assist Magnification

8.6x, 17.1x

Viewfinder

Viewfinder Screen Type/Number of Dots

0.39-type electronic viewfinder (XGA OLED), 2,359,296 dots

Field Coverage

100%

Magnification

Approx. 0.59x with 50 mm lens at infinity, -1m^{-1} (35 mm equiv.)

Eye Point

Approx. 20 mm from the eyepiece, 19.2 mm from the eyepiece frame at -1m^{-1} (CIPA standard)

Dioptr Adjustment

-4.0 to $+3.0\text{m}^{-1}$

Viewfinder

0.39-type electronic viewfinder(OLED)

Brightness Control

Auto/Manual (5 steps)

Camera

Image Processing Engine

BIONZ X™

SteadyShot

Still images: Optical, Movie: Intelligent Active Mode, Optical type with electronic compensation (Anti Rolling type)

Focus Type

Contrast detection AF

Focus Mode

Single-shot AF, Continuous AF, Direct Manual Focus (DMF), Manual Focus

Focus Area

Wide, Centre, Flexible Spot (S/M/L), Expand Flexible Spot, Lock-on AF
(Wide/Center/Flexible Spot [S/M/L]/Expand Flexible Spot)

LOCK ON AF

Yes

Light Metering Mode

Multi Pattern, Center Weighted, Spot

Exposure Compensation

+/- 3.0 EV, 1/3 EV step

ISO Sensitivity (Still Image)(Recommended Exposure Index)

Auto (ISO 125-12800, selectable with upper/lower limit),
125/160/200/250/320/400/500/640/800/1000/1250/1600/2000/2500/3200/4000/5000/6400/8000/10000/12800 (Extendable to ISO80/100), Multi Frame NR: Auto (ISO 125-12800), 200/400/800/1600/3200/6400/12800/25600*3 (*2)

ISO Sensitivity (Movie)

Auto: (ISO 125-ISO 12800, selectable with upper/lower limit),
125/160/200/250/320/400/500/640/800/1000/1250/1600/2000/2500/3200/4000/5000/6400/8000/10000/12800

Minimum Illumination (Movie)

Auto: 1.2 lux (Shutter Speed 1/30 s)

White Balance Modes

Auto, Daylight, Shade, Cloudy, Incandescent, Fluor.: Warm White, Fluor.: Cool White, Fluor.: Day White, Fluor.: Daylight, Flash, C.Temp., Filter, Custom

WB Micro Adjustment

Yes (G7 to M7 (57 steps), A7 to B7 (29 steps))

Shutter Speed

iAuto (4-1/2000), Program Auto (30-1/2000), Manual (Bulb, 30-1/2000), Aperture Priority (30-1/2000), Shutter Priority (30-1/2000)

Electronic Shutter

iAuto (4 - 1/32000) / Programme Auto (30 - 1/32000) / Manual (30 - 1/32000) / Aperture Priority (30 - 1/32000) / Shutter Priority (30 - 1/32000)

Aperture

iAuto (F1.8/F11 (W)), Programme Auto (F1.8/F11 (W)), Manual (F1.8/F11 (W)), Shutter Priority (F1.8/F11 (W)), Aperture Priority (F1.8/F11 (W))

Image Control

Contrast, Saturation, Sharpness, Creative Style, Colour Space (sRGB/Adobe RGB), Quality (RAW/RAW & JPEG/Extra fine/Fine/Standard)

Noise Reduction

Long exposure NR: On/Off, available of shutter speeds longer than 1/3 s. High ISO NR: Normal/Low/Off, Multi Frame NR: Auto, ISO200-25600

Dynamic Range Functions

Off, Dynamic Range Optimiser (Auto/Level 1-5), Auto High Dynamic Range (Auto Exposure Difference, Exposure difference Level (1.0-6.0 EV, 1.0 EV step))

Shooting Mode

AUTO (Intelligent Auto / Superior Auto), Programme Auto, Aperture Priority, Shutter Speed Priority, Manual Exposure, MR (Memory Recall) 1/2/3, Movie Mode (Programme Auto, Aperture Priority, Shutter Speed Priority, Manual Exposure), HFR Mode

(Programme Auto, Aperture Priority, Shutter Speed Priority, Manual Exposure),
Panorama, Scene Selection

Scene Selection

Portrait, Sports Action, Landscape, Sunset, Night Scene, Handheld Twilight, Night
Portrait, Anti Motion Blur, Pet Mode, Gourmet, Fireworks, High Sensitivity

Continuous Shooting Speed (maximum) (with max. recording pixels)

Speed Priority Continuous Shooting: approx. 16fps, Continuous Shooting: approx.
5.5fps*4*5

Self-Timer

10 sec., 5 sec., 2 sec., 3 or 5 consecutive shots with 10 sec. 5 sec. or 2 sec. delay
selectable, Bracketing shots with 10 sec. 5 sec. or 2 sec. delay selectable

Drive Modes

Single, Continuous shooting, Speed priority continuous shooting, Self-timer, Self-timer
(cont.), Single-bracketing*6, Cont.-bracketing*6, White balance bracketing*6, DRO
bracketing*6

Panorama (Shooting)

Sweep Panorama

Picture Effect

Still Image: Toy camera, Pop Colour, Posterisation, Retro Photo, Soft High-key, Partial
Colour, High Contrast Mono., Soft Focus, HDR Painting, Richtone Monochrome,
Miniature, Watercolour, Illustration, Movie: Toy camera, Pop Colour, Posterisation,
Retro Photo, Soft High-key, Partial Colour, High Contrast Mono.

Creative Style

Standard, Vivid, Neutral, Clear, Deep, Light, Portrait, Landscape, Sunset, Night Scene,
Autumn Leaves, Black & White, Sepia, Style Box

Picture Profile

Off/PP1-PP7 (Black Level, Gamma (Movie, Still, Cine1-2, ITU709, ITU709 [800%], S-
Log2), Black Gamma, Knee, Colour Mode, Colour Level, Colour Phase, Colour Depth,
Detail, Copy, Reset)

Auto Image Rotation

Yes

Number of Recognised Scenes

Still images: Superior Auto: 44, Intelligent Auto: 33 Movie: 44

Minimum Illumination

Auto: 1.2lux (Shutter Speed 1/30 sec.)

Exposure Control

Yes

Flash Red-Eye Correction

On/Off

Flash

Flash Mode

Auto, Flash On, Slow Synchro, Rear Sync, Flash Off

Flash type

Built-in, manual pop-up

AF Illuminator

Auto/Off

Bracketing

Yes

Flash Range

ISO Auto: approx. 0.4m to 10.2m (W), approx. 0.4 m to 6.5 m (T), ISO12800: up to approx. 20.4m (W), approx. 13.0m (T)

Recording

Compatible Recording Media

Memory Stick Duo™, Memory Stick PRO Duo™, Memory Stick PRO Duo™ (High Speed), Memory Stick PRO-HG Duo™, Memory Stick Micro™*8, Memory Stick Micro™ (Mark2)*8, Memory Stick XC-HG Duo™, SD Memory Card, SDHC Memory Card (UHS-I), SDXC Memory Card (UHS-I), microSD Memory Card*8, microSDHC Memory Card*8, microSDXC Memory Card*8 (*7)

Recording Format

Still images: JPEG (DCF Ver. 2.0, Exif Ver. 2.3, MPF Baseline compliant), RAW (Sony ARW 2.3 format), Movie: XAVC S, AVCHD format Ver. 2.0 compatible, MP4

Recording Format (Movie Audio)

XAVC S: LPCM 2ch, AVCHD: Dolby® Digital (AC-3) 2ch (Dolby® Digital Stereo Creator), MP4: MPEG-4 AAC-LC 2ch

Colour Space (Still)

sRGB, Adobe RGB

Still Image Number of recorded pixels (Image Size)

16:9: 17M (5472 x 3080), 7.5M (3648 x 2056), 4.2M (2720 x 1528)

Movie Recording Mode (NTSC)

[NTSC] AVCHD: 28M PS(1,920 x 1,080/60p) / 24M FX(1,920 x 1,080/60i) / 17M FH(1,920 x 1,080/60i) / 24M FX(1,920 x 1,080/24p) / 17M FH(1,920 x 1,080/24p), XAVC S 4K: 30p 100M(3,840 x 2,160/30p) / 30p 60M(3,840 x 2,160/30p) / 24p 100M(3,840 x 2,160/24p) / 24p 60M(3,840 x 2,160/24p), XAVC S HD:60p 50M(1,920 x 1,080/60p) / 30p 50M(1,920 x 1,080/30p) / 24p 50M(1,920 x 1,080/24p) / 120p 100M(1,920 x 1,080/120p) / 120p 60M(1,920 x 1,080/120p), MP4: 28 M (1,920 x 1,080/60p) / 16 M (1,920 x 1,080/30p) / 6 M (1,280 x 720/30p)

Movie Recording Mode

PAL: AVCHD: 28M PS (1920 x 1080/50p) / 24M FX (1920 x 1080/50i) / 17M FH (1920 x 1080/50i) / 24M FX (1920 x 1080/25p) / 17M FH (1920 x 1080/25p), XAVC S 4K: 25p 100M (3840 x 2160/25p) / 25p 60M (3840 x 2160/25p), XAVC S HD:50p 50M (1920 x 1080/50p) / 25p 50M (1920 x 1080/25p) / 100p 100M (1920 x 1080/100p) / 100p 60M (1920 x 1080/100p), MP4: 28M (1920 x 1080/50p) / 16M (1920 x 1080/25p) / 6M (1280 x 720/25p);NTSC: AVCHD: 28M PS (1920 x 1080/60p) / 24M FX (1920 x 1080/60i) / 17M FH (1920 x 1080/60i) / 24M FX (1920 x 1080/24p) / 17M FH (1920 x 1080/24p), XAVC S 4K: 30p 100M (3840 x 2160/30p) / 30p 60M (3840 x 2160/30p) / 24p 100M (3840 x 2160/24p) / 24p 60M (3840 x 2160/24p), XAVC S HD:60p 50M

(1920 x 1080/60p) / 30p 50M (1920 x 1080/30p) / 24p 50M (1920 x 1080/24p) / 120p 100M (1920 x 1080/120p) / 120p 60M (1920 x 1080/120p), MP4: 28M (1920 x 1080/60p) / 16M (1920 x 1080/30p) / 6M (1280 x 720/30p)

HFR

NTSC: XAVC S HD: 60p 50M (1920 x 1080/240 fps), 60p 50M (1920 x 1080/480 fps), 60p 50M (1920 x 1080/960 fps) / 30p 50M (1920 x 1080/240 fps), 30p 50M (1920 x 1080/480 fps), 30p 50M (1920 x 1080/960 fps) / 24p 50M (1920 x 1080/240 fps), 24p 50M (1920 x 1080/480 fps), 24p 50M (1920 x 1080/960 fps), PAL: XAVC S HD: 50p 50M (1920 x 1080/250 fps), 50p 50M (1920 x 1080/500 fps), 50p 50M (1920 x 1080/1000 fps) / 25p 50M (1920 x 1080/250 fps), 25p 50M (1920 x 1080/500 fps), 25p 50M (1920 x 1080/1000 fps)

Still Image Resolution

3:2 mode: 20M (5,472 x 3,648) / 10M (3,888 x 2,592) / 5M (2,736 x 1,824), 4:3 mode: 18M (4,864 x 3,648) / 10M (3,648 x 2,736) / 5M (2,592 x 1,944) / VGA, 16:9 mode: 17M (5,472 x 3,080) / 7.5M (3,648 x 2,056) / 4.2M (2,720 x 1,528), 1:1 mode: 13M (3,648 x 3,648) / 6.5M (2,544 x 2,544) / 3.7M (1,920 x 1,920), Sweep Panorama: Wide (12,416 x 1,856/5,536 x 2,160), Standard (8,192 x 1,856/3,872 x 2,160)

Number of Recording Pixels (Image Size)

3:2 : 20M (5472 x 3648) / 10M (3888 x 2592) / 5M (2736 x 1824), 4:3 : 18M (4864 x 3648) / 10M (3648 x 2736) / 5M (2592 x 1944) / VGA, 16:9 : 17M (5472 x 3080) / 7.5M (3648 x 2056) / 4.2M (2720 x 1528), 1:1 : 13M (3648 x 3648) / 6.5M (2544 x 2544) / 3.7M (1920 x 1920) , Sweep Panorama : Wide (12416 x 1856/5536 x 2160), Standard (8192 x 1856/3872 x 2160)

Interface

Input and output terminals

Multi/Micro USB Terminal*9, Hi-Speed USB (USB2.0), Micro HDMI

NFC

NFC forum Type 3 Tag compatible, One-touch remote, One-touch sharing

WI-FI

Yes (IEEE802.11b/g/n [2.4 GHz band])

Wireless capabilities

NFC forum Type 3 Tag compatible, One-touch remote, One-touch sharing, Wi-Fi

Power

Power Source

DC3.6V (supplied battery)/DC5.0V (supplied AC adaptor)

Battery System

Rechargeable Battery Pack NP-BX1 (supplied)

Power Consumption (Camera Mode)

Approx. 1.9W with LCD monitor and approx. 2.3W with viewfinder(CIPA standard)

USB Charge/USB Power Supply

Yes (Shooting, Playback)

BATTERY LIFE(STILL IMAGES)(CIPA)

Still images*10: Monitor: approx. 280 shots / approx. 140 min., Viewfinder: approx. 230 shots / approx. 115min., Movies (actual shooting)*11*12: Monitor: approx. 45 min., Viewfinder: approx. 45 min. (In [MP4 28M] mode, max. continuous shooting time is approx. 20 min. and max. file size is 4 GB), Movies (continuous shooting)*11: Monitor: approx. 80 min., Viewfinder: approx. 85 min. (In [MP4 28M] mode, max. continuous shooting time is approx. 20 min. and max. file size is 4 GB)*13

Supplied Battery

Rechargeable Battery Pack NP-BX1

Others

Playmemories Camera Apps

Yes*15

Photo Creativity

Yes

Shooting Functions

Eye AF, Lock-on AF, Face Detection, Face Registration, Still Image Recording (during movie recording), Smile shutter, Grid Line, Quick Navi, Digital Level Gauge (pitch and roll), White Balance Bracketing, DRO Bracketing, MF Assist, Peaking, Zebra, Marker Display, Micref Level, Step Zoom, Quick Zoom, Self-portrait timer/ TC/UB Photographer Name & Copyright, ISO Auto Minimum Shutter Speed, PC Remote Control

Playback Functions

BRAVIA Sync, 9/25-frame index view, Auto orientation, Slide Show, Forward/Rewind (Movie), Delete, Protect, Motion Shot Video, Beauty Effect, TRILUMINOS Colour*14, 4K image output

Operating Temperature

Approx. 0-40°C (32-104°F)

Index Playback

9 / 25 images

Playback Zoom

Depends on Image Size

Print

Print

Exif Print, PRINT Image Matching (PIM3)

Size & Weight

DIMENSIONS (W X H X D) (APPROX.)

Approx. 101.6 mm x 58.1 mm x 41.0 mm

WEIGHT (CIPA COMPLIANT)

Approx. 271 g (Body only), Approx. 298 g (with battery and Memory Stick Duo™)