

# ***XA11*** ***XA15***

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HD Camcorder

# Specifications

## XA15 / XA11

◆ — Values given are approximate figures.

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### System

- **Recording System**

Movies: AVCHD<sup>1</sup> Video: MPEG-4 AVC/H.264;  
Audio: Linear PCM, 16 bits, 48 kHz, 2ch<sup>2</sup>  
Dolby Digital 2ch

MP4 Video: MPEG-4 AVC/H.264  
Audio: MPEG-2 AAC-LC (2ch)

Photos: DCF (Design rule for Camera File system), compatible with Exif<sup>3</sup> Ver. 2.3  
Image type: JPEG

<sup>1</sup> Compatible with AVCHD ver. 2.0 specifications.

<sup>2</sup> Linear PCM is available only when the recording mode is 28 Mbps LPCM or 24 Mbps LPCM.

<sup>3</sup> This camcorder supports Exif 2.3 (also called "Exif Print"). Exif Print is a standard for enhancing the communication between camcorders and printers. By connecting to an Exif Print-compliant printer, the camcorder's image data at the time of shooting is used and optimized, yielding extremely high quality prints.

- **Recording Media**

SD, SDHC (SD High Capacity) or SDXC (SD eXtended Capacity) memory card (not included);  
two memory card slots

- **Image Sensor**

1/2.84-type CMOS, 3,090,000 pixels◆  
Effective pixels: 2,910,000 pixels◆

- **LCD Touch Screen:** 7.50 cm (3.0 in.), wide, TFT color, 460,000 dots◆, 100% coverage, capacitive touch screen operation

- **Viewfinder:** 0.61 cm (0.24 in.), wide, color, equivalent to 1,560,000 dots◆, 100% coverage

- **Microphone:** Stereo electret condenser microphone, attenuator (20 dB)

- **Lens**

f=3.67-73.4 mm, F/1.8-2.8, 20x optical zoom, 8-bladed circular aperture  
35 mm equivalent: 26.8 – 576 mm◆  
28.8 – 576 mm◆ (when Dynamic IS is activated)

- **Lens Configuration:** 12 elements in 10 groups (double-sided aspheric element)

- **AF System**

Autofocus (TTL + external distance sensor when set to [Instant AF] or [Medium AF]) or Manual focus

- **Filter Diameter:** 58 mm

- **Minimum Focusing Distance**

60 cm; 1 cm at full wide angle

- **White Balance**

Auto white balance, Custom white balance (2 settings), User-defined color temperature or Preset white balance settings: Daylight, Shade, Cloudy, Fluorescent, Fluorescent H, Tungsten

- **Minimum Illumination**  
0.1 lx ([Low Light] recording program, Shutter speed at 1/2)  
1.0 lx ([Programmed AE] recording program, Auto slow shutter [On], Shutter speed at 1/25)
- **Recommended Illumination:** More than 100 lx
- **Image Stabilization:** Optical-Shift Image Stabilizer
- **Size of Video Recordings**  
AVCHD movies:  
28 Mbps LPCM (50.00P), 28 Mbps (50.00P), 24 Mbps LPCM, 24 Mbps, 17 Mbps: 1920 x 1080 pixels; 5 Mbps: 1440 x 1080 pixels  
MP4 movies:  
35 Mbps (50.00P), 24 Mbps, 17 Mbps: 1920 x 1080 pixels; 8 Mbps (50.00P), 4 Mbps: 1280 x 720 pixels; 3 Mbps: 640 x 360 pixels
- **Size of Photos:** 1920 x 1080 pixels  
1280 x 720 pixels (when recording MP4 movies at 8 or 4 Mbps)  
640 x 360 pixels (when recording MP4 movies at 3 Mbps)  
1920 x 1080 pixels (photos captured from movies)

## Terminals

- **XAVS HD/SD-SDI Terminal**  
BNC jack, output only, 0.8 Vp-p / 75 Ω, unbalanced  
HD-SDI: SMPTE 292M  
Video: 1080i, 720P  
SD-SDI: SMPTE 259M  
Video: 576i  
Embedded audio, time code (VITC/LTC)
- **HDMI OUT Terminal:** HDMI mini connector; output only
- **USB Terminal:** mini-B receptacle, Hi-Speed USB; output only
- **AV OUT Terminal**  
Ø 3.5 mm 4-pole minijack; output only  
Video: 1 Vp-p / 75 Ω unbalanced  
Audio: -10 dBV (47 kΩ load) / 3 kΩ or less
- **MIC Terminal**  
Ø 3.5 mm stereo minijack (unbalanced)  
Sensitivity:  
For microphone input: -65 dBV (auto volume, full scale -12 dB) / 5 kΩ or more  
For line input: -30 dBV (auto volume, full scale -12 dB) / 5 kΩ or more  
Microphone attenuator: 20 dB
- **INPUT Terminal**  
INPUT jack (pin1: shield, pin2: hot, pin3: cold), 2 sets (balanced)  
Sensitivity:  
For microphone input: -60 dBu (manual volume center, full scale -18 dB) / 600 Ω  
For line input: 4 dBu (manual volume center, full scale -18 dB) / 10 kΩ  
Microphone attenuator: 20 dB
- **Ⓜ (headphone) Terminal**  
Ø 3.5 mm stereo minijack (unbalanced)  
-29 dBV (16 Ω load, Max volume) / 100 Ω

- **REMOTE Terminal:** Ø 2.5 mm stereo sub-mini jack; input only

### Power/Others

- **Power supply (rated)**  
7.4 V DC (battery pack), 8.4 V DC (compact power adapter)
- **Power consumption** ♦:  
**X415** 4.6 W **X417** 4.5 W (17 Mbps, AF on, LCD normal brightness)
- **Operating temperature** ♦: 0 – 40 °C
- **Dimensions** ♦ [W x H x D] (excluding the grip belt)  
Camcorder only: 109 x 84 x 182 mm  
Camcorder with the lens hood attached: 115 x 84 x 231 mm  
Camcorder with the lens hood and handle unit attached: 131 x 180 x 231 mm
- **Weight** ♦  
**X415**  
Camcorder only: 750 g  
Camcorder with lens hood, BP-820 Battery Pack, memory card, handle unit: 1140 g  
**X417**  
Camcorder only: 745 g  
Camcorder with lens hood, BP-820 Battery Pack, memory card, handle unit: 1135 g

### CA-570 Compact Power Adapter

- **Power supply:** 100 – 240 V AC, 50/60 Hz
- **Rated output / consumption:** 8.4 V DC, 1.5 A / 29 VA (100 V) – 39 VA (240 V)
- **Operating temperature** ♦: 0 – 40 °C
- **Dimensions** ♦: 52 x 29 x 90 mm
- **Weight** ♦: 135 g

### BP-820 Battery Pack

- **Battery type**  
Rechargeable lithium ion battery, compatible with Intelligent System
- **Rated voltage:** 7.4 V DC
- **Operating temperature** ♦: 0 – 40 °C
- **Battery capacity:** 1780 mAh (typical); 13 Wh / 1700 mAh (minimum)
- **Dimensions** ♦: 30.7 x 39.4 x 40.2 mm
- **Weight** ♦: 85 g

## Reference Tables

### Approximate recording times

The camcorder uses a variable bit rate (VBR) to encode video so the actual recording times will vary depending on the subject.

For AVCHD movies:

Recording mode →	28 Mbps LPCM (50.00P) and 28 Mbps (50.00P)	24 Mbps LPCM and 24 Mbps	17 Mbps	5 Mbps
Memory card ↓				
8 GB Memory card	35 min.	40 min.	1 hr.	3 hr.
16 GB Memory card	1 hr. 15 min.	1 hr. 25 min.	2 hr. 5 min.	6 hr. 5 min.
32 GB Memory card	2 hr. 30 min.	2 hr. 55 min.	4 hr. 10 min.	12 hr. 15 min.*
64 GB Memory card	5 hr. 5 min.	5 hr. 55 min.	8 hr. 20 min.	24 hr. 30 min.*
128 GB Memory card	10 hr. 10 min.	11 hr. 55 min.	16 hr. 45 min.*	49 hr.*

For MP4 movies:

Recording mode →	35 Mbps (50.00P)	24 Mbps	17 Mbps	8 Mbps (50.00P)	4 Mbps	3 Mbps
Memory card ↓						
8 GB Memory card	30 min.	40 min.	1 hr.	2 hr. 10 min.	4 hr. 20 min.	5 hr. 40 min.
16 GB Memory card	1 hr.	1 hr. 25 min.	2 hr. 5 min.	4 hr. 20 min.	8 hr. 40 min.	11 hr. 25 min.
32 GB Memory card	2 hr.	2 hr. 55 min.	4 hr. 10 min.	8 hr. 40 min.	17 hr. 20 min.*	22 hr. 55 min.*
64 GB Memory card	4 hr.	5 hr. 55 min.	8 hr. 20 min.	17 hr. 20 min.*	34 hr. 45 min.*	45 hr. 55 min.*
128 GB Memory card	8 hr.	11 hr. 55 min.	16 hr. 45 min.*	34 hr. 45 min.*	69 hr. 30 min.*	91 hr. 55 min.*

\* A single scene can be recorded continuously for 12 hours; at that point, the camcorder will stop.

### Approximate number of photos

The photo size and number of photos that can be saved on a 1 GB memory card are summarized in the following table. However, the actual number of photos that can be recorded will vary depending on the subject and shooting conditions.

Movie Format	Recording mode	Photo size	Number of photos
AVCHD	Any	1920x1080	660
MP4	35 Mbps, 24 Mbps, 17 Mbps	1920x1080	660
	8 Mbps, 4 Mbps	1280x720	1,490
	3 Mbps	640x360	5,800

## Charging, Recording and Playback Times

The charging times given in the following table are approximate and vary according to charging conditions and initial charge of the battery pack.

Battery pack→	BP-820	BP-828
Charging conditions↓		
Using the camcorder	275 min.	405 min.
Using the CG-800E Battery Charger	190 min.	260 min.

Recording and playback times given in the following tables are approximate and vary according to recording mode and charging, recording or playback conditions. The times are based on using the LCD screen. The effective usage time of the battery pack may decrease when recording in cold surroundings, when using the brighter screen settings, etc.

### **XA15** Recording AVCHD movies

Battery pack	Recording mode	Recording (maximum)	Recording (typical)*	Playback
BP-820	28 Mbps LPCM (50.00P) / 28 Mbps (50.00P)	150 min.	90 min.	235 min.
	17 Mbps	155 min.	100 min.	250 min.
	5 Mbps	160 min.	95 min.	255 min.
BP-828	28 Mbps LPCM (50.00P) / 28 Mbps (50.00P)	220 min.	140 min.	355 min.
	17 Mbps	235 min.	150 min.	370 min.
	5 Mbps	240 min.	150 min.	380 min.

### **XA15** Recording MP4 movies

Battery pack	Recording mode	Recording (maximum)	Recording (typical)*	Playback
BP-820	35 Mbps (50.00P)	145 min.	90 min.	235 min.
	17 Mbps	170 min.	105 min.	250 min.
	3 Mbps	175 min.	105 min.	260 min.
BP-828	35 Mbps (50.00P)	220 min.	135 min.	350 min.
	17 Mbps	250 min.	160 min.	375 min.
	3 Mbps	270 min.	165 min.	390 min.

**XA11** Recording AVCHD movies

Battery pack	Recording mode	Recording (maximum)	Recording (typical)*	Playback
BP-820	28 Mbps LPCM (50.00P) / 28 Mbps (50.00P)	150 min.	95 min.	245 min.
	17 Mbps	160 min.	100 min.	255 min.
	5 Mbps	165 min.	100 min.	265 min.
BP-828	28 Mbps LPCM (50.00P) / 28 Mbps (50.00P)	225 min.	140 min.	365 min.
	17 Mbps	240 min.	150 min.	385 min.
	5 Mbps	245 min.	155 min.	390 min.

**XA11** Recording MP4 movies

Battery pack	Recording mode	Recording (maximum)	Recording (typical)*	Playback
BP-820	35 Mbps (50.00P)	150 min.	95 min.	245 min.
	17 Mbps	170 min.	105 min.	260 min.
	3 Mbps	180 min.	105 min.	270 min.
BP-828	35 Mbps (50.00P)	225 min.	140 min.	365 min.
	17 Mbps	260 min.	160 min.	385 min.
	3 Mbps	275 min.	170 min.	405 min.

\* Approximate times for recording with repeated operations such as start/stop, zooming, and power on/off.