SONY

HXC-FB75H/HXC-FB75KC
HD Portable Camera

HXC-F70
HD Multi-Purpose Camera

Exmor
FULL HD 3CMOS

2/3-Inch Full HD 3 CMOS Sensors, Hybrid Optical Cable Camera System

Sony introduces an ideal solution for entry-level HD and SD live production, delivering better quality and performance for live production. HXC-FB75 and HXC-P70 Cameras are equipped with three 2/3-inch Full HD Exmor CMOS sensors to provide excellent sensitivity (F12 at 1080i/59.94, F13 at 1080i/50) with a low noise ratio at -60 dB for clear images. With sensors common to both the HXC-FB75 and HXC-P70, you can flexibly combine these cameras as required, and you can use a wide range of output formats. By direct connection with hybrid fiber cable, both the HXC-FB75 and the HXC-P70 can support long-distance connection from camera head to CCU while also supplying power. When you connect via single-mode fiber cable, this direct connection distance can be extended up to 10 km. Both cameras can also be controlled from a CCU panel and remote controller.

Common features of HXC-FB75 & HXC-P70

Excellent Picture Quality

Three Exmor Full-HD CMOS Sensors
The HXC-FB75 and HXC-P70 are equipped with three 2/3-inch Exmor CMOS sensors delivering superior picture performance with Full HD resolution. Due to Sony's advanced sensor technologies, this imager provides brilliant sensitivity (F12 for 1920 x 1080/59.94i mode, F13 for 1920 x 1080/50i mode), a remarkable signal-to-noise ratio at -60 dB, and a high horizontal resolution of 1,000 TV lines.*1 All of these excellent features result in high-quality digital signals with extremely low noise. This significantly enhances shooting in low-light environments. In addition to the camera's high performance of these cameras, a wide range of output formats are available including 1080i/59.94,50, 1080PsF/29.97,25, 720p/59.94,50, 480i/59.94, and 576i/50.
*1 In 1920 x 1080i mode.

Equipped with a Direct Fiber Connector as Standard

Selectable use between hybrid fiber cable and single mode fiber cable can be realized on this multi-purpose connector. A Neutrik opticalCON DUO connector and hybrid cable provide secure protection against dust and liquid ingress because this connector has a small internal cover mechanism which guards against damage and interference while allowing long-distance extension with a power supply.

Variety of Picture Adjustment Functions

Skin-tone detail
This function allows adjustment (emphasis or suppression) of the detail level for a specific hue or chroma area in the image, such as human skin tones. Three channels of skin tone gate can be set. With this you are able to create the appropriate natural skin tone in a wide range, depending on shooting object conditions.

Natural Skin-tone Detail OFF   Natural Skin-tone Detail ON
                                                  Simulated images

Knee saturation
Hue and chroma in highlighted areas can be adjusted to reproduce natural human skin tones under strong lighting.

Knee Saturation OFF   Knee Saturation ON
                                      Simulated images

Selection of multiple gamma tables
Seven types of standard and four types of hyper gamma table are featured. The hyper gamma values enable cinema-like image creation with wide dynamic range.

Adaptive-matrix function
This enables ideal color conversion for shooting even under excessively strong ambient lighting conditions such as live shooting under bright monochromatic blue light. These conditions.

Other functions
Black Gamma, Multo-Matrix, Low Key Saturation, Master White Gain, Extended Clear Scan Shutter, etc.

Auto Lens Aberration Compensation (ALAC) Function

Use this function to improve chromatic aberration according to the correcting value of the lens.*2
*2 When using applicable lenses.

Total Level Control System in Auto Gain, Auto Iris, and Auto Shutter

This function automatically adjusts optimum gain, iris, and shutter speed in accordance with each shooting situation.

Digital Extender

It is available at x2 or x4 magnified picture output.
x2 or x4 mode can be remotely controlled by the selection of assignable setting.
The CCU control panel of HXCU-FB70, RCP remote control panel, or an external control via Sony Simple Camera Protocol can change the Digital Extender mode.

x1 (normal)   x2   x4

Expandable Operability with the HXCU-FB70

The HXCU-FB70 Optical Fiber Camera Control Unit (CCU) enables precise control of HXC-FB75 and HXC-P70 picture adjustments, and ensures easy and precise color matching among HXC-D70, HXC-FB75, and HXC-P70 cameras.

USB Interface

By connecting USB flash drivers, the data configuration files can be saved and loaded.

HDVF Interface for Connecting a Variety of Viewfinders

The HXC-FB75 have an HDVF interface that suits the latest HD portable viewfinders (including OLED display devices) offering high picture quality.

HDVF-EL20   HDVF-EL30   HDVF-L750

HXC-FB75

HXC-FB75KC

HXC-FB75H

CCU Connection, Transmission, and Power Extension (up to 350 m) Via Hybrid-Type Optical Fiber Cable

When you configure the HXC-FB75 with the HXCU-FB70 CCU, the camera head connector combined with hybrid-type optical fiber cable supports extended signal transmission with the required power supply up to 350 m. Full camera control is possible through a user-friendly operational panel designed specifically to work with HXC Series cameras.

Long-Distance Transmission (up to 10 km) with Single-Mode Fiber Cable

When you connect using a single-mode fiber (SMF) cable, and provided there is a local power supply, transmission can extend up to 10 km. In many facilities, SMF is already laid as part of the infrastructure, allowing you to install the camera system quickly and easily.

Supplied with HD Viewfinder, HD Lens and Monaural Microphone

The HXC-FB75KC camera package includes the 3.5-inch QHD Color LCD Monocular Viewfinder which offers better and easier focusing than comparable viewfinders. The camera is also supplied with a portable HD 20x zoom lens and monaural electret condenser microphone.

Slow Shutter with 8-Frame Accumulation and +12 dB Gain-Up

Utilizing the Slow Shutter function, you can achieve up to 8 frames of frame accumulation. In combination with the +12 dB gain-up function, appropriately exposed pictures are available while keeping sharpness without noise, even in very dark environments. These unique features can be used in a wide range of applications.
*3 This capability is available only in HD1080 mode; it is unavailable in HD720 mode.

SD Down-Converter

You can achieve down-converted SD signal output from both the HXC-FB75 and the HXCU-FB70.

Built-In Optical ND Filter with Electrical CC Filter

The HXC-FB75 is equipped with a neutral density (ND) optical filter and electrical color correction (CC) filter. The ND filter supports ND: 1; CLEAR, 2; 1/4ND, 3; 1/16ND, and 4; 1/64ND. Along with the electrical CC filter, you can achieve the appropriate color temperature by white balance adjustment and also change the color temperature according to your preference.

Versatile Camera Interfaces
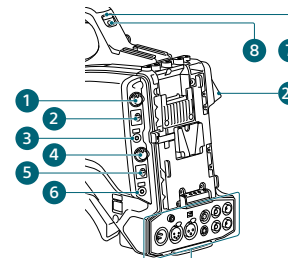
1. PGM LEVEL	11. REMOTE
2. RET2 selector switch	12. TEST OUT
3. RET1	13. SDI OUT
4. INTERCOM LEVEL	14. DC IN
5. INTERCOM MIC switch	15. INTERCOM
6. CALL	16. AUDIO2 IN
7. TALLY indicators	17. DC OUT
8. TALLY switch	18. PROMPTER/GENLOCK
9. EARPHONE jack	19. SDI IN
10. LINE/Mic/+48V selector switch	20. CCU connector

HXC-P70

Long-distance Transmission up to 10 km

The hybrid-type optical fiber cable can extend the distance between the camera and the HXCU-FB70 CCU to a maximum of 500 m* while supplying the required power. Using single-mode fiber (SMF) cables, this distance can extend up to 10 km with local power supply. The HXC-P70 can utilize the SMF cable infrastructure that's often available in many buildings, which means you can install the camera system quickly and easily.

* Fiber cable extension up to 500 m is available when you are also using a portable lens.

Slow Shutter with 64-frame Accumulation and +48 dB Gain-up

Utilizing the Slow Shutter function, frame accumulation is possible up to 64 frames.* In combination with the +48 dB gain-up function, very bright pictures are available even in very dark environments. These unique features can be used in wider roles such as surveillance and security, in addition to production studio, auditorium, conference, houses of worship, and other unmanned applications.

* This is available only in HD1080 mode. It does not work in HD720 mode.

Integrated ND Filter, Electrical CC Filter

The HXC-P70 is equipped with a neutral density (ND) optical servo filter unit and electrical color correction (CC) filter. Along with ND filter selection, the CC filter can be controlled locally or from a remote control panel and offers four color temperature settings.
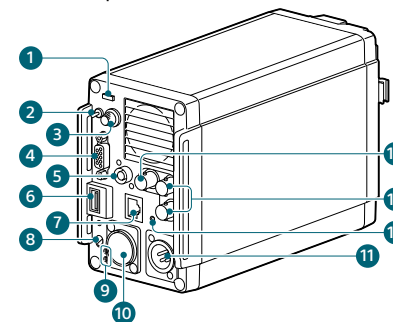
Total Level Control System (TLCS)

The TLCS function provides automatic control of gain/iris/shutter, and is a highly effective tool to cope with changing lighting conditions for surveillance use. It helps to achieve the shooting image with the required picture level.

IP Connection from RCP

Remote control over an IP connection from the remote control panel (RCP) is provided via a LAN Cable interface on the rear panel. This is available in addition to the traditional 8-pin remote connector.

Versatile Camera Interfaces

The HXC-P70 provides a wide range of inputs and outputs via the onboard connector panel, including two HD/SD-SDI outputs, a return signal output, prompter signal output, and test (VBS analog) signal output, etc. Moreover, there are Ethernet interfaces for remote control in addition to the remote 8-pin connector, and trunk line and assignable functions on the D-sub 9-pin connector.

1. Tally Indicator
2. Display switch
3. Menu switch
4. EXT I/O
5. REMOTE
6. USB
7. REMOTE, RJ-45
8. POWER switch
9. CONDITION of supplied Fiber Signal Level & Power (LEDs)
10. CCU connector
11. DC IN
12. NETWORK indicator
13. SDI Out 1/2
14. GENLOCK/TEST

In addition to these electrical interfaces, the camera has top and bottom plates that are mechanically the same; the position and size of the screws and holes are identical. This allows you to achieve upside-down installation.

Common features of HXC-FB75 & HXC-P70

Expandable Operability with the HXCU-FB70

The HXCU-FB70 Optical Fiber Camera Control Unit (CCU) enables precise control of HXC-FB75 picture adjustment and ensures easy and precise color matching among the HXC-P70 and HXC-D70 with the CA-FB70 as a common CCU model. There are two ways to connect to the camera head: hybrid fiber cable or single mode fiber cable. Both connections can be realized using the same Neutrik opticalCON DUO cable on the camera head side of the HXC-FB75 and HXC-P70.

HXCU-FB70 Front

HXCU-FB70 Rear

Hybrid fiber cable
with power supply capabllity

Single mode fiber cable
with LC connector

HXCE-FB70: Power Supply Extension Unit

The HXCE-FB70 is beneficial for building a flexible system by the combination of Sony CCFN hybrid cable and single mode fiber cable in order to keep the durability of cable wiring in long distance.
The HXCE-FB70 has the same power supply capability as the HXCU-FB70, and can pass all the signals through either a single-mode optical fiber cable or a hybrid fiber cable.
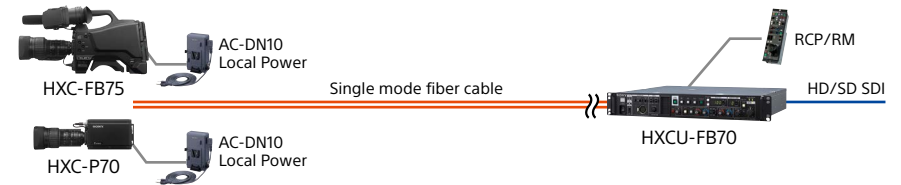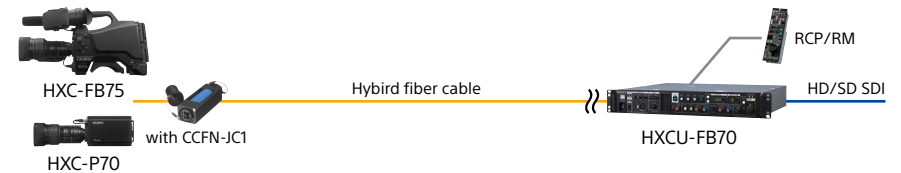
HXCE-FB70 Front

HXCE-FB70 Rear

Long-Distance Cable Extension

There are different types of extension cable connection. For fiber cable connection, you can use single-mode fiber or hybrid fiber. These cables can be combined with the HXCE-FB70. In addition, you can achieve triax cable connection using the camera adaptor in combination with a triax CCU.

1. Single mode fiber(SMF) cable

HXC-FB75 — AC-DN10 Local Power
HXC-P70 — AC-DN10 Local Power
Single mode fiber cable — HXCU-FB70
RCP/RM
HD/SD SDI

2. Hybird oprical fiber cable

HXC-FB75
HXC-P70 — with CCFN-JC1
Hybird fiber cable — HXCU-FB70
RCP/RM
HD/SD SDI

3.Combination of SMF and Hybrid optical fiber

HXC-FB75
HXC-P70 — with CCFN-JC1
Hybrid fiber cable — HXCE-FB70 — Single mode fiber cable — HXCU-FB70
SMF to/from CCFN (LC - OpticalCON DUO) — AC Power
RCP/RM
HD/SD SDI

4. Triax cable

HXC-FB75 + CA-TX70
Triax cable   Max.600m/1200m — HXCU-TX70
RCP/RM
HD/SD SDI
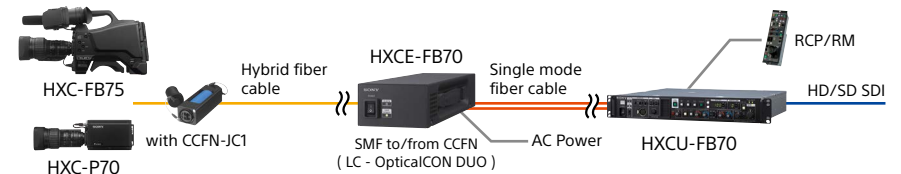
Max transmission distance	Single mode fiber	Hybrid optical fiber	Triax with CA-TX70
HXC-FB75	10 km	350 m	Φ14.5 mm cable: 1,200 m Φ8.5 mm cable: 600 m
HXC-P70	10 km	500 m	-

5

Live System Example

Studio Live System

As the HXC-FB75, HXC-P70, and PXW-X400 share a common imager, you can:
1. Adjust image reproduction easily between these cameras
2. Expand your live production system flexibly and cost effectively

Hybird fiber cable — BNC — 8-pin remote

HXC-FB75 — HXCU-FB70
HXC-D70 + CA-FB70 — HXCU-FB70
HXC-P70 — HXCU-FB70
PXW-X400 + CA-FB70 — HXCU-FB70
RCP-1000 series
MCS-8M — PGM / AUX1 / AUX2

Conference/Education/Presentation Applications

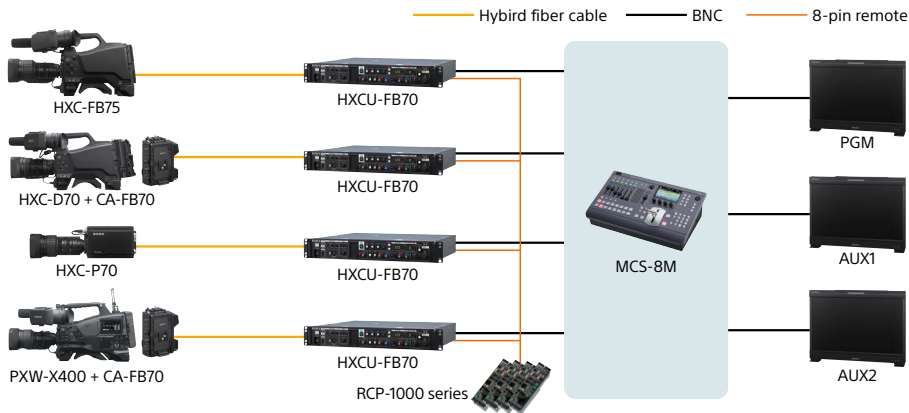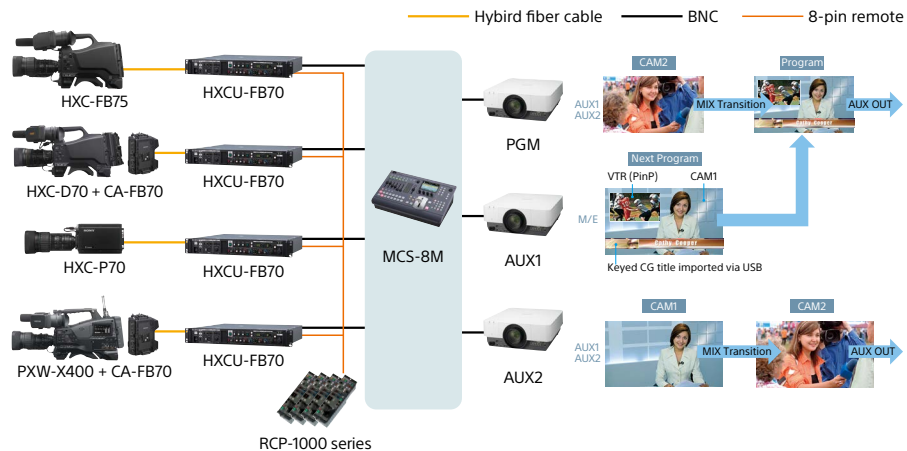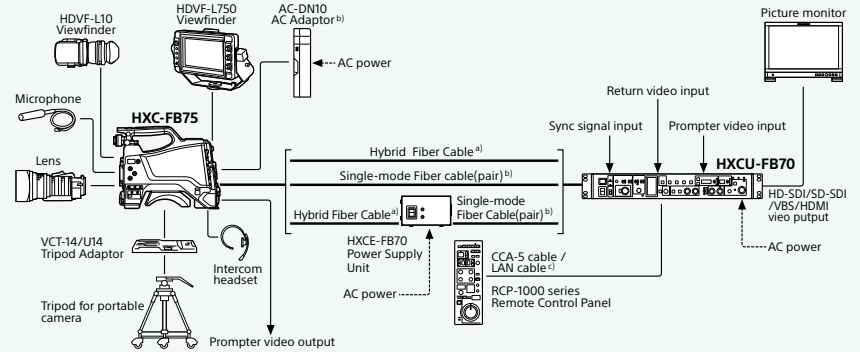In conference, education, and other presentation applications, you may decide to use a combination of HXC-FB75, HXC-P70, and PXW-X400 devices. In this mixed use environment, their common imager allows you to easily adjust each device to achieve the same image reproduction. Also, when your system is configured with the HXC-P70, you may find you need fewer production crew members. The MCS-8M provides three different outputs as PGM and AUX1&2, which is very good for conference, education, and other presentation applications.
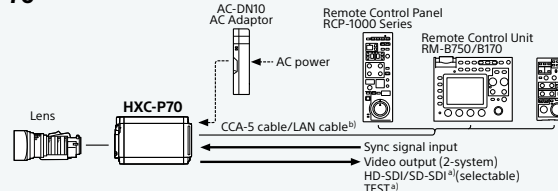

Hybird fiber cable — BNC — 8-pin remote

HXC-FB75 — HXCU-FB70
HXC-D70 + CA-FB70 — HXCU-FB70
HXC-P70 — HXCU-FB70
PXW-X400 + CA-FB70 — HXCU-FB70
MCS-8M — PGM / AUX1 / AUX2
RCP-1000 series

CAM2 / Program / MIX Transition / AUX OUT
AUX1 AUX2
Next Program
VTR (PinP) / CAM1
M/E
Keyed CG title imported via USB
CAM1 / CAM2 / MIX Transition / AUX OUT
AUX1 AUX2

System configuration Examples

HXC-FB75

HDVF-L10 Viewfinder
HDVF-L750 Viewfinder
AC-DN10 AC Adaptor [b] --- AC power
Microphone
Lens
HXC-FB75
VCT-14/U14 Tripod Adaptor
Tripod for portable camera
Intercom headset
Hybrid Fiber Cable [a]
Single-mode Fiber cable(pair) [b]
Hybrid Fiber Cable [a]
Single-mode Fiber Cable(pair) [b]
HXCE-FB70 Power Supply Unit
AC power
CCA-5 cable / LAN cable [c]
RCP-1000 series Remote Control Panel
Prompter video output
Sync signal input
Return video input
Prompter video input
Picture monitor
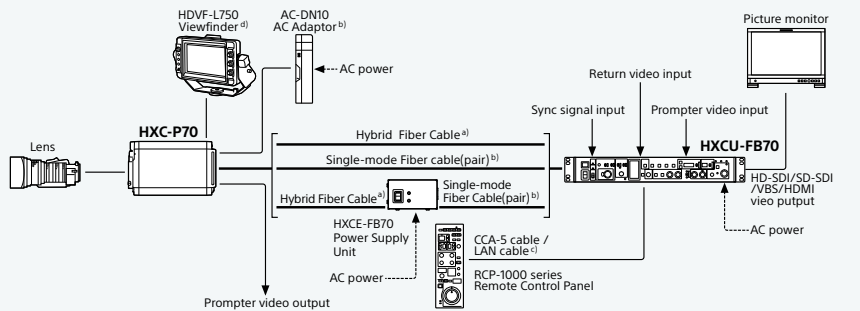HXCU-FB70
HD-SDI/SD-SDI /VBS/HDMI vieo output
AC power

a) The maximum transmission distance is approximately 350 m (1,150 ft) when using Sony CCFN-25/50/100/150/200/250 Hybrid Fiber Cable (with portable lens). Hybrid fiber cable joint CCFN-JC1 may be required depending on cable length.

b) The maximum transmission distance is approximately 10 km (6 miles) when using general-purpose single-mode fiber cables with LC connectors. In this connection, an external power supply AC-DN10 is necessary.

c) A LAN cable can be used only to connect the RCP-1500/1501/1530. To connect it, power needs to be supplied via a PoE hub or power needs to be supplied to the EXT DC IN connector of the RCP-1500/1501/1530.

HXC-P70

AC-DN10 AC Adaptor --- AC power
Remote Control Panel RCP-1000 Series
Remote Control Unit RM-B750/B170
Lens
HXC-P70
CCA-5 cable/LAN cable [b]
Sync signal input
Video output (2-system) HD-SDI/SD-SDI [a](selectable)
TEST [a]

a) No subcarrier phase-lock function with respect to external reference is available for the TEST signal output from the camera.

b) A LAN cable can be used only to connect the RCP-1500/1501/1530. To connect it, power needs to be supplied via a PoE hub or power needs to be supplied to the EXT DC IN connector of the RCP-1500/1501/1530.

HXC-P70

HDVF-L750 Viewfinder [d]
AC-DN10 AC Adaptor [b] --- AC power
Lens
HXC-P70
Hybrid Fiber Cable [a]
Single-mode Fiber cable(pair) [b]
Hybrid Fiber Cable [a]
Single-mode Fiber Cable(pair) [b]
HXCE-FB70 Power Supply Unit
AC power
CCA-5 cable / LAN cable [c]
RCP-1000 series Remote Control Panel
Prompter video output
Sync signal input
Return video input
Prompter video input
Picture monitor
HXCU-FB70
HD-SDI/SD-SDI /VBS/HDMI vieo output
AC power

a) The maximum transmission distance is approximately 500 m (1,640 ft) when using Sony CCFN-25/50/100/150/200/250 Hybrid Fiber Cable (with portable lens). Hybrid fiber cable joint CCFN-JC1 may be required depending on cable length.

b) The maximum transmission distance is approximately 10 km (6 miles) when using general-purpose single-mode fiber cables with LC connectors. In this connection, an external power supply AC-DN10 is necessary.

c) A LAN cable can be used only to connect the RCP-1500/1501/1530. To connect it, power needs to be supplied via a PoE hub or power needs to be supplied to the EXT DC IN connector of the RCP-1500/1501/1530.

d) The HDVF-L750 is connected by external EXT DC IN and SDI IN signals.

Specifications

		HXC-FB75KC	HXC-FB75H
General	Power Requirements	CCU: DC 48 V, 2.8 A (max.)	CCU: DC 48 V, 2.8 A (max.)
		Ext.DC In: DC 12 V, 5.4 A (max.)	Ext.DC In: DC 12 V, 5.4 A (max.)
	Power Consumption	Approx.18 W (Camera body only)	Approx.18 W (Camera body only)
		Approx. 21 W (Camera body with supplied viewfinder)	
	Operating Temperature	-10°C to +45°C	-10°C to +45°C
		(14°F to +113°F)	(14°F to +113°F)
	Storage Temperature	-20°C to +60°C	-20°C to +60°C
		(-4°F to +140°F)	(-4°F to +140°F)
	Dimensions (W x H x D)*¹	160 x 266 x 333 mm	160 x 266 x 333 mm
		(6 3/8 x 10 1/2 x 13 1/8 inches)	(6 3/8 x 10 1/2 x 13 1/8 inches)
	Mass	Main body only : Approx. 3.3 kg	Main body only : Approx. 3.3 kg
		Approx. 7 lb 4.4 oz	Approx. 7 lb 4.4 oz
Camera Section	Pickup Device	3-chip 2/3-inch type CMOS	3-chip 2/3-inch type CMOS
	Effective Picture Elements	1920 x 1080 (H x V)	1920 x 1080 (H x V)
	Signal Format	HD: 1080/59.94i, 1080/50i, 1080/29.97PsF,	HD: 1080/59.94i, 1080/50i, 1080/29.97PsF,
		1080/25PsF, 720/59.94p, 720/50p	1080/25PsF, 720/59.94p, 720/50p
		SD: 480/59.94i, 576/50i	SD: 480/59.94i, 576/50i
	Spectrum System	F1.4 prism system	F1.4 prism system
	Lens Mount	Sony 2/3"-type bayonet mount	Sony 2/3"-type bayonet mount
	Built-in Filters	CC: Electrical	CC: Electrical
		ND: 1; CLEAR, 2; 1/4ND, 3; 1/16ND, 4; 1/64ND	ND: 1; CLEAR, 2; 1/4ND, 3; 1/16ND, 4; 1/64ND
	Sensitivity (at 2000 lx, 3200K, 89.9% reflectance)	F12 (59.94 Hz), F13 (50 Hz)	F12 (59.94 Hz), F13 (50 Hz)
	Signal-to-noise Ratio	Typical 60 dB*² (1080/59.94i)	Typical 60 dB*² (1080/59.94i)
	Modulation Depth	HD : 45% or higher at 27.5 MHz (1080i)	HD : 45% or higher at 27.5 MHz (1080i)
	Horizontal Resolution	1,000 TV lines or higher	1,000 TV lines or higher
	Gain	-3, 0, 3, 6, 9, 12 dB	-3, 0, 3, 6, 9, 12 dB
	Shutter Speed	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (59.94i mode)	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (59.94i mode)
		1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (50i mode)	1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (50i mode)
	Shutter Speed (Slow Shutter (SLS)	2, 3, 4, 5, 6, 7, 8-frame accumulation (Only for HD1080 mode)	2, 3, 4, 5, 6, 7, 8-frame accumulation (Only for HD1080 mode)
Input/Output	Audio 1	XLR type: 3-pin, female	XLR type: 3-pin, female
		MIC IN: -60 dBu (Up to -20 dBu can be set by using menu or HXCU-FB70), balanced	MIC IN: -60 dBu (Up to -20 dBu can be set by using menu or HXCU-FB70), balanced
		LINE IN: 0 dBu, balanced	LINE IN: 0 dBu, balanced
	Audio 2	XLR type: 3-pin, female	XLR type: 3-pin, female
		MIC IN: -60 dBu (Up to -20 dBu can be set by using menu or HXCU-FB70), balanced	MIC IN: -60 dBu (Up to -20 dBu can be set by using menu or HXCU-FB70), balanced
		LINE IN: 0 dBu, balanced	LINE IN: 0 dBu, balanced
	Prompter/Genlock	BNC (x1); GenLock In or Prompter Out	BNC (x1); GenLock In or Prompter Out
	SDI Input	BNC (x1), for Return	BNC (x1), for Return
	Test Output	TEST Out (Analog output with/without characters), or HD/SD Sync Out	TEST Out (Analog output with/without characters), or HD/SD Sync Out
	SDI Output	BNC (x1), HD-SDI or SD-SDI selectable	BNC (x1), HD-SDI or SD-SDI selectable
	CCU	Optical Fiber (x1), CCFN cable or Single Mode Fiber cable (LC type)	Optical Fiber (x1), CCFN cable or Single Mode Fiber cable (LC type)
	Distance of Power Supply (with HXCU-FB70)	350 m (max.) by CCFN Sony Hybrid Type Fiber Cable with Portable Lens Installed	350 m (max.) by CCFN Sony Hybrid Type Fiber Cable with Portable Lens Installed
	Distance of Fiber Cable (with HXCU-FB70)	10 km (max.) by Single Mode Fiber Cable (LC type) with Local Power Supply	10 km (max.) by Single Mode Fiber Cable (LC type) with Local Power Supply
	Intercom	XLR type: 5-pin, female (x1)	XLR type: 5-pin, female (x1)
	Earphone Output	Stereo minijack (x1)	Stereo minijack (x1)
	Lens	12-pin (x1)	12-pin (x1)
	Viewfinder	20-pin (x1), for HDVF only	20-pin (x1), for HDVF only
	Remote	8-pin (x1)	8-pin (x1)
	TRUNK Input/Output	TRUNK LINE D-sub 9-pin, female (x1) RS-232C	TRUNK LINE D-sub 9-pin, female (x1) RS-232C
	EXT Input/Output	(in TRUNK I/O) D-sub 9-pin, female (x1)	(in TRUNK I/O) D-sub 9-pin, female (x1)
	USB	USB 2.0 (x1)	USB 2.0 (x1)
	DC Input	XLR-type 4-pin (x1), DC 10.5 V to 17 V	XLR-type 4-pin (x1), DC 10.5 V to 17 V
	DC Output	4-pin (x1), DC 10.5 V to 17 V, 1.5 A (max.)	4-pin (x1), DC 10.5 V to 17 V, 1.5 A (max.)
Viewfinder Display	Screen Size	8.8 cm diagonal (3.5 inch)	-
	Apsect Ratio	16:9	-
	Picture Elements	960(H) x 3 x 540(V) RGB stripe array	-
Lens	Lens Mount	2/3"-type Sony Bayonet	-
	Focal Length	8.2 mm (11/32 inches) to 164 mm (6 1/2 inches)	-
	Zoom	Servo/Manual selectable	-
	Zoom Ratio	20 x	-
	Maximum Relative Apperture	1: 1.9	-
	Iris	Auto/Manual selectable	-
		F1.9 to F16 and C (Close)	-
	Focus	Full manual focus	-
		900 mm to ∞ (MACRO OFF)	
		10 mm to ∞ (MACRO ON, Wide)	
	Filter Thread	M82 mm, pitch 0.75 mm	-
	Macro	On/Off switchable	-
Supplied Accessories		Operation Guide (1), Operation Manual (CD-ROM 1), 2/3"-type HD Portable Lens (1), Viewfinder (1), Microphone (1), Windscreen(1), Lens Mount Cap (1), Flange back adjustment chart (1), Cable clamp belt (1)	Operation Guide (1), Operation Manual (CD-ROM 1), Lens Mount Cap (1), Flange back adjustment chart (1), Cable clamp belt (1)

*1 The values for dimensions are approximate.   *2 The value is in NS (Noise Suppressor) : ON mde.

		HXC-P70
General	Power Requirements	CCU: DC 48 V, 1.7 A (max.)
		Ext.DC In: DC 12 V, 3.6 A (max.)
	Power Consumption	17W
	Operating Temperature	-10°C to +45°C
		(14°F to +113°F)
	Storage Temperature	-20°C to +60°C
		(-4°F to +140°F)
	Dimensions (W x H x D)*³	86 x 130 x 210 mm
		(3 1/2 x 5 1/8 x 8 3/8 inches)
	Mass	Approx. 1.5 kg
		Approx. 3 lb 4 oz
Camera Section	Pickup Device	3-chip 2/3-inch type CMOS
	Effective Picture Elements	1920 x 1080 (H x V)
	Signal Format	HD: 1080/59.94i, 1080/50i, 1080/29.97PsF, 1080/25PsF, 720/59.94p, 720/50p
		SD: 480/59.94i, 576/50i
	Spectrum System	F1.4 prism system
	Lens Mount	Sony 2/3"-type bayonet mount
	Built-in Filters	CC: Electrical
		ND: 1; CLEAR, 2; 1/4ND, 3; 1/16ND, 4; 1/64ND
	Sensitivity (at 2000 lx, 3200K, 89.9% reflectance)	F12 (59.94 Hz), F13 (50 Hz)
	Signal-to-noise Ratio	Typical 60 dB*⁴ (1080/59.94i)
	Modulation Depth	HD : 45% or higher at 27.5 MHz (1080i)
	Horizontal Resolution	1,000 TV lines or higher
	Gain	-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB
	Shutter Speed	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (59.94i mode)
		1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec (50i mode)
	Shutter Speed (Slow Shutter (SLS)	2, 3, 4, 5, 6, 7, 8, 16, 32, 64-frame accumulation (Only for HD1080 mode)
Input/Output	Mic Input	-60 dBu to -20 dBu, Balance, via D-Sub 9-pin, female (x1)
	GL/Test	BNC (x1); Gen-Lock In, HD/SD Sync Out, Prompter Out, or TEST Out (Analog output with characters)
	SDI Output	BNC (x2) HD-SDI or SD-SDI selectable
	CCU	Optical Fiber (x1), for Single Mode Fiber Cable
	Distance of Power Supply (with HXCU-FB70)	500 m (max.) by CCFN Sony Hybrid Type Fiber Cable with Portable Lens Installed
	Distance of Fiber Cable (with HXCU-FB70)	10 km (max.) by Single Mode Fiber Cable with Local Power Supply
	Lens	12-pin (x1)
	Remote	8-pin (x1)
		RJ-45 (x1), Ether 10BASE-T, 100BASE-TX
	TRUNK Input/Output	(in EXT I/O) D-sub 9-pin, female (x1)
	EXT Input/Output	D-Sub 9-pin, female (x1) RS-232C
	USB	USB 2.0 (x1)
	DC Input	XLR-type 4-pin (x1), DC 10.5 V to 17 V
	DC Output	DC 10.5 V to 17 V, 1.5 A (max.) via D-Sub 9-pin
Supplied Accessories		Operation Guide (1), Operation Manual (CD-ROM 1), Tally Number Plate (1)

*3 The values for dimensions are approximate.   *4 The value is in NS (Noise Suppressor) : ON mode.

Specifications

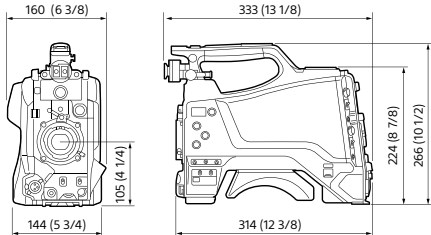## HXCU-FB70

General	
Power supply	AC 100 V to 240 V, 50/60 Hz
Operating Temperature	5°C to 40°C (41°F to 104°F)
Storage Temperature	-20°C to +60°C (-4°F to +140°F)
Dimensions (W x H x D)	482 x 66 x 365 mm (19 x 2 5/8 x 14 3/8 inches, 1.5U rack-mount size)
Mass	6.5 Kg (14 lb 5.3 oz)

Inputs/Outputs	
Camera	Optical Multi connector
Intercom/Tally/PGM	D-sub 25-pin, female (x1)
	Intercom (PROD and ENG), 4W/RTS/CC, 0 dBu
	Tally (R and G)
	PGM x 1 system, -20/0/+4 dBu
Remote	8-pin (x1)
Trunk	D-sub 9-pin (x1), female, RS-232C system (Only for HXC-D70 camera)
LAN	RJ-45 8-pin (x1) Control
SDI output	BNC (x4) HD/SD selectable at each pair of two outputs
Analog video output	BNC (x3) Selectable from HD (Y/Pb/Pr or R/G/B) or SD (Y/Cb/Cr or R/G/B)
S-Video (Y/C) output	Mini DIN 4-pin (x1)
VBS output	BNC (x2)
HDMI monitor output	Type A 19-pin (x1), HDMI version : Ver. 1.3
PIX (monitor, VBS) output	BNC (x1)
Sync output	BNC (x1)
Audio outputs	XLR 3-pin(x2)
Return input (VBS)	BNC (x2)
Return input (SDI)	BNC (x2) HD/SD selectable
Prompter input (VBS)	BNC (x1) with loop-through output BNC (x1)
Reference input and loop-through	BNC (x1) with loop-through output BNC (x1)
	HD : SMPTE-274M, tri-level sync, 0.6 Vp-p, 75 Ω
	SD : Black burst (NTSC: 0.286 Vp-p, 75 Ω/PAL: 0.3 Vp-p, 75 Ω)
Intercom headset	XLR 5-pin (x1)

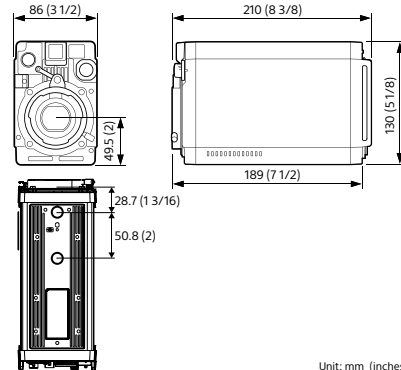| Supplied accessories	
	Number plates (1 set), Operation instructions (1), CD-ROM (1), Warranty booklet (1)

HXCE-FB70

General	
Power supply	AC 100 V to 240 V, 50/60 Hz
Operation temperature	5°C to 40°C (41°F to 104°F)
Storage temperature	5°C to 40°C (41°F to 104°F)
Dimensions (W x H x D)	104 x 62 x 360 mm (4 1/8 x 2 1/2 x 14 1/4 inches)
Mass	2.3 Kg (5 lb 1.1 oz)

Inputs/Outputs	
Camera	Optical Multi connector (x1)
CCU	Optical Multi connector (x1)

Supplied accessories	
	Operation instructions (1), CD-ROM (1), Warranty booklet (1)

Dimensions

HXC-FB75

160 (6 3/8)
333 (13 1/8)
224 (8 7/8)
266 (10 1/2)
105 (4 1/4)
144 (5 3/4)
314 (12 3/8)

HXC-P70

86 (3 1/2)
210 (8 3/8)
49.5 (2)
130 (5 1/8)
189 (7 1/2)
28.7 (1 3/16)
50.8 (2)

Unit: mm (inches)

Optional Accessories

HDVF-L750
7-inch*[1]
LCD Color Viewfinder

HDVF-L770[2]
7-inch*[1]
LCD Color Viewfinder

HDVF-EL75[2]
7.4-inch*[1]
OLED Color Viewfinder

HDVF-EL20
OLED 0.7-inch*[1] Color
HD Viewfinder

HDVF-EL30
OLED 0.7-inch*[1] Color
Full HD Vewfinder with
3.5-inch*[1] sub-LCD

RCP-1000
Remote Control Panel

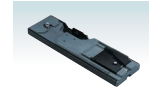**RCP-1001**
Remote Control Panel

RCP-1500
Remote Control Panel

RCP-1501
Remote Control Panel

RCP-1530
Remote Control Panel

RM-B170
Remote Control Unit

VCT-U14
Tripod Adaptor

VCT-14
Tripod Adaptor

CNA-1
Camera Control
Network Adaptor

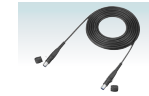**HXCU-FB70**
Optical Fiber
Camera Control Unit

HXCE-FB70
Power Supply
Extension Unit

CA-TX70
Digital Triax
Camera Adaptor

HXCU-TX70
Triax Cable
Camera Control Unit

CCFN-25/50/100/150/200/250
Hybrid-type Optical
Fiber Cable

CCFN-JC1
Neutrik Cable Coupler

HKC-LC01
LEMO 3K.93C. Connector
for HXC-FB75

HKC-LC02
LEMO 3K.93C. Connector
for HXCU-FB70, HXCE-FB70

BVM-F170A
17-inch*[1] OLED
Master Monitor

LMD-A240
24-inch*[1] LCD
Picture Monitor

LMD-B170
17-inch*[1] LCD
Picture Monitor

ECM-678
Shotgun Electret
Condenser Microphone

HZC-RCP5
Remote Control
Software for Windows 7

J-712-156-0A
Sony Camera Test
Charts

MS-15
Canon Semi-Servo Control Kit
(Focus and Zoom)

*1 Viewable area measured diagonally
*2 For mounting of the viewfinder, please contact your nearest Sony or dealer's office.

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