

# Optical Fiber Camera System Digital Triax Camera System

**SONY**



Sony newly introduces a variety of transmission options along with more flexible operation of professional live camera systems.

The CA-FB70 Optical Fiber Camera Adaptor and the CA-TX70 Digital Triax Camera Adaptor can be attached to the HXC-D70 Digital Multi-core Transmission Camera as well as to PMW-320/400/500 camcorders. The CA-FB70 provides excellent picture quality as well as flexible integration, while the CA-TX70 offers outstanding reliability especially in tough field operation.

## **CA-FB70**

Optical Fiber Camera Adaptor

## **HXCU-FB70**

Optical Fiber Camera Control Unit

## **HXCE-FB70**

Power Supply Unit

## **CA-TX70**

Digital Triax Camera Adaptor

## **HXCU-TX70**

Digital Triax Camera Control Unit

## **HKCU-FP2**

Front Control Panel

# CA-FB70 Optical Fiber Camera Adaptor

Ideal solution for more flexible system integration

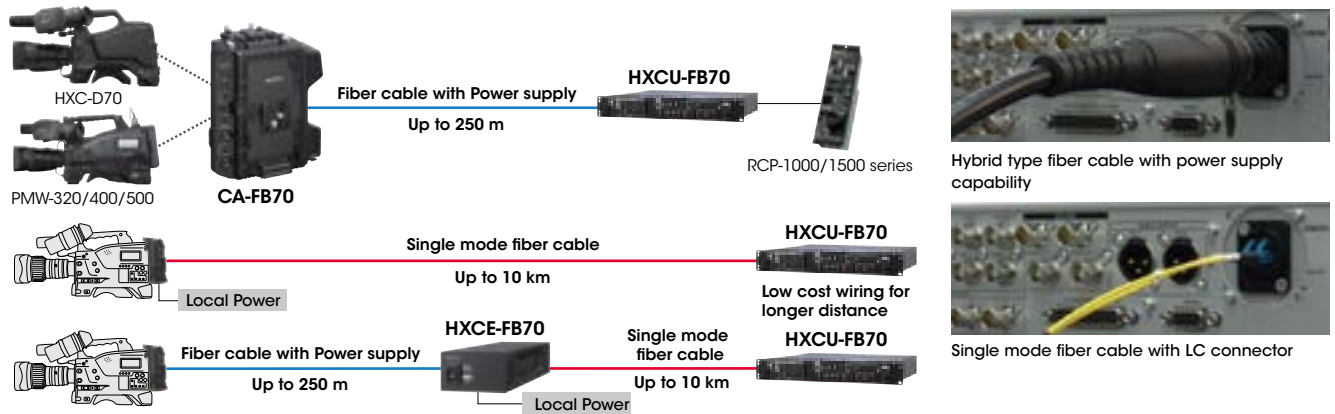


## Flexible Integration with Optical Fiber Cables

The CA-FB70, HXCU-FB70 Optical Fiber CCU, and HXCE-FB70 Power Supply Extension Unit all have a unique connector for fiber cable connection as standard. The CA-FB70 can accept either a standard optical LC-Duplex connector (for cost-effective single-mode fiber cable), or a rugged-type connector (for connection to power and fiber composite cable such as CCFN-25/50/100/150/200/250). This enables flexible integration for a variety of

applications such as (1) up to 250 m connection between the CA-FB70 and HXCU-FB70 with power and signal transmission, (2) up to 10 km connection between the CA-FB70 and HXCU-FB70 with only signal transmission, and (3) the HXCE-FB70 can be located between the CA-FB70 and HXCU-FB70.

\*Note Distance capability for the case power supply depends on the combination of camera and accessories. For more details, please contact your nearest Sony sales office.



## HXCU-FB70: Optical Fiber Camera Control Unit (CCU)

The HXCU-FB70 is a dedicated CCU for the CA-FB70. The front panel incorporates commonly used controls for picture adjustment and color matching in multiple camera operation. The rear panel includes a variety of input and output connectors which are convenient for live event production.



HXCU-FB70 Front



HXCU-FB70 Rear

## HXCE-FB70: Power Supply Extension Unit

The HXCE-FB70 is beneficial for building a flexible system which needs longer wiring (more than 250 m) but also requires a power supply to the camera. The HXCE-FB70 has the same power supply capability as the HXCU-FB70, and can pass all signals between the CA-FB70 and HXCU-FB70 through either a single-mode optical fiber cable or a hybrid optical/power cable.



HXCE-FB70 Front



HXCE-FB70 Rear

# COMMON FEATURES OF THE CA-FB70 AND CA-TX70

## Expanded Transmission Flexibility for HXC-D70 cameras

The HXC-D70 system camera has a unique rear-panel design; various types of adaptors can be attached to expand the functionality of this camera. By utilizing this capability, either the CA-FB70 or CA-TX70 can add advanced signal transmission to the HXC-D70, via optical fiber or triax cable, respectively. This delivers greater flexibility and choice in various live camera applications.

## Professional Interfaces for Live Operation

Along with these transmission capabilities, the new adaptors provide essential interfaces and several functions for live camera operation, such as tally signals, a viewfinder display showing one of four sources of return signals, an intercom function that supports both PROD and ENG lines, and more.

## Cable-less Connection

CA-FB70 and CA-TX70 adaptors offer simple and direct connectivity to the HXC-D70 camera and also to PMW-320/400 and PMW-500 shoulder camcorders (No cable clusters).

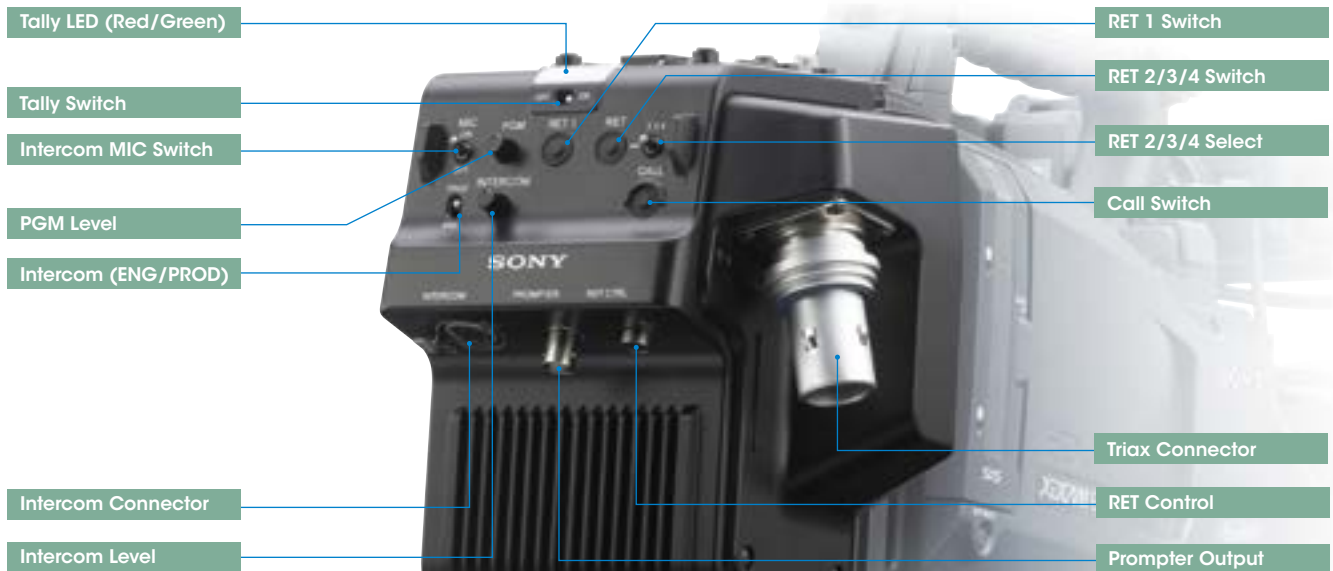
\*1 A specific firmware version is required for the HXC-D70, PMW-320/400, or PMW-500 to attach the CA-FB70 or CA-TX70. Please contact your nearest Sony sales office for details.

\*2 When combining PMW-320/400/500 camcorders and the CA-FB70 or the CA-TX70, TC (timecode), REC trigger signals are unavailable on the SDI output from the camera control unit (CCU). For more details, please contact your nearest Sony office.

\*3 CBK-HD02 is required when the CA-FB70 or CA-TX70 is configured with PMW-500.  
CBK-CE01 is required when the CA-FB70 or CA-TX70 is configured with PMW-320/400.

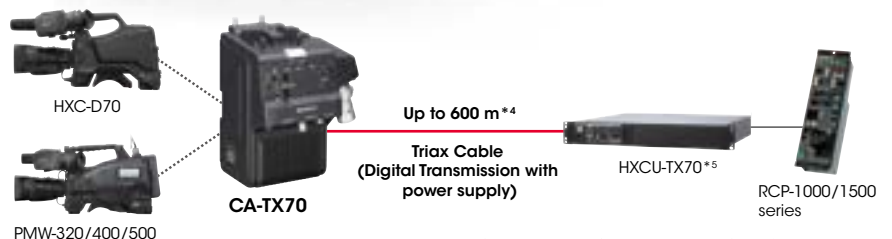
## CA-TX70 Digital Triax Camera Adaptor

### Durable solution for outside live production



### Digital Triax System for Rugged Field Operation

With the new CA-TX70 Digital Triax Camera Adaptor, the HXC-D70 camera and PMW-320/400/500 camcorders can work with the HXCU-TX70 Digital Triax CCU. This system is capable of extending the cable length up to 600 m\*4 between a camera and a CCU with a durable triax cable – a type of cable that is well accepted by professional users for its excellent reliability, especially in rugged use.



\*4 When  $\varnothing$  8.5 mm cable is utilized

\*5 Optional Front Control Panel HKCU-FP2 is available.

# Specifications

	CA-FB70	CA-TX70
<b>General</b>		
Power supply	DC 48 V via CCU connector / DC 11 V to 17 V via DC Input	DC 180 V via CCU Connector
Power consumption	Max. 75 W (at DC 48 V), Max. 70 W (at DC 12 V) (including power supply for camera)	Max. 95 W (including power supply for camera)
Operation 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)	158 x 171 x 92 mm (6 1/4 x 6 3/4 x 3 5/8 inches)	142 x 174.8 x 139.7 mm (5 5/8 x 7 x 5 1/2 inches)
Mass	0.8 Kg (1 lb 12 oz)	1.65 Kg (3 lb 10 oz)
<b>Inputs/Outputs</b>		
Camera/Camcorder	50-pin (x1)	
CCU	Optical Multi connector	Triax connector
Prompter output	BNC (x1), 1 Vp-p, 75Ω	
Intercom	XLR 5-pin, female (x1)	
DC input	XLR 4-pin (x1)	-
DC output	4-pin (x1)	-
Return control	-	6-pin (x1)
Supplied accessories	Operation instructions (1), CD-ROM (1), Cable clamp belt (1set), Accessory shoe kit (1), Warranty booklet (1), CA bracket (1), Screws for CA bracket (2)	

HXCU-FB70	
<b>General</b>	
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	-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)
<b>Inputs/Outputs</b>	
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	
<b>General</b>	
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	-20°C to +60°C (-4°F to +140°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)
<b>Inputs/Outputs</b>	
Camera	Optical Multi connector (x1)
CCU	Optical Multi connector (x1)
Supplied accessories	Operation instructions (1), CD-ROM (1), Warranty booklet (1)

HXCU-TX70	
<b>General</b>	
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)
Mass	7.9 kg (17 lb 6.7 oz)
<b>Input/output connectors</b>	
Camera	Triax (x1)
Intercom/Tally/PGM	D-sub 25-pin, female (x1) • Intercom (PROD/ENG), 4W/RTS/CC, 0 dBu • Tally (R, G) • PGM 2 systems, -20/0/+4 dBu
Remote	8-pin multi-connector (x1)
Trunk/ WF mode/ Mic remote*1/ WF remote*1	D-sub 25-pin, female (x1), Trunk : RS-422A 1 system
LAN	RJ-45 (x1), 10BASE-T, 100BASE-TX
<b>Input connectors</b>	
AC input	AC 100 V to 240 V
Serial return input	BNC (x2) HD-SDI : SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.4835 Gbps SD-SDI : SMPTE 259M, 270 Mbps HD-SDI/SD-SDI selectable
VBS return input	BNC (x2) VBS: 1.0 Vp-p, 75 Ω
Reference input	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)
Prompter input	BNC (x2), VBS signal, 1.0 Vp-p, 75 Ω, 2 ch
<b>Output connectors</b>	
Mic output	XLR 3-pin, male (x2), 0/-20 dBu
HD-SDI/SD-SDI output	BNC (x2) HD-SDI : SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.4835 Gbps SD-SDI : SMPTE 259M, 0.8 Vp-p, 75 Ω, 270 Mbps HD-SDI/SD-SDI selectable
HD-SDI/SD-SDI monitor output	BNC (x2) HD-SDI : SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.4835 Gbps SD-SDI : SMPTE 259M, 0.8 Vp-p, 75 Ω, 270 Mbps HD-SDI/SD-SDI selectable
Pr/R-R-Y, Y/G-Y, Pb/B-B-Y	HD Component video: Y (100% white): 0.7 Vp-p, Pr/Pb (75% color bar): 0.7 Vp-p, 75 Ω HD RGB video R/G/B (100% white): 0.7 Vp-p, 75 Ω SD Component video: Y (100% white): 0.714 Vp-p, Pr/Pb (75% color bar): 0.756 Vp-p, 75 Ω SD RGB video R/G/B (100% white): 0.7 Vp-p, 75 Ω
VBS output	BNC (x2), VBS 1.0 Vp-p, 75 Ω
PIX output	BNC (x1), VBS/R/G/B (VBS a1.0 Vp-p, 75 Ω)
Sync/WF output*1	BNC (x1), Sync output: HD: BTA-S001A, tri-level sync, 0.6 Vp-p, 75 Ω SD: composite sync, 0.3 Vp-p, 75 Ω HD sync/SD sync selectable WF output: VBS/SEQ/R/G/B (VBS 1.0 Vp-p, 75 Ω)
Supplied accessories	Number plates (1 set), Operation manual (1)

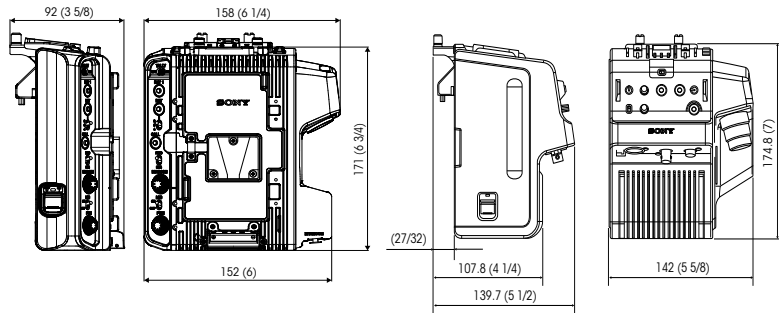
\*1 Selectable

## Dimensions

Unit: mm (inches)

CA-FB70

CA-TX70



## Optional Accessories

- CCFN-250:** 250m length, Power and Optical fiber hybrid cable
- CCFN-200:** 200m length, Power and Optical fiber hybrid cable
- CCFN-150:** 150m length, Power and Optical fiber hybrid cable
- CCFN-100:** 100m length, Power and Optical fiber hybrid cable
- CCFN-50:** 50m length, Power and Optical fiber hybrid cable

- CCFN-25:** 25m length, Power and Optical fiber hybrid cable
- CCFN-JC1:** Coupler for cascade connection of CCFN cables
- HKC-LC01:** Lemo-type Fiber Connector Kit for CA-FB70 / HXCE-FB70
- HKC-LC02:** Lemo-type Fiber Connector Kit for HXCU-FB70 / HXCE-FB70

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