

# ***XF605***

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4K Camcorder

Firmware ver. 1.0.1.1

## Specifications

### XF605

#### System

- Recording System

Clips:

XF-AVC

Video compression: MPEG-4 AVC / H.264

Audio format: Linear PCM, 24 bit, 48 kHz, 4 channels

File format: MXF

MP4

Video compression: H.265 / HEVC, MPEG-4 AVC / H.264

Audio format: Linear PCM, 16 bit, 48 kHz, 4 channels

MPEG-2 AAC-LC, 16 bit, 48 kHz, 2 channels

File format: MP4

WAV

Audio format: Audio files for slow & fast motion recording

Linear PCM, 24 bit, 48 kHz, 4 channels

Audio files for second card recording functions

Linear PCM, 16 bit, 8 kHz, 1 channel

File format: BWF

Photos: DCF (Design rule for Camera File system), compatible with Exif Ver. 2.31, JPEG compression

- Video Configuration (recording/playback)

Primary clips:

XF-AVC

Bit rate: 600 Mbps, 500 Mbps, 410 Mbps, 310 Mbps, 300 Mbps, 250 Mbps, 240 Mbps, 160 Mbps / Intra-frame

260 Mbps, 160 Mbps, 50 Mbps, 24 Mbps / Long GOP

Resolution: 3840x2160, 1920x1080, 1280x720

Color sampling: YCbCr 4:2:2, 10 bit

Frame rate: 59.94P, 59.94i, 50.00P, 50.00i, 29.97P, 25.00P, 23.98P

MP4

Bit rate: 225 Mbps, 170 Mbps, 150 Mbps, 135 Mbps, 100 Mbps, 50 Mbps, 35 Mbps, 12 Mbps, 9 Mbps, 8 Mbps / Long GOP

Resolution: 3840x2160, 1920x1080, 1280x720

Color sampling: YCbCr 4:2:2, 10 bit, 4:2:0, 10 bit, 4:2:0, 8 bit

Frame rate: 59.94P, 50.00P, 29.97P, 25.00P, 23.98P

Sub recording clips:

XF-AVC

Bit rate: 310 Mbps, 300 Mbps, 250 Mbps, 240 Mbps, 160 Mbps / Intra-frame, 160 Mbps, 50 Mbps, 24 Mbps / Long GOP

Resolution: 3840x2160, 1920x1080, 1280x720

Color sampling: YCbCr 4:2:2, 10 bit

Frame rate: 59.94P, 59.94i, 50.00P, 50.00i, 29.97P, 25.00P, 23.98P

MP4

Bit rate: 150 Mbps, 100 Mbps, 50 Mbps, 35 Mbps, 12 Mbps, 9 Mbps, 8 Mbps / Long GOP

Resolution: 3840x2160, 1920x1080, 1280x720

Color sampling: YCbCr 4:2:2, 10 bit, 4:2:0, 10 bit, 4:2:0, 8 bit

Frame rate: 59.94P, 50.00P, 29.97P, 25.00P, 23.98P

Proxy clips:

## XF-AVC

Bit rate:	35 Mbps, 24 Mbps, 17 Mbps / Long GOP
Resolution:	1920x1080, 1280x720
Color sampling:	YCbCr 4:2:0, 8 bit
Frame rate:	59.94P, 59.94i, 50.00P, 50.00i, 29.97P, 25.00P, 23.98P

## MP4

Bit rate:	9 Mbps, 6 Mbps / Long GOP
Resolution:	1920x1080, 1280x720
Color sampling:	YCbCr 4:2:0, 8 bit
Frame rate:	59.94P, 50.00P, 29.97P, 23.98P, 25.00P

- **Recording Media (not included)**

SD, SDHC (SD High Capacity) or SDXC (SD eXtended Capacity) cards

- **Image Sensor**

Type 1.0 (1.0 in.) single-plate CMOS sensor

Effective pixels (approximate): 8,290,000 pixels (3840x2160)

- **LCD Touch Screen**

8.8 cm (3.5 in.) color LCD, 16:9 aspect ratio, approx. 2,760,000 dots, 100% coverage, capacitive touch screen operation

- View assistance (Gamma: equivalent to BT.709 Wide DR / original, Color space: equivalent to BT.709).
- Assistance displays can be output (onscreen displays, peaking, zebra pattern, magnification, B&W image, video scope, false color).

- **Viewfinder:** 0.92 cm (0.36 in.) organic LED display, approx. 1,770,000 dots, 100% coverage

- View assistance (Gamma: equivalent to BT.709 Wide DR / original, Color space: equivalent to BT.709).
- Assistance displays can be output (onscreen displays, peaking, zebra pattern, magnification, B&W image, video scope, false color).

- **Lens**

f=8.3 – 124.5 mm, F/2.8 – 4.5, 15x optical zoom, 9-bladed iris diaphragm

35mm equivalent focal length: approx. 28.3 – 424.6 mm (Dynamic IS)

approx. 25.5 – 382.5 mm (other IS modes)

- **Lens Configuration:** 18 elements in 14 groups (including 2 aspheric elements)

- **Filter Diameter:** 58 mm

- **Minimum Focusing Distance**

60 cm (2 ft.) throughout the zoom range; 1 cm (0.39 in.) at full wide angle

- **Shutter Speed**

Automatic, speed (1/3-stop increments, 1/4-stop increments), angle, clear scan, slow, off

- **Iris**

Manual (1/3-stop increments, 1/4-stop increments, fine adjustment available), push auto iris, automatic aperture

- **ISO Speed/Gain**

Manual, automatic adjustment

ISO Speed: ISO200 to ISO12800

Gain: -6 dB to 21.0 dB

- **ND Filter**

Built-in (Off, 1/4, 1/16, 1/64), motor operated

- **Exposure**

AE shift, light metering modes (standard, spotlight, backlight)

- **White Balance**

Custom white balance (two sets, A and B); two preset settings (daylight, 5,600 K<sup>1</sup> and tungsten lamp, 3,200 K<sup>1</sup>); color temperature setting (2,000 K to 15,000 K); automatic white balance (AWB)  
Color temperature and color compensation (CC) adjustment available for all settings except custom white balance and AWB.

<sup>1</sup> Color temperatures are approximate and given only as a reference.

- **Focus**

Manual focus, autofocus (AF-boosted MF, continuous AF, Face AF); face detection and subject tracking available

AF type: Dual Pixel CMOS AF, contrast-detection AF

- **Image Stabilization**

Optical-shift image stabilizer + digital compensation (Standard IS, Dynamic IS, Powered IS)

- **Sensor Sensitivity (2000 lux, 89.9% reflection, [High Sensitivity Mode] set to [On])**

59.94 Hz: F12 (at 59.94P)

50.00 Hz: F13 (at 50.00P)

- **Infrared mode:** Available, including built-in infrared light

- **Wi-Fi**

Wireless Standard: IEEE802.11b/g/n (2.4 GHz band), IEEE802.11a/n/ac (5 GHz band)

Connection Methods:

Infrastructure (Wi-Fi Protected Setup (WPS), search for access points, manual), Camera Access Point

Authentication Methods: Open, shared key, WPA-PSK, WPA2-PSK

Encryption Methods: WEP-64, WEP-128, TKIP, AES

- **Built-in Microphone**

Stereo electret condenser microphone

- **Size of Photos**

3840x2160

## Terminals

- **SDI Terminal**

BNC jack, output only, 0.8 Vp-p / 75 Ω, unbalanced

Video

SD: SMPTE ST 259

HD: SMPTE 292

3G: SMPTE 424, SMPTE 425

6G: SMPTE ST 2081

12G: SMPTE ST 2082

Audio

SD: SMPTE ST 272

Other than SD: SMPTE ST 299

Embedded audio, time code (VITC/LTC)

Supplemental displays (superimposed onscreen displays, peaking, zebra pattern, magnification, B&W display, waveform monitor, false color) can also be output.

- **HDMI OUT Terminal**

HDMI connector, output only, time code

- Assistance displays can be output (onscreen displays, peaking, zebra pattern, magnification, B&W image, video scope, false color).

- **INPUT Terminals (INPUT 1 and INPUT 2)**  
XLR 3-pin jack (pin1: shield, pin2: hot, pin3: cold), 2 sets, balanced  
Sensitivity:  
MIC setting: -60 dBu (volume center, full scale -18 dB) / microphone attenuator: 20 dB  
LINE setting: 4 dBu (volume center, full scale -18 dB)
- **MIC Terminal**  
Ø 3.5 mm stereo mini-jack  
Sensitivity:  
[MIC], [MIC (with Power Supply)] setting:  
-72 dBV (volume center, full scale -18 dB) / microphone attenuator: 20 dB  
Plug-in power supply: 2.5 V DC  
[LINE] setting: -12 dBV (volume center, full scale -18 dB)
- **G-LOCK/SYNC Terminal**  
BNC jack, 1.0 Vp-p / 75 Ω  
GENLOCK setting: input only; SYNC OUT setting: output only, tri-level HD signal
- **🎧 (Headphone) Terminal**  
Ø 3.5 mm stereo mini-jack, -∞ to -8 dBV (16 Ω load, volume range Min to Max)
- **TIME CODE Terminal**  
BNC jack, input/output  
Input setting: 0.5 Vp-p to 18 Vp-p / 100 kΩ; Output setting: 1.3 Vp-p / 50 Ω or less
- **USB Terminal**  
USB Type-C™ receptacle
- **USB (HOST) Terminal**  
USB Type-A receptacle (used for future functionality expansion)
- **REMOTE A Terminal, REMOTE B Terminal**  
REMOTE A: Ø 2.5 mm stereo sub-mini jack  
REMOTE B: Circular 8-pin jack (for the optional RC-V100 Remote Controller, RS-422 interface)
- **🌐 (Ethernet) Terminal**: Ethernet, 1000BASE-T compatible

## Power/Others

- **Power Supply (rated)**  
14.4 V DC (battery pack), 24.0 V DC (DC IN)
- **Power Consumption and Approximate Continuous Recording Times**  
Values are listed in the following order: Power consumption / Continuous recording time with a BP-A30 battery / Continuous recording time with a BP-A60 battery. The values were measured using normal recording (second card recording function turned off), the LCD monitor ([LCD Luminance] set to [Normal]) and the SDI OUT terminal (3G-SDI).  
Approx. 14.3 W / 175 min. / 360 min. (XF-AVC, 3840x2160 600Mbps Intra at 59.94P)  
Approx. 13.9 W / 180 min. / 370 min. (XF-AVC, 3840x2160 500Mbps Intra at 50.00P)  
Approx. 14.2 W / 175 min. / 365 min. (XF-AVC, 3840x2160 260Mbps L.GOP at 59.94P)  
Approx. 13.6 W / 185 min. / 380 min. (XF-AVC, 3840x2160 260Mbps L.GOP at 50.00P)
- **Operating Temperature**  
0 – 40 °C (32 – 104 °F)
- **Dimensions (W x H x D)<sup>2</sup>**  
Camera body only: 168 x 173 x 333 mm (6.6 x 6.8 x 13.1 in.)  
Camera with lens hood, eye cup, microphone holder: 200 x 219 x 385 mm (7.9 x 8.6 x 15.2 in.)
- **Weight<sup>2</sup> (including grip belt)**  
Camera body: 2010 g (4.4 lb.)  
Camera with lens hood, eye cup, microphone holder, BP-A30 battery and one SD card: 2460 g (5.4 lb.)

## Accessories

### CG-A20 Battery Charger

- Rated Input: 24 V DC, 1.8 A
- Rated Output: 16.7 V DC, 1.5 A
- Operating Temperature: 0 – 40 °C (32 – 104 °F)
- Dimensions<sup>2</sup> (W x H x D): 100 x 24 x 100 mm (3.9 x 0.9 x 3.9 in.)
- Weight<sup>2</sup>: 145 g (5.1 oz.)

### CA-CP200 L Compact Power Adapter

- Rated Input: 100 – 240 V AC, 50/60 Hz, 90 VA (100 V AC) – 120 VA (240 V AC)
- Rated Output: 24 V DC, 1.8 A
- Operating Temperature: 0 – 40 °C (32 – 104 °F)
- Dimensions<sup>2</sup> (W x H x D): 67.5 x 37 x 134 mm (2.7 x 1.5 x 5.3 in.)
- Weight<sup>2</sup>: 290 g (10.2 oz.)

### BP-A30 Battery Pack

- Battery Type: Rechargeable lithium ion battery, compatible with Intelligent System
- Rated Voltage: 14.4 V DC
- Rated Battery Capacity: 3,100 mAh / 45 Wh
- Operating Temperature: 0 – 40 °C (32 – 104 °F)
- Dimensions<sup>2</sup> (W x H x D): 41.5 x 45.1 x 69.7 mm (1.6 x 1.8 x 2.7 in.)
- Weight<sup>2</sup>: 225 g (7.9 oz)

<sup>2</sup> All dimensions and weights are approximate.

## Reference Tables

### Approximate Recording Time on a Card

Approximate times, for reference only, based on a single recording that continues until the card is full.

Main recording format and bit rate		32 GB	128 GB	512 GB
XF-AVC	600 Mbps	6 min.	27 min.	109 min.
	500 Mbps	8 min.	32 min.	131 min.
	410 Mbps	9 min.	39 min.	156 min.
	310 Mbps	12 min.	51 min.	207 min.
	300 Mbps	13 min.	54 min.	216 min.
	260 Mbps	15 min.	61 min.	246 min.
	250 Mbps	16 min.	64 min.	256 min.
	240 Mbps	16 min.	66 min.	267 min.
	160 Mbps	25 min.	100 min.	401 min.
MP4 (HEVC)	50 Mbps	80 min.	321 min.	1,284 min.
	225 Mbps	16 min.	71 min.	285 min.
	170 Mbps	23 min.	94 min.	377 min.
	135 Mbps	29 min.	118 min.	475 min.
	100 Mbps	40 min.	160 min.	642 min.
MP4 (H.264)	50 Mbps	80 min.	321 min.	1,284 min.
	150 Mbps	25 min.	107 min.	428 min.
	35 Mbps	114 min.	458 min.	1,834 min.

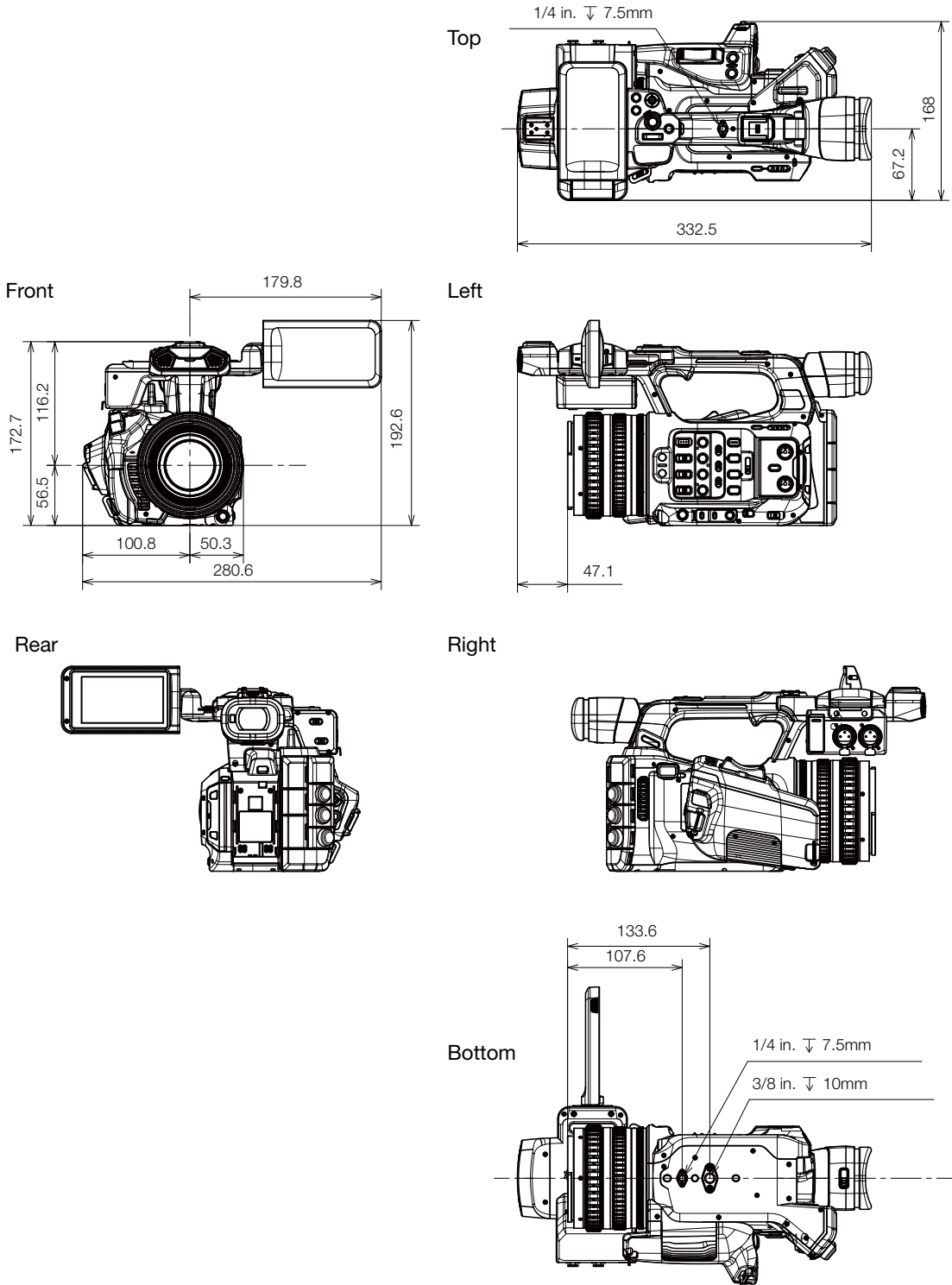
### Charging Times

Charging times are approximate and vary according to charging conditions, ambient temperature and initial charge of the battery pack.

Battery pack	BP-A30	BP-A60
Charging time using the supplied CG-A20 Battery Charger	170 min.	300 min.

## Appendix: Camera Dimensions

Unless indicated with the " (inch) mark, all units are in mm. ∇ represents the depth of a hole or socket.





Camera with lens hood, microphone holder and eye cup

