

Specifications

As of August, 2015

General

Power:	DC 7.2 V (when the battery is used) DC 12 V (when the AC adaptor is used)
Power Consumption:	21.7 W
Operating Temperature:	0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity:	10 % to 80 % (no condensation)
Weight: Approx.	2.7 kg (5.95 lb) (body only, excluding lens hood, battery, and accessories)
Dimensions:	181 mm(H) x 216 mm(W) x 374 mm (D) (excluding protrusion and eye cup) (7-1/8 inches x 8-1/2 inches x 14-23/32 inches)

Camera Unit

Pickup Device:	4/3-type MOS
Effective Pixels:	15.49 megapixel (FHD), 8.71 megapixel (UHD/59.94p), 12.89 megapixel (UHD/29.97p), 13.35 megapixel (4K/24p)
Lens:	Optical image stabilizer lens, motorized/manual mode switching, 13x zoom F2.8 to F4.5 (f=12.8 mm to 167 mm) 35 mm equivalent: 28.0 mm to 365.3 mm (FHD)
Filter Diameter:	72 mm
ND Filter:	OFF, 1/4, 1/16, 1/64
Shortest Shooting Distance (M.O.D.):	Approx. 1.0 m from the front lens
Gain Setting:	L/M/H selector switch 0 dB to 24 dB (in 1 dB steps) (When assigning [S.GAIN] to the USER button: Switching between 30 dB and 36 dB)
Color Temperature Setting:	ATW, ATW LOCK, Ach, Bch, preset 3200 K/preset 5600 K/VAR (2000 K to 15000 K)
Shutter Speed:	When [SYSTEM MODE] = 59.94 Hz <ul style="list-style-type: none"> 60i/60p mode: 1/60 sec., 1/100 sec., 1/120 sec., 1/180 sec., 1/250 sec., 1/350 sec., 1/500 sec., 1/750 sec., 1/1000 sec., 1/1500 sec., 1/2000 sec., 1/3000 sec., 1/4000 sec., 1/8000 sec. 30p mode: 1/30 sec., 1/50 sec., 1/60 sec., 1/100 sec., 1/120 sec., 1/180 sec., 1/250 sec., 1/350 sec., 1/500 sec., 1/750 sec., 1/1000 sec., 1/1500 sec., 1/2000 sec., 1/3000 sec., 1/4000 sec., 1/8000 sec. 24p mode: 1/24 sec., 1/48 sec., 1/50 sec., 1/60 sec., 1/100 sec., 1/120 sec., 1/180 sec., 1/250 sec., 1/350 sec., 1/500 sec., 1/750 sec., 1/1000 sec., 1/1500 sec., 1/2000 sec., 1/3000 sec., 1/4000 sec., 1/8000 sec. When [SYSTEM MODE] = 50 Hz <ul style="list-style-type: none"> 50i/50p mode: 1/50 sec., 1/60 sec., 1/100 sec., 1/125 sec., 1/180 sec., 1/250 sec., 1/350 sec., 1/500 sec., 1/750 sec., 1/1000 sec., 1/1500 sec., 1/2000 sec., 1/3000 sec., 1/4000 sec., 1/8000 sec. 25p mode: 1/25 sec., 1/50 sec., 1/60 sec., 1/100 sec., 1/125 sec., 1/180 sec., 1/250 sec., 1/350 sec., 1/500 sec., 1/750 sec., 1/1000 sec., 1/1500 sec., 1/2000 sec., 1/3000 sec., 1/4000 sec., 1/8000 sec.
Slow Shutter Speed:	When [SYSTEM MODE] = 59.94 Hz <ul style="list-style-type: none"> 60i/60p mode: 1/2 sec., 1/4 sec., 1/8 sec., 1/15 sec., 1/30 sec. 30p mode: 1/2 sec., 1/4 sec., 1/8 sec., 1/15 sec. 24p mode: 1/2 sec., 1/3 sec., 1/6 sec., 1/12 sec. When [SYSTEM MODE] = 50 Hz <ul style="list-style-type: none"> 50i/50p mode: 1/2 sec., 1/3 sec., 1/6 sec., 1/12 sec., 1/25 sec. 25p mode: 1/2 sec., 1/3 sec., 1/6 sec., 1/12 sec.
Synchro Scan Shutter:	When [SYSTEM MODE] = 59.94 Hz <ul style="list-style-type: none"> 60i/60p mode: 1/60.0 sec. to 1/249.8 sec. 30p mode: 1/30.0 sec. to 1/249.8 sec. 24p mode: 1/24.0 sec. to 1/249.6 sec. When [SYSTEM MODE] = 50 Hz <ul style="list-style-type: none"> 50i/50p mode: 1/50.0 sec. to 1/250.0 sec. 25p mode: 1/25.0 sec. to 1/250.0 sec.

Shutter Open Angle:	5.0 deg to 180.0 deg to 360.0 deg (in 0.5 deg steps, angle display)
VFR Recording Frame Rate:	When [SYSTEM MODE] = 59.94 Hz <ul style="list-style-type: none"> 60p mode: 2, 15, 30, 40, 55, 58, 60, 62, 65, 75, 90, and 120 (frames per second) 30p mode: 2, 15, 26, 28, 30, 32, 34, 45, 60, 75, 90, and 120 (frames per second) 24p mode: 2, 12, 18, 20, 22, 24, 26, 28, 30, 36, 48, 60, 72, 84, 96, and 120 (frames per second) When [SYSTEM MODE] = 50 Hz <ul style="list-style-type: none"> 50p mode: 2, 12, 25, 33, 45, 48, 50, 52, 55, 62, 75, 100, and 120 (frames per second) 25p mode: 2, 12, 21, 23, 25, 27, 30, 37, 50, 62, 75, 100, and 120 (frames per second)

Minimum Subject Illumination:	0.2 lx (F2.8, gain 18 dB, [1/2S.], Manual slow shutter, [HIGH SENS.] mode)
Digital Zoom:	x2/x5/x10, iA zoom (1.0x to 1.54x, Variable zoom)
Lens Hood:	Hood with lens cover

Memory Card Recorder

Recording Media:	SDHC memory card (4 GB to 32 GB), SDXC memory card (48 GB to 128 GB), UHS-I supported *An SD card with a capacity of UHS Speed Class 3 (U3) is required to shoot videos with a bit rate of 100 Mbps or higher. An SDXC card with a capacity of 64 GB or more and UHS Speed Class 3 (U3) is required to shoot UHD 2160/59.94p/50.00p videos with a bit rate of 150 Mbps or higher.
Recording Slot:	Slot x 2
System Format:	59.94 Hz / 50 Hz
Video Recording Format:	Recording Format: MOV, MP4, AVCHD Recording Mode: *Please see the Video record mode table.
Still Picture Recording Format:	JPEG (DCF/Exif2.2) supported 8.8M: 4096 x 2160 (17:9), 8.3M: 3840 x 2160 (16:9), 2.1M: 1920 x 1080 (16:9), 0.2M: 640 x 360 (16:9), 0.3M: 640 x 480 (4:3)

Digital Video	
External Output Video Signal:	8 bit 4:2:2/10 bit 4:2:2 (switchable menu) *HDMI output of UHD/59.94p/50.00p becomes 8 bit 4:2:0. Also, when 10 bit 4:2:2 is selected, recording is not possible with the main unit.
Recording Video Signal:	8 bit 4:2:0
Video Compression Format:	MPEG-4 AVC/H.264 High Profile (MOV/MP4/AVCHD)

Digital Audio

Recording Audio Signal:	48 kHz/16 bit, 2 CH
Audio Compression Format:	LPCM (MOV/MP4) Dolby Digital (AVCHD)
Headroom:	12 dB

Dual Codec

File Format:	MOV, MP4
Video Compression Format:	MPEG-4 AVC/H.264 High Profile
Audio Compression Format:	LPCM
Recording Format:	When [Dual Codec] = FHD 50 Mbps [Main Recording Side] Recording mode = MOV/MP4 •UHD/29.97p/25.00p/23.98p 100 Mbps [Sub Recording Side] Recording mode = Same as the recording mode of the Main Recording Side •FHD/29.97p/25.00p/23.98p 50Mbps

Recording Format:	When [Dual Codec] = FHD 8Mbps [Main Recording Side] Recording mode = MOV/MP4 •UHD/29.97p/25.00p/23.98p 100 Mbps •FHD/59.94p/50.00p/29.97p/25.00p/23.98p 200 Mbps •FHD/59.94p/50.00p 100 Mbps [Sub Recording Side] Recording mode = MOV •FHD/59.94p/50.00p/29.97p/25.00p/23.98p 8 Mbps
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Video Input/Output

SDI OUT:	BNC x1, 0.8 V [p-p], 75 Ω, 3 G/1.5 G HD-SDI, SD-SDI supported Output format: 1080/59.94p LEVEL-A/50.00p LEVEL-A, 1080/29.97PsF/25.00PsF/24.00PsF/23.98PsF, 1080/59.94i/50.00i, 720/59.94p/50.00p, 480/59.94i, 576/50.00i
VIDEO OUT:	BNC x 1, Composite 1.0 V [p-p], 75 Ω
HDMI OUT:	HDMI x 1 (HDMI type A terminal, not compatible with VIERA Link) Output format: 2160/59.94p/50.00p/29.97p/25.00p/24.00p/23.98p, 1080/59.94p/50.00p/29.97p/25.00p/24.00p/23.98p/59.94i/50.00i, 720/59.94p/50.00p, 480/59.94p, 576/50.00p

Audio Input

Built-in Microphone:	Supports stereo microphone
XLR IN:	XLR (3 pin) x 2 (INPUT1, INPUT2) Input high impedance, LINE/MIC/MIC+48 V (switchable SW) LINE: 4 dBu/0 dBu (switchable menu) MIC: -40 dBu/-50 dBu/-60 dBu (menu)

Audio Output

SDI OUT:	2 CH (LPCM) switchable gain: 0 dB/-6 dB/-12 dB
HDMI OUT:	2 CH (LPCM)
Audio OUT:	3.5 mm diameter stereo mini jack x 1, Output level: 600 Ω, 316 mV
Headphone:	3.5 mm diameter stereo mini jack x 1
Speaker:	20 mm diameter, round x 1

Other Input/Output

CAM REMOTE:	2.5 mm diameter super mini jack x1 (ZOOM, S/S) 3.5 mm diameter mini jack x1 (FOCUS, IRIS)
TC PRESET IN/OUT:	BNC x 1, Used as the input and output terminals Input: 1.0 V to 4.0 V [p-p], 10 kΩ Output: 2.0 V ±0.5 V [p-p], low impedance
USB 3.0 HOST:	Standard-A connector, 9 pin External media connected function*, Bus power supply *A USB HDD of 32 GB or less, or exceeding 2TB, cannot be used.
USB 3.0 DEVICE:	Micro-B connector, 10 pin, Mass storage function (read only)
DC IN 12 V:	DC 12 V (11.4 V to 12.6 V), EIAJ type 4
Monitor/Viewfinder	
LCD Monitor:	4.3 type HD color monitor (Approx. 2760000 dots)
Viewfinder:	0.39 type OLED (organic EL display) (Approx. 2360000 dots, video display area: Approx. 1770000 dots)

Included Accessories

Battery (VW-VBD58), Shoulder strap, Battery charger, Microphone holder, AC adaptor, Screw for microphone holder (12 mm), Power code x 2, Eye cup, Lens hood, INPUT terminal cap, CD-ROM (Operating Instructions)
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Weight and dimensions are approximate. Specifications are subject to change without notice.