



TYPE	Type	Digital Single Lens Mirrorless camera		
	Recording media	XQD Memory Card, SD Memory Card / SDHC Memory Card* / SDXC Memory Card*, CFexpress Card (CFexpress Ver2.0 Type B) ***** *Compatible with UHS-I/UHS-II UHS Speed Class 3 standard SDHC/SDXC Memory Cards and UHS-II Video Speed Class 90 standard SDXC Memory Cards.		
	Lens mount	L-Mount		
IMAGE SENSOR	Type	35mm full-frame (36.0 x 24.0mm) CMOS sensor		
	Camera effective pixels / Total pixels	47.30 megapixels / 50.44 megapixels		
	Aspect ratio / Color filter	3:2 / Primary color filter		
	Dust reduction system	Supersonic wave filter		
STILL IMAGE	Recording file format	Still image	JPEG (DCF, Exif 2.31), RAW, HLG Photo (CTA-2072)	
		6K PHOTO** / 4K PHOTO**	6K PHOTO: MP4 (H.265/HEVC, Audio format: AAC (2ch))	
		6K PHOTO** / 4K PHOTO**	4K PHOTO: MP4 (H.264/MPEG-4 AVC, Audio format: AAC (2ch))	
		6K PHOTO** / 4K PHOTO**	Extracted still images: JPEG (DCF, Exif 2.31)	
	Aspect ratio	4:3 / 3:2 / 16:9 / 1:1 / 65:24 / 2:1		
	File size(Pixels)	When using full-frame lenses / 3:2	8368x5584(L) / 5952x3968(M) / 4272x2848(S) / 16736x11168(XL)* *High Resolution Mode. RAW file.	
		When using full-frame lenses / 3:2	5184x3456(6K PHOTO) / 3504x2336(4K PHOTO) / 6464x4320(HLG PHOTO, 8K-Res.) / 3232x2160(HLG PHOTO, 4K-Res.)	
		When using full-frame lenses / 4:3	7440x5584(L) / 5296x3968(M) / 3792x2848(S) / 14880x11168(XL)* *High Resolution Mode. RAW file.	
When using full-frame lenses / 4:3		4992x3744(6K PHOTO) / 3328x2496(4K PHOTO) / 5760x4320(HLG PHOTO, 8K-Res.) / 2880x2160(HLG PHOTO, 4K-Res.)		

	When using full-frame lenses / 16:9	8368x4712(L) / 5952x3352(M) / 4272x2400(S) / 16736x9424(XL)* *High Resolution Mode. RAW file.
	When using full-frame lenses / 16:9	3840x2160(4K PHOTO) / 7680x4320(HLG PHOTO, 8K-Res.) / 3840x2160(HLG PHOTO, 4K-Res.)
	When using full-frame lenses / 1:1	5584x5584(L) / 3968x3968(M) / 2848x2848(S) / 11168x11168(XL)* *High Resolution Mode. RAW file.
	When using full-frame lenses / 1:1	2880x2880(4K PHOTO) / 4320x4320(HLG PHOTO, 8K-Res.) / 2144x2144(HLG PHOTO, 4K-Res.)
	When using full-frame lenses / 65:24	8368x3088(L)
	When using full-frame lenses / 2:1	8368x4184(L)
	When using APS-C lenses / 3:2	5504x3664(L) / 3920x2608(M) / 2784x1856(S)
	When using APS-C lenses / 4:3	4880x3664(L) / 3472x2608(M) / 2480x1856(S)
	When using APS-C lenses / 16:9	5504x3096(L) / 3840x2160(M) / 1920x1080(S)
	When using APS-C lenses / 1:1	3664x3664(L) / 2608x2608(M) / 1856x1856(S)
	Image quality	RAW / RAW+Fine / RAW+Standard / Fine / Standard
	Color Space	sRGB, AdobeRGB
MOTION PICTURE	Recording file format	MP4: H.264/MPEG-4 AVC (Audio format: LPCM (2ch 48kHz/16-bit), AAC (2ch))
	Recording file format	AVCHD Progressive (Audio format: Dolby Audio (2ch)), AVCHD (Audio format: Dolby Audio (2ch))
	MP4** [4K] 3840x2160	59.94p, 150Mbps (4:2:0 8-bit LongGOP) (LPCM)
	MP4** [4K] 3840x2160	50.00p, 150Mbps (4:2:0 8-bit LongGOP) (LPCM)
	MP4** [4K] 3840x2160	29.97p, 100Mbps (4:2:0 8-bit LongGOP) (AAC)
	MP4** [4K] 3840x2160	25.00p, 100Mbps (4:2:0 8-bit LongGOP) (AAC)

MP4** [4K] 3840x2160	23.98p, 100Mbps (4:2:0 8-bit LongGOP) (AAC)
MP4** [FHD] 1920x1080	59.94p, 28Mbps (4:2:0 8-bit LongGOP) (AAC)
MP4** [FHD] 1920x1080	50.00p, 28Mbps (4:2:0 8-bit LongGOP) (AAC)
MP4** [FHD] 1920x1080	29.97p, 20Mbps (4:2:0 8-bit LongGOP) (AAC)
MP4** [FHD] 1920x1080	25.00p, 20Mbps (4:2:0 8-bit LongGOP) (AAC)
AVCHD Progressive** AVCHD** [FHD] 1920x1080	50.00p, 28Mbps (4:2:0 8-bit LongGOP) (Dolby Audio)
AVCHD Progressive** AVCHD** [FHD] 1920x1080	50.00i, 24Mbps (4:2:0 8-bit LongGOP) (Dolby Audio) (Sensor output is 25.00fps)
AVCHD Progressive** AVCHD** [FHD] 1920x1080	50.00i, 17Mbps (4:2:0 8-bit LongGOP) (Dolby Audio) (Sensor output is 50.00fps)
AVCHD Progressive** AVCHD** [FHD] 1920x1080	23.98p, 24Mbps (4:2:0 8-bit LongGOP) (Dolby Audio)
MP4** High speed video *When Creative Video Mode is selected. [4K] 3840x2160	29.97p (Sensor output is 60fps)
MP4** High speed video *When Creative Video Mode is selected. [4K] 3840x2160	25.00p (Sensor output is 50fps)
MP4** High speed video *When Creative Video Mode is selected. [4K] 3840x2160	23.98p (Sensor output is 48fps)
MP4** High speed video *When Creative Video Mode is selected.	29.97p (Sensor output is 180fps / 120fps)

	[FHD] 1920x1080	
	MP4** High speed video *When Creative Video Mode is selected. [FHD] 1920x1080	25.00p (Sensor output is 150fps / 100fps)
	Continuous recordable time (Motion picture)**	Approx. 150 min (rear monitor), 140 min (LVF) in [AVCHD/FHD/60p] *When using S-R24105 and SD Memory Card.
	Actual recordable time (Motion picture)**	Approx. 75 min (rear monitor), 70 min (LVF) in [AVCHD/FHD/60p] *When using S-R24105 and SD Memory Card.
VIEWFINDER	Type	OLED Live View Finder
	Pixels	Approx. 5,760k dots
	Field of view / Magnification	Approx. 100% / Approx. 0.78x with 50 mm lens at infinity; -1.0 m-1
	Eye point / Diopter adjustment	Approx. 21 mm at infinity; -1.0 m-1 / -4.0 - +2.0 (dpt)
	Eye sensor	Yes
	Display speed	120fps / 60fps
	Display time lag	Approx. 0.005sec
REAR MONITOR	Type	TFT LCD monitor with static touch control
	Monitor size	Triaxial tilt, 3.2-inch (8.0cm), 3:2 aspect
	Pixels	Approx. 2,100k dots
	Field of view	Approx. 100%
STATUS LCD		Yes
FOCUS	Type	Contrast AF system
	DFD technology	Yes
	Focus mode	AFS (Single) / AFC (Continuous) / MF
	AF mode	Face/Eye/Body/Animal Detection / Tracking / 225-Area / Zone (Vertical/Horizontal) / Zone (Square) / Zone (Oval) / 1-Area+ / 1-Area / Pinpoint / Custom 1, 2, 3 (Full area touch is available) (Scalable AF frame size and flexible AF position)
	AF detective range	EV -6 - 18 (F1.4, ISO100 equivalent, AFS)

	AF custom setting	AF Sensitivity, AF Area Switching Sensitivity, Moving Object Prediction
	AF assist lamp	Yes
	AF lock	Set the Fn button in custom menu to AF lock
	Post Focus / Focus Stacking	Yes / Yes
	Others	AF-ON, Shutter AF, Half Press Release, Focus/Shutter Priority, Quick AF, Continuous AF (during motion picture recording), Eye Sensor AF, AF-Point Scope Setting, AF+MF, MF Guide, MF Assist, Touch MF Assist, Focus Peaking, Touch AF/AE Function, Touch Pad AF, Touch Shutter, Focus Switching for Vert/Hor, Focus Ring Lock, Show/Hide AF Mode
EXPOSURE CONTROL	Light metering system	1,728-zone multi-pattern sensing system
	Light metering mode	Multiple / Center Weighted / Spot / Highlight Weighted
	Metering range	EV0-18 (F2.0 lens, ISO100 equivalent)
	Exposure mode	Program AE / Aperture Priority AE / Shutter Priority AE / Manual Exposure
	ISO sensitivity (Standard Output Sensitivity)	Auto / 50* / 100 / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600 / 51200* (Changeable to 1/3 EV step) *Extended ISO
	Exposure compensation	1/3 EV step ± 5 EV (± 3 EV for motion picture)
	AE lock	Set the Fn button in custom menu to AE lock
IMAGE STABILIZATION SYSTEM		Image sensor shift type (5-axis / 5.5-stop*), Dual I.S. (6.0-stop* Dual I.S. 2 compatible)
IMAGE STABILIZATION SYSTEM		*Based on the CIPA standard [Yaw/Pitch direction: focusing distance $f=50$ mm when S-X50 is used.]
IMAGE STABILIZATION SYSTEM		*Based on the CIPA standard [Yaw/Pitch direction: focusing distance $f=105$ mm when S-R24105 is used.]
WHITE BALANCE	White balance	AWB / AWBc / AWBw / 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	Type	Focal-plane shutter

	Shutter speed	Still image: Bulb (Max. 30 minutes), 1/8,000 - 60
	Shutter speed	Electronic front curtain shutter: Bulb (Max. 30 minutes), 1/2,000 - 60
	Shutter speed	Electronic shutter: Bulb (Max. 60 sec), 1/16,000 - 60
	Shutter speed	Motion picture: 1/16,000 - 1/25
	Shutter life	Approx. 400,000 images
	Self timer	10sec, 3 images / 2sec / 10sec
	Remote control	Remote control by DMW-RS2 (sold separately)
	Silent mode / Shutter type	Yes / Yes (Auto / Mechanical / Electronic front curtain / Electronic / Electronic+NR)
BRACKET	AE bracket	3, 5, 7 images in 1/3, 2/3 or 1 EV step, max. ± 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
	White balance bracket	3 images in blue/amber axis or in magenta/green axis, color temperature setting
BURST SHOOTING	Burst speed -Mechanical shutter / Electronic front curtain shutter	AFS/MF: H: 9 frames/sec, M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View)
	Burst speed -Mechanical shutter / Electronic front curtain shutter	AFC: H: 6 frames/sec (with Live View), M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View)
	Burst speed -Electronic shutter	AFS/MF: H: 9 frames/sec, M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View)
	Burst speed -Electronic shutter	AFC: H: 5 frames/sec (with Live View), M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View)
	Number of recordable images	RAW: More than 40 images
	Number of recordable images	RAW+JPEG: More than 35 images
	Number of recordable images	JPEG: More than 50 images
6K PHOTO** / 4K	Burst speed	6K PHOTO: 30 frames/sec

PHOTO**	Burst speed	4K PHOTO: 60 frames/sec, 30 frames/sec
	Exif information	Yes (Each JPEG image cropped out of the 6K/4K burst file complies with EXIF.)
FLASH	Flash type	TTL External Flash (sold separately)
	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 only.
	Flash synchronization	1st Curtain Sync, 2nd Curtain Sync.
	Flash output adjustment	1/3EV step ±3EV
	Synchronization speed	Less than 1/320 second
	Wireless control	Yes (When using DMW-FL200L / FL360L / FL580L (sold separately)), Wireless Channel: 1ch/2ch/3ch/4ch
	Flash sync socket	Yes
EXTRA TELE CONVERSION		2.0x (EX S), 1.4x (EX M) *Only for still image recording.
PHOTO STYLE	Photo Style	Standard / Vivid / Natural / Flat / Landscape / Portrait / Monochrome / L. Monochrome / L. Monochrome D / Cinelike D / Cinelike V / Like709 / Standard (HLG) / Monochrome (HLG) / My Photo Style 1-10
	Picture adjustment	Contrast / Highlight / Shadow / Saturation / Color Tone / Hue / Filter Effect / Grain Effect / Sharpness / Noise Reduction / ISO / WB
FILTER		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* *For photos only.
FUNCTION BUTTON	REC	Exposure Comp. / Sensitivity / White Balance / Photo Style / Metering Mode / Aspect Ratio / Picture Quality / Picture Size / HLG Photo / High Resolution Mode / 1 Shot Spot Metering / Long Exposure NR / Min. Shutter Speed / 1 Shot RAW+JPG / i.Dynamic Range / Filter Effect / One Push AE / Touch AE / Exposure Mode / AF Mode/MF / AF Custom Setting(Photo) / AF Custom Setting(Video) / Focus Peaking / Focus Peaking Sensitivity / 1-Area AF Moving Speed / Focus Ring Lock / AE LOCK / AF LOCK / AF/AE LOCK / AF-ON / AF-ON: Near Shift***** / AF-ON: Far Shift***** / AF-Point Scope / Focus Area Set / Flash Mode / Flash Adjust. / Wireless Flash Setup / Drive Mode / 1 Shot 6K/4K PHOTO" / Bracketing / Silent Mode / Image Stabilizer / Shutter Type / Ex. Tele Conv. / Flicker Decrease (Photo) / Post-Focus / Motion Pic. Rec Format / Motion Pic. Rec Quality / Sound Rec Level Disp. / Sound Rec Level Adj. / Mic. Directivity Adjust / Image Stabilizer / E-Stabilization (Video) / Boost I.S. (Video) / Q.MENU / Rec / Playback Switch / Video Record / LVF/Monitor Switch / LVF Magnification / Dial Operation Switch / Preview / Preview Aperture Effect***** / Constant Preview / Level Gauge / Histogram / Photo Grid Line / Live View Boost / Monochrome Live View / Night Mode / LVF/Monitor Disp. Style / Photo/Video Preview / Zebra Pattern / HLG View

		Assist(Monitor) / HLG View Assist (HDMI) / Sheer Overlay / I.S. Status Scope / Focus Ring Control/ Zoom Control / Destination Card Slot / Wi-Fi / No Setting / Off (Disable Press and Hold)***** / Restore to Default
	PLAY	Magnify from AF Point / HLG View Assist(Monitor) / RAW Processing / 6K/4K PHOTO Bulk Saving / Delete Single / Protect / Rating 1, 2, 3, 4, 5 / Copy / Rec/Playback Switch / LVF/Monitor Switch / Video Record / Night Mode / Card Slot Change / Wi-Fi / Send Image (Smartphone) / HLG View Assist (HDMI) / 6K/4K Photo Play / No Setting / Restore to Default
Fn LEVER		AF Mode / Photo Style / Picture Quality / Long Exposure NR / Focus Peaking / Bracketing / Silent Mode / Image Stabilizer / Shutter Type / 6K/4K PHOTO (Pre-Burst) / Focus Ring Lock / Touch Screen / Touch Pad AF / Auto Review (Photo) / Live View Boost / Night Mode / Sheer Overlay / Front/Rear/Control Dial Lock / No Setting / Restore to Default
LEVEL GAUGE		Yes
OSD LANGUAGE		Japanese, English, German, French, Italian, Spanish, Chinese (Traditional), Chinese (Simplified)
PRINT		PictBridge compatible
INTERFACE	USB	SuperSpeed USB 3.1 Gen1 Type-C
	HDMI*** Monitor-through	4:2:2 8bit (Except for [4K/60p]/[4K/50p]) / 4:2:0 8bit
	HDMI*** Playback	HDMI TypeA / VIERA Link
	HDMI*** Playback	Video: Auto / 4K/50p / 4K/25p / 1080p / 1080i / 720p / 576p
	HDMI*** Playback	Audio: Stereo
	Audio video output	No
	Remote input	φ2.5mm
	External microphone / external audio device input	φ3.5mm for external microphone / external audio device
	External microphone / external audio device input	MIC (Plug-in Power) / MIC / LINE is selectable.
External microphone / external audio device input	Stereo/Lens Auto/Shotgun/Super Shotgun/Manual is selectable when attaching DMW-MS2 (sold separately).	

	Headphone output	φ3.5mm
	Microphone	Stereo, Wind Noise Canceller: OFF / Low* / Standard / High *When attaching DMW-MS2 (sold separately).
	Speaker	Monaural
	Card slot	Slot 1: XQD Memory Card, CFexpress Card***** Slot 2: SD Memory Card, SDHC Memory Card*, SDXC Memory Card* *Compatible with UHS-I/UHS-II UHS Speed Class 3 standard SDHC/SDXC Memory Cards and UHS-II Video Speed Class 90 standard SDXC Memory Cards.
WIRELESS	Wi-Fi	2.4GHz (STA/AP) (IEEE802.11b/g/n)
	Wi-Fi	5GHz (STA) (IEEE 802.11a/n/ac) *5GHz Wi-Fi is not available in some countries.
	Wi-Fi	1-13, 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140, 149, 153, 157, 161, 165 ch
	Bluetooth	Bluetooth® v4.2 (Bluetooth Low Energy (BLE))
DUST AND SPLASH RESISTANT*		Yes.
DUST AND SPLASH RESISTANT*		*Dust and Splash Resistant does not guarantee that damage will not occur if this camera is subjected to direct contact with dust and water.
POWER	Battery	Li-ion Battery Pack (7.4V, 3050mAh, 23Wh) (bundled)
	Battery	USB power supply, USB power charging
	Battery life (CIPA standard)/ When using XQD memory card	Approx. 360 images (rear monitor), 340 images (LVF), 1,100 images (Power Save LVF mode*) with S-R24105
	Battery life (CIPA standard)/ When using XQD memory card	*Under the test conditions specified by Panasonic based on CIPA standard. When the time to get in the sleep mode is set to 1 sec.
	Battery life (CIPA standard)/ When using SD memory card	Approx. 380 images (rear monitor), 360 images (LVF), 1,150 images (Power Save LVF mode*) with S-R24105
	Battery life (CIPA standard)/ When using SD memory card	*Under the test conditions specified by Panasonic based on CIPA standard. When the time to get in the sleep mode is set to 1 sec.
	Battery grip	DMW-BGS1 (sold separately)

DIMENSIONS / WEIGHT	Dimensions (W x H x D)	Approx. 148.9 x 110.0 x 96.7 mm / 5.86 x 4.33 x 3.81 inch (excluding protrusions)
	Weight	Approx. 1,020g / 2.25 lb (XQD Memory Card x 1, Battery, Body)
	Weight	Approx. 1,016g / 2.24 lb (SD Memory Card x 1, Battery, Body)
	Weight	Approx. 898g / 1.98 lb (Body only)
OPERATING ENVIRONMENT	Operating temperature****	-10oC to 40oC (14oF to 104oF)
	Operating humidity	10%RH to 80%RH
STANDARD ACCESSORIES	Software-Recording	LUMIX Tether
	Software-Recording	<ul style="list-style-type: none"> This software is used to control a Panasonic digital camera from a PC. It allows you to change various settings of the camera, perform remote recording,
	Software-Recording	and save remotely recorded images to the PC. Check the site below to download and install the software.
	Software-Recording	http://panasonic.jp/support/global/cs/soft/download/d_lumixtether.html (For Windows / Mac)
	Software-Playback / Editing	<ul style="list-style-type: none"> The software to edit and playback images on computer is not bundled with this camera. To do this, PHOTOfunSTUDIO 10.1PE is available for download at Panasonic website using computer connected to the Internet.
	Software-Playback / Editing	https://panasonic.jp/support/global/cs/soft/download/d_pfs1001pe.html (For Windows)
	Software-Playback / Editing	<ul style="list-style-type: none"> The software to process RAW file on computer is not bundled with this camera. To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using computer connected to the Internet.
	Software-Playback / Editing	http://www.isl.co.jp/SILKYPIX/english/p/ (For Windows / Mac)
	Standard accessories	DC-S1R Kit
	Standard accessories	Body Cap, Hot Shoe Cover, Eye Cup, Flash Synchro Socket Cap, Cover for the Battery Grip Connector, Shoulder Strap, Battery Pack, Battery Charger, AC Adaptor, AC Mains Lead,
	Standard accessories	USB Connection Cable (C-C), USB Connection Cable (A-C), Cable Holder
	Standard accessories	<ul style="list-style-type: none"> The DC-S1R Operating Instructions for advanced features is available for downloaded at Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet.

NOTE

** About motion picture recording / 6K PHOTO/4K PHOTO recording

- 6K PHOTO is a high speed burst shooting function that cuts a still image out of a 4:3 or 3:2 video footage with approx. 18-megapixel (approx. 6000 x 3000 effective pixel count) that the 6K image manages.

- Use an SD memory card with SD Speed Class with "Class 4" or higher when recording motion pictures in [AVCHD].

- Use an XQD or SD memory card with SD Speed Class with "Class 4" or higher when recording motion pictures in [MP4(under 28Mbps)].

- Use an XQD or SD memory card with SD Speed Class with "UHS-I / UHS-II UHS Speed Class 3 (U3)" when recording motion pictures with [MP4] in [4K] [High Speed Video], [MOV] or [6K PHOTO/4K PHOTO].

(SD speed class is the speed standard regarding continuous writing.)

- Recording stops when the continuous recording time exceeds 10 minutes with [MP4] in [6K PHOTO].

- Recording stops when the continuous recording time exceeds 15 minutes with [MP4] in [High Speed Video] [4K PHOTO].

- Recording stops when the continuous recording time exceeds 29 minutes and 59 seconds with [MP4] in [4K/60p] [4K/50p].

- MP4 motion pictures with [MP4] in [4K]:

- When using an XQD memory card of 32 GB or less, or an SDHC memory card: You can continue recording without interruption even if the file size exceeds 4 GB, but the motion picture file will be divided and recorded/played back separately.

- When using an XQD memory card over 32 GB, or an SDXC memory card: You can continue recording without interruption even if the file size exceeds 96 GB or 3 hours 4 minutes in length, but the motion picture file will be divided and recorded/played back separately.

- MP4 motion pictures with [MP4] in [FHD]:

- You can continue recording without interruption even if the file size exceeds 4 GB or 30 minutes in length, but the motion picture file will be divided and recorded/played back separately.

- When the ambient temperature is high or continuous recording is performed, the camera may stop the recording to protect itself. Wait until the camera cools down.

- XQD is a registered trademark of Sony Corporation.

*** For [4K/60p] [4K/50p] video output, use an HDMI2.0 cable that has the HDMI logo on it, and that is described as "4K compatible".

**** The camera may stop recording when used in lower or higher than recommended operating temperature: -10 to 40 degrees.

***** Firmware must be updated to version 1.2 or later. Upgrade Software Key (DMW-SFU2) is required.

***** Firmware must be updated to version 1.2 or later.

***** Firmware must be updated to version 1.3 or later.