

XF705

CANON'S FLAGSHIP XF CAMCORDER DELIVERING UHD HDR IN XF-HEVC



The XF705 is a professional UHD camcorder using the XF-HEVC format to record 4:2:2 10-bit UHD HDR files to SD cards, and outputs a UHD signal via a single 12G-SDI interface.



- **UHD/50P 4:2:2 10-bit support with HEVC**
The XF705 delivers UHD 4:2:2 10-bit footage utilising Canon's new and efficient XF-HEVC format.
- **Simple HDR workflow**
The XF705 records HDR internally in HLG or PQ formats to easily fit into a variety of quick HDR workflows.
- **Advanced 12G-SDI and IP streaming**
A 12G-SDI interface sends UHD 50P over a single cable. Additionally, XF705 can stream UHD HDR with HEVC.
- **Accurate and reliable Dual Pixel CMOS AF**
Dual Pixel CMOS AF provides accurate and fast autofocus with touch focus control and face detection.
- **15x L-series lens with Wide-angle**
The powerful 4K L-series lens with three independent lens rings provide flexible control.



XF-HEVC

HDR
High Dynamic Range

12G-SDI

Dual Pixel CMOS AF

1.0
type
CMOS

PRODUCT RANGE



XF705



XF405



XF305

XF705

XF405 / XF400

XF305

XF205 / XF200

XC15

XC10

Canon

TECHNICAL SPECIFICATIONS

XF705

CAMERA

IMAGE SENSOR

Sensor
1.0-type CMOS

Filter
RGB Primary Colour Filter

Total pixels
13.4 MP

Effective pixels per sensor
8.29 MP

Subject illumination range
Approx. 0.1 lx to 100,000 lx

Minimum illumination (PAL/50.00Hz Mode)
1.5 lux (with Custom Picture Preset Normal 1: BT.709, full auto mode, shutter speed 1/30 sec)

LENS

Zoom ratio
1.5 x Optical (UHD Mode) 30 x Advanced Zoom Mode (FHD Only)

Focal length
8.3 to 124.5 mm.
35mm equivalent:
Approx. 25.5 - 382.5 mm
Dynamic IS Mode: Approx. 28.3 - 424.6 mm

Minimum focus distance

10 mm at wide end, 60 cm across entire zooming range
3 densities: turret switched, motor-driven.
ND 1/4, ND 1/16, and ND 1/64.

Zoom control

Via Zoom Rocker Switch, Lens Control Ring or Remote Control

Zoom speed
Selectable. Variable or constant speed. Fast, Normal or Slow speed.

Focus control

Dual Pixel CMOS AF, Face Only, Face Priority, One-Shot AF, AF boosted MF, Focus Assist feature, Manual via Lens Ring, Manual via Iris Control Ring, Auto, Push Auto Iris

Aperture
9-blade Iris, Max f/2.8 - 4.5

Filter diameter

Lens elements/groups

58mm

14 groups of 18 elements (double aspherical lenses and single Hi-UD lenses)

Image stabilization system
Optical system + Electronic Stabilisation
Powered IS/Dynamic/Standard Mode/IS Off

Digital zoom/Teleconverter

Yes. 300 X Digital Zoom, 1.5/3.0/6.0 X Digital Teleconverter.

IMAGE PROCESSOR

Type

Dual DIGIC DV6

Dynamic Range
12-stops (800%) in Canon Log3 or Wide DR mode

Sample Depth
XF-HEVC: 4:2:2 10-bit, XF-AVC: 4:2:0 8-bit

Custom Picture Settings

Preset:
Normal 1 : BT.709 (Normal 1 (STANDARD) / BT.709 / Video)
Normal 1 : BT.2020 (Normal 1 (STANDARD) / BT.2020 / Video)
WideDR : BT.709 (Wide DR / BT.709 / Video)
WideDR : BT.2020 (Wide DR / BT.2020 / Video)
PQ : BT.2020 (PQ / BT.2020 / Video)
HLG : BT.2020 (HLG / BT.2020 / Video)
Canon Log 3 : BT.709 (Canon Log 3 / BT.709 / Neutral)
Canon Log 3 : BT.2020 (Canon Log 3 / BT.2020 / Neutral)
Gamma: PQ/HLG (HLG Equivalent to BT.2100, Vivid equivalent to BT.2390)/CANON LOG3/WIDE DR/NORMAL 1 (STANDARD/NORMAL2 (x4.0)/NORMAL3 (BT.709)/NORMAL 4 (x5.0)
Colour Space: BT.2020/BT.709

Custom Picture setting adjustments

Black: Master Pedestal 0 ± 50/Master Black Red 0 ± 50/Master Black Blue 0 ± 50
Black Gamma: Level 0 ± 50/Range -20 - 0 - +50/Point -20 - 0 - +50
Low Key Satur: Activate On / Off/Level 0 ± 50
Knee: Activate On / Off/Automatic On / Off/Slope -35 - 0 - +50/Point +50 - 95 - +109/Saturation 0 - ±10
Sharpness: Level -10 - 0 - +50/Detail Frequency 0 - ±8/Coring Level -30 - 0 - +50/HV Detail Bal. 0 - ±8/Limit 0 - ±50
Noise Reduction: Level Off / Auto / 1 - 12
Skin Detail: Effect Level Off / Low / Middle / High/Hue 0 - ±16/Chroma 0 - 16 - +31/Area 0 - 16 - +31/Y Level 0 - 16 - +31
White Balance: R Gain 0 - +50/B Gain 0 - +50
Colour Matrix Tuning: Gain 0 - ±50/Phase 0 - ±18 (R-G) / (R-B) / (G-R) / (G-B) / (B-R) / (B-G) 0 - ±50
Colour Correction
Select Area Area A / Area B / Area A&B / Off
Area (A/B) Setting Phase (0 - 31)/Area (A/B) Setting Chroma (0 - 16 - 31)/Area (A/B) Setting Area (0 - 16 - 31)/Area (A/B) Setting Y level (0 - 16 - 31)
Area (A/B) Revision Level (0 - ±50)
Area (A/B) Revision Phase (0 - ±18)
Other Functions
Over 100 % Through / Clip / Press

High Dynamic Range Recording

Yes via Custom Picture Menu. PQ and HLG standards supported. Simultaneous HDR and SDR recording supported (HDR to SD card, SDR to External device).

HDR - SDR Gain Control
Yes, ± 7.5dB adjustment to HDR or SDR signal as required.

RECORDING

Video storage media

Type
SD/SDHC/SDXC card, 2 card slots

Recording time (64GB Card, approx.)
XF-HEVC: 160 Mbps: 50 Minutes. 60 Mbps: 140 Mins, 45 Mbps, 185 Mins.

Recording file system
FAT32/exFAT

Recording file format
MXF

Internal Recording format

XF-HEVC: H.265/HEVC
Resolution 3840 x 2160 / 1920 x 1080
Colour sampling YCC 4:2:2 10-bit
Bit rate: 3840 x 2160: 160 Mbps / 110 Mbps (Long GOP)
1920 x 1080: 60 Mbps / 45 Mbps (Long GOP)

XF-AVC: MPEG-4 AVC/H.264
Resolution 1920 x 1080
Colour sampling YCC 4:2:0 8-bit
Bit rate 45 Mbps (Long GOP)

XF-HEVC: Camera mode
3840 x 2160: 59.94P/50.00P/29.97P/25.00P
1920 x 1080: 59.94P/50.00P/29.97P/25.00P
PsF: 1920 x 1080: 59.94i/50.00i
1920 x 1080 (12G-SDI) 29.97PsF/25.00PsF
1920 x 1080 (HDMI) 59.94i/50.00i
23.98P
1920x1080 (23.98P)
PsF --- 1920x1080 (59.94i)

External Recording Output (Varies according to Recording Option selected)

Simultaneous Recording Options

1. SD Card + SD Card: Relay or Simultaneous recording
2. SD Card + External device: 4K (Internal) 2K (External)/HDR (Internal), SDR (External)
50.00P/25.00P

Recording frame rate (PAL Mode)

Slow motion (PAL/50.00Hz Mode)
Yes.
1920 x 1080: 50.00P: x0.5/25.00P: x0.25. Max bit rate 180 Mbps

Interval Record

Frame Record
No

Pre Record (cache record)
Yes. 3 Seconds

Scan Reverse
No

Still Image quality
1920 x 1080 JPEG DCF Exif. Ver 2.3

Photo storage media
SD Card. (Photo Function assigned to Assignable Button)

AUDIO

Recording
Linear PCM: 24-bit / 48 kHz / 4 channels (4.5 Mbps).
EBU/AES3 Standard: 48kHz/24-bit/2-ch

Control

Reference Tone
Manual or Auto
1KHz, -12dB / -18dB / -20dB / Off

Microphone level meter
Yes

SYSTEM

PANEL

Type
LCD Capacitive touch panel

Size
4-inch (10.1 cm)

Dots
Approx. 1.23 million dots

Adjustable
Yes

Touch Screen Focus Point Selection
Yes. AF point selection, Face AF subject selection. Manual Focus: Focus Assist Reference Point Selection

Focus Assist
Yes. Focus Guide Function in MF

Peaking
Yes. Selectable Peaking Colour: Red / Blue / Yellow

Zebra
Yes. 70%, 100%

Markers
Yes. Horizontal (grey) / Horizontal (white) / Grid (grey) / Grid (white)

CVF

Type
Wide Screen Organic EL display

Size
0.46-inch

Dots
approx. 1.77 million dots

Adjustable
Yes

Viewing Angle
100%

Correction lens
+2.0 - -5 dioptre

INPUTS/OUTPUTS

Audio in

XLR 3-pin jacks (x2), balanced on Handle Unit. 3.5mm Stereo jack (unbalanced) on camera body

Headphone output

Yes. 3.5mm

Video monitor output

No

HDMI

Yes.

USB

Yes. Min-B and Hi-Speed USB supported

SDI output

Yes. BNC Connector.
[HD]: SMPTE ST 292
[3G]: SMPTE ST 424, 425
[4G]: SMPTE ST 2081
[12G]: SMPTE ST 2082
Audio: SMPTE ST 299
Output Impedance: 75 Ω
Output Signal Level: 0.8 Vp-p

Time code

Genlock/Sync
Yes. BNC. Function selected via menu

LAN
Yes. Ethernet connector (RJ45) (supports 1000 BASE-T)

AV terminal
No

DC input
Yes. 3.4mm Jack

Remote Control Terminal
Yes. 2. Remote A: 2.5mm mini-mini jack/Remote B: 8-pin jack (for RS-422)

IP Streaming Capability

IP Streaming Output
Yes. Third-party HEVC-IP decoder required
MPEG2-TS, HEVC/H.265: 3840 x 2160, 16 Mbps/9Mbps/59.94P/29.97P/50.00P/25.00P
HEVC/H.265: 1920 x 1080, 9Mbps/4Mbps: 59.94P/29.97P/50.00P/25.00P
MPEG2-TS, AVC/H.264: 1920 x 1080, 9Mbps/4Mbps: 59.94i/50.00i

TECHNICAL SPECIFICATIONS

XF705

SHOOTING FUNCTIONS

EXPOSURE

Exposure metering

Standard (centre-weighted metering), Spotlight and Backlight. The Standard setting is used in the FULL AUTO mode.

Exposure compensation

Centre ± 8 levels (± 2.0 , ± 1.75 , ± 1.5 , ± 1.25 , ± 1.0 , ± 0.75 , ± 0.5 , ± 0.25 , ± 0)

AE Response function via the menu.

Wave Form Monitor

Auto Exposure mode

Yes

Auto Gain Control setting

Full Auto Mode

Auto Gain Control limit

Yes

Gain setting

-6 dB - OFF / 33 dB (1 dB increments)

Gain L/M/H

System Frequency

59.94kHz (NTSC)/50.00kHz (PAL). User selectable.

WHITE BALANCE

Setting

Auto, Manual

Preset

Daylight: 5600 K (Initial value: 5600 K / ± 0 CC) Adjustable range: 4300 K - 8000 K / -5 CC - +5 CC
Tungsten: 3200 K (Initial value: 3200 K / ± 0 CC) Adjustable range: 2700 K - 3700 K / -5 CC - +5 CC
Colour Temperature Setting: Adjustable range: 2000 K - 15000 K / -20 CC - +20 CC Initial value: 5600 K / ± 0 CC
Set A / Set B

SHUTTER SPEED

Control Modes

Auto, manual, Clear Scan, Slow, Angle, Off

Shutter speed (PAL)

1/2 - 1/2000 sec (depending on shooting option selected).

Shutter Angle

Yes: 11.25° - 360.00° (depending on shooting option selected).

Slow Shutter (SLS)

50.00P: Auto slow shutter On: 1/25 to 1/500 sec. Auto slow shutter Off
1/50 to 1/500 sec.
25.00P: Auto slow shutter On 1/12.5* to 1/500 sec. (*Display is 1/12.)
Auto slow shutter Off: 1/25 to 1/500 sec.

Yes

Clear Scan

INFRARED

Infrared shooting mode

Yes

Built-in IR lamp

Yes, in Handle Unit

MISC.

Tally lamp

Yes

Colour Bars

EBU / SMPTE (PAL); SMPTE / ARIB (NTSC)

Accessory shoe

Cold Shoe

Custom Button Assignment

Yes. 14 assignable buttons (Camera Mode). 82 assignable functions via menu.

Wireless LAN standards

Supported Wi-Fi Functions

IEEE802.11b/g/n/a (2.4 GHz/5 GHz)

Browser Remote. (Camera Mode) FTP file transfer (Media Mode)

Encryption

Open Encoding, Open WEP, Shared key/WEP, WPA, WPA2-PSK, or WPA2-PSK AES.

Supported Browser for Remote Operation

Internet Explorer 8 or later, Safari (iOS 9 or 10), Safari (MacOS), Android standard browser Android 4.4 - 6.0

Remote Operation Control Features

Aperture, ND control, Focus, focus adjustment, White balance, Shutter speed, Gain, Exposure compensation, Shooting mode, Zoom, Slot selection. The free memory remaining on the media, time code, remaining battery charge, etc. can be checked. Live View.

Live view image Resolution

GPS Information (Optional Accessory)

Camera setting mode: 680 x 383
Simplified setting mode: 284 x 160

Location (latitude, longitude and altitude) as well as the GPS information while using Coordinated Universal Time (UTC) can be added to MP4 movies and photos. Also, based on this information, the satellite data acquisition status can be checked in camera mode.

TIME CODE

Count up system

Rec Run / Free Run

Start value setting

00:00:00:00 - 23:59:59:29 (PAL 23:59:59:24)

Drop Frame

DF / NDF

User BIT Type

Setting (00 00 00 00 - FF FF FF FF) / Time / Date

ACCESSORIES

Supplied

Lens cap, Lens hood with barrier, Mic holder unit (with screws), Shoulder strap (SS-1200), Wireless Controller, [WL-D6000], Lithium battery (CR2025), Compact Power Adapter (CA-CP200L), AC cable, Battery Pack BP-A30, Battery Charger (CG-A20)

Optional Accessories (Includes items not currently on sale)

Canon Battery Pack BP-A30/BP-A60, Canon Battery Charger CG-A10/CG-A20, Canon Compact Power Adapter CA-CP200L, Canon Wireless Controller WL-D6000, RC-V100 Remote Control Unit, Canon Tele Converter TL-US8, Canon Wide Attachment WA-US8, Canon Shoulder Strap SS-1200, Canon PROTECT filter 58 mm, Canon ND4-L filter 58 mm, Canon ND8-L filter 58 mm, Canon GPS Receiver GP-E2, Canon Remote Controller RC-V100, Tripod Adapter TA-100, Canon Interface Cable IFC-300PCU/S / IFC-400PCU

POWER SUPPLY/BATTERY

Power Consumption

50.00P: 3840x2160 XF-HEVC/160Mbps:- Approx. 20.8W

(Recording), 18.1W (Playback)

50.00P: 1920x1080 XF-AVC/45Mbps:- Approx. 18.8W

(Recording), 15.8W (Playback)

Battery Pack

14.4 V DC, BP-A30 (Supplied), BP-A60 (Optional)

Continuous Recording Time (approx.)

50.00P: 3840x2160 XF-HEVC/160Mbps:- Approx. 125 Mins (Maximum), 65 Minutes (Typical)

50.00P: 1920x1080 XF-AVC/45Mbps:- Approx. 135 Mins (Maximum), 80 Mins (Typical)

Mains Power

24V DC (Compact Power Adapter CA-CP200L, supplied)

MISCELLANEOUS

Dimensions

Approx. 191 x 258 x 433 mm (Approx. 7.5 x 10.2 x 17.0 in)

[Including lens hood, eyecup and mic holder unit]

Weight (camera only)

Approx. 2.600 g (including grip belt)

Operating Temperature range

Approx. 0 to 40 °C, 85% (relative humidity), Approx. -5 to 45 °C, 60% (relative humidity)

Footnotes:

All specifications are subject to change without notice

Canon Inc.
canon.com
Canon Europe
canon-europe.com
English edition
Canon Europa NV 2018

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Sales Start Date: December 2018

PRODUCT DETAILS:

Product Name	Mercury Code	EAN Code
XF705	3041C007AA	8714574659473

OPTIONAL ACCESSORIES

Accessories	Mercury Code	EAN Code
AC Adapter CA-CP200 L	3100C003AA	4549292121636
Battery Charger CG-A20	2416C003AA	4549292100310
Battery Charger CG-A20 GB	2416C005AA	8714574651781
Battery Charger CG-A10 (Twin Charger)	0872C003AA	4549292047585
Battery Pack BP-A30	0868C002AA	4549292047493
Battery Pack BP-A60	0870C002AA	4549292047523
Tele Converter TL-U58	2493C001AA	4549292105391
Wide Attachment WA-U58	2494C001AA	4549292105407
GPS Receiver GP-E2	6363B001AA	4960999848358
Remote Controller RC-V100	9660B001AB	4549292014013

MEASUREMENT / LOGISTIC INFORMATION:

Product Name	Mercury Code	Pack type	Pack description	Quantity per pack	Length (mm)	Width (mm)	Height (mm)	Gross Weight (kg)
XF705	3041C007AA	EA	Each	1	502	341	310	6.23
		CT	Carton	1	515	354	331	7.08
		EP	Euro Pallet	12	1200	800	1143	95.00

What's in the box?

- XF705 body
- Shoulder pad
- Lens hood with lens barrier
- Battery pack BP-A30
- Battery Charger CG-A20
- AC Adapter CA-CP200 L
- Mic holder
- Eye-cup
- Wireless Controller WL-D6000
- Shoulder Strap SS-1200

