

# Focus 75 Live

## Highly Affordable 720p/1080i Switchable HD System Cameras



Superb switchable-format HD camera with legendary Grass Valley image performance.

The Focus 75 Live system cameras from Grass Valley, a Belden Brand, represent a new entry level into the company's legendary imaging quality.

Three Xensium-FT CMOS imagers with global shutter — similar to CCD sensors — do not produce any of the rolling shutter artifacts seen with other CMOS-based cameras, such as sensitivity to fast camera movements with short exposure time or sensitivity to short light flashes.

This makes Focus 75 Live cameras ideal for smaller live studio and field applications, including regional broadcast stations, SNG vans, small OB vans, university sports productions, staging and houses of worship.

The cameras offer strong image performance by always capturing the image in full progressive 1920x1080 HD resolution and downconverting to either 1080i50/59.94 or 720p50/59.94 (user switchable). In addition, the highest quality SD signals are available at the camera base unit.

The high level of camera sensitivity also allows less lighting to be used, and this contributes to lower power consumption from both lights and air conditioning. In addition, the cameras can be used with smaller iris settings to deliver an increased depth of field, while also allowing operators to hold a tighter focus.

Focus 75 Live cameras use standard B4 2/3-inch lens mounts to accommodate HD lenses that may have been already purchased or are on-hand.

The cameras offer a high level of operational excellence. Button layouts and control knobs are ergonomically designed to allow operators to make adjustments quickly. With the easily accessible and separated "info" knob, all important information is displayed in the viewfinder instantly. The user-friendliness of Focus 75 Live cameras has also been strengthened with a streamlined menu structure which allows operators to access commonly used functions very rapidly.



## KEY FEATURES

- Fully digital FT CMOS imagers with global shutter operation offer absolute smear-free images under all conditions
- Switchable between 720p and 1080i acquisition formats
- Best possible resolution and image sharpness from over-sampling the full HD progressive image
- Highest sensitivity in combination with the best noise performance for the best results, even under difficult lighting conditions
- Highest quality mechanical construction identical to high-end Grass Valley LDX Series broadcast camera systems

## SPECIFICATIONS

### Camera Head

#### General:

Temperature range: -10° to +45° C (-4° to 113° F) (operating)  
 Weight: 2.1 kg (4.6 lbs.) (including shoulder pad)  
 Dimensions: width: 170 mm, depth: 200 mm, height: 180 mm (6.7 x 7.9 x 7.1 in.)  
 Power: Supplied through the transmission adapter

#### Camera:

Pick-up device: 3x2/3" Xensium-FT CMOS  
 Picture elements: 1920x1080  
 Smear: no vertical smear  
 Shutter: no mechanical shutter  
 Optical system: F1.4 prism  
 Lens mount: 2/3" Bayonet type  
 Optical filter wheels: 1x motorized wheel: clear, 1/4 ND, 1/16 ND, 1/64 ND  
 Electronic color correction: 3200° K, 5600° K, 7500° K, FL, 2 AWB presets, Var, continuous auto white  
 Exposure: electronic exposure down to 1/1000 sec

#### Video modes:

Switchable-format: 1080i50/59.94 or 720p50/59.94 (user switchable)  
 Sensitivity at 2000 lux:  
 – F12.0 (1080i50, 720p50)  
 – F11.0 (1080i59.94, 720p59.94)  
 S/N ratio: 60 dB typical  
 Aspect ratio: 16:9  
 Modulation depth: 60% (typical) at 800 TV lines (27 MHz) in 1080i50/59.94 & 720p50/59.94 modes  
 Digital resolution: Floating point A/D-conversion with 16-bit performance and with 34-bit processing in RGB  
 Horizontal resolution: >1,000 TV lines  
 Gain selection: -6 dB to +18 dB in 3 dB steps (user-definable presets) or continuous master gain

#### Connectivity:

Front microphone input: XLR-3 female, balanced, phantom +48V selectable  
 USB  
 Ethernet RJ-45  
 Lens connector: Hirose 12-pin  
 Viewfinder connector: 20-pin and HDMI

#### Control buttons:

PickMe  
 Info  
 Menu control  
 Intercom production/engineering  
 Filter wheel selection  
 Standard file recall  
 2 user assignable

#### Control switches:

On/off  
 Color bar  
 Gain selection  
 Color temperature  
 Exposure time  
 White balance

#### Accessories:

2.0" LCD viewfinder  
 7" Economic LCD viewfinder  
 7" IPS LCD viewfinder  
 7.4" OLED viewfinder

#### Focus Base Unit

#### Video:

720p: 50/59.94 Hz  
 1080i: 50/59.94 Hz

#### General:

Dimensions (HxWxL, approx.): 438 x 88 x 510 mm (19" rack, 2 RU) (17.2 x 3.5 x 20.1 in.)  
 Operating temperature: 0 to +45° C (+32 to +113° F)  
 Storage temperature: -20 to +70° C (-4 to +158° F)  
 Operation humidity: Max. 90% (non-condensing)  
 Shock resistance: Max. 10G (transport, Max. 2G (operating))  
 Altitude: Max. 15,420m (50,000 ft.)  
 Weight XCU 11.8 kg (26.0 lbs.)  
 Power requirement: AC 100V/240V, 47 to 63 Hz  
 Power connector: IEC type, 3-pin male  
 Power consumption: Total power (Cam + XCU) 450W max.

#### Connectors:

#### Video:

Teleprompter in: BNC 1x (loop-through output), (C)VBS, 1.0 Vp-p, 75Ω  
 Reference in: 1x (loop-through output), 1.0 Vp-p, 75Ω HD tri-level sync or SD black-burst  
 HD-SDI out: BNC 4x 0.8 Vp-p, 75Ω, SMPTE ST 292, 1080i/720p at 50/59.94 Hz  
 HD-SDI monitoring out: BNC 1x 0.8 Vp-p, 75Ω, SMPTE ST 292, 1080i/720p at 50/59.94 Hz  
 SD-SDI out: BNC 2x 0.8 Vp-p, 75Ω, SMPTE ST 259 ITU-R, BT.601  
 SD-SDI monitoring out: BNC 1x 0.8 Vp-p, 75Ω, SMPTE ST 259 ITU-R, BT.601  
 Composite Video monitoring output: BNC 1x 1.0 Vp-p, 75Ω (CVBS text with video, for viewing purposes)  
 Signaling in/out: D-sub 15-pin, male; preview, green tally (call), dry contact; yellow tally (iso), dry contact; red tally (on air), dry contact; remote audio level control (22-64 dB),  
 Control data: RJ-45 connector for C2IP (camera control)  
 Fiber (Hybrid) executions: Lemo Hybrid fiber connector acc. SMPTE ST 304  
 Triax executions: Fischer, ARD, Lemo-4E, Lemo-3T, BBC-Lemo, TriLock  
 External video in: 2x HD-SDI (1.5 Gb/3.0 Gb) or SD-SDI 0.8 Vp-p, 75Ω

#### Audio:

2-ch. audio: Audio out, XLR-3 2x ; 0/+6 dBu (±1.5 dB, max. 18 dBu, 600Ω, gain max. 70 dB)  
 Frequency response: 40 Hz to 15 Hz, (+1/-3 dB, 1 kHz, -10 dBu output level)  
 Distortion: Less than 0.5% (100 Hz/1 kHz, +6 dBu out, 600Ω)  
 S/N ratio: 58 dB (unweighted RMS)

#### Intercom:

Intercom in/out (2/4-wire intercom): D-sub 15-pin, female (program in, production in/out, engineering in/out), in: 0 or 6 dBu; out: 0 or 6 dBu (±2 dB, max. 12 dBu)  
 Frequency response: 150 Hz to 6 kHz (1 kHz, -10 dBu output level)  
 Distortion: Less than 2% (1 kHz, +12 dBu level)

### Focus Triax Adapter

**Power requirements:** Triax powered

**Operating temperatures:** -10 to +45° C (-4 to +113° F)

**Storage temperatures:** -25 to +70° C (-13 to +158° F)

**Weight (approx.):** 2.1 kg (4.6 lbs.)

**Dimensions (L x W x H):** 222.1 x 132.7 x 212.1 mm (8.7 x 5.2 x 8.4 in.) without handgrip

**Triax connection:** Swivel triax connector (Fischer, ARD, LEMO-4E, LEMO-3T, BBCEMO and TriLock types available)

**Triax cable length:** 1,500m (5,000 ft.) max. with 14 mm (0.55") cable (specified for Draka triax cable)

**Analog VF/Analog TP (Y only) output:** BNC connector 1.0 Vp-p; 75Ω

**VF output or main output:** BNC connector HD-SDI 0.8 Vp-p; 75Ω,

Selectable:

– Main

– VF-HD

– VF-SD

– VF-Ext

**EXT video output connector:** BNC connector HD-SDI 0.8 Vp-p; 75Ω

**Rear microphone inputs:** 2x XLR-3, balanced, +48V phantom power

**Intercom:** XLR-5 with 3 channels (engineering, production and program)

### Focus Fiber Adapter

**Power requirements:** Hybrid fiber powered

**Operating temperatures:** -10 to +45° C (-4 to +113° F)

**Storage temperatures:** -25 to +70° C (-13 to +158° F)

**Weight (approx.):** 2.1 kg (4.6 lbs.)

**Dimensions (L x W x H):** 222.1 x 132.7 x 212.1 mm (8.7 x 5.2 x 8.4 in.) without handgrip

**Fiber connector:** Swivel hybrid fiber connector SMPTE ST 304 Lemo

**Cable length:** 3,000m (10,000 ft.) max. using SMPTE ST 311 hybrid fiber cable

**Analog VF output:** BNC connector 1.0 Vp-p; 75Ω

**VF output or main output:** BNC connector HD-SDI 0.8 Vp-p; 75Ω

Selectable:

– Main

– VF-HD

– VF-SD

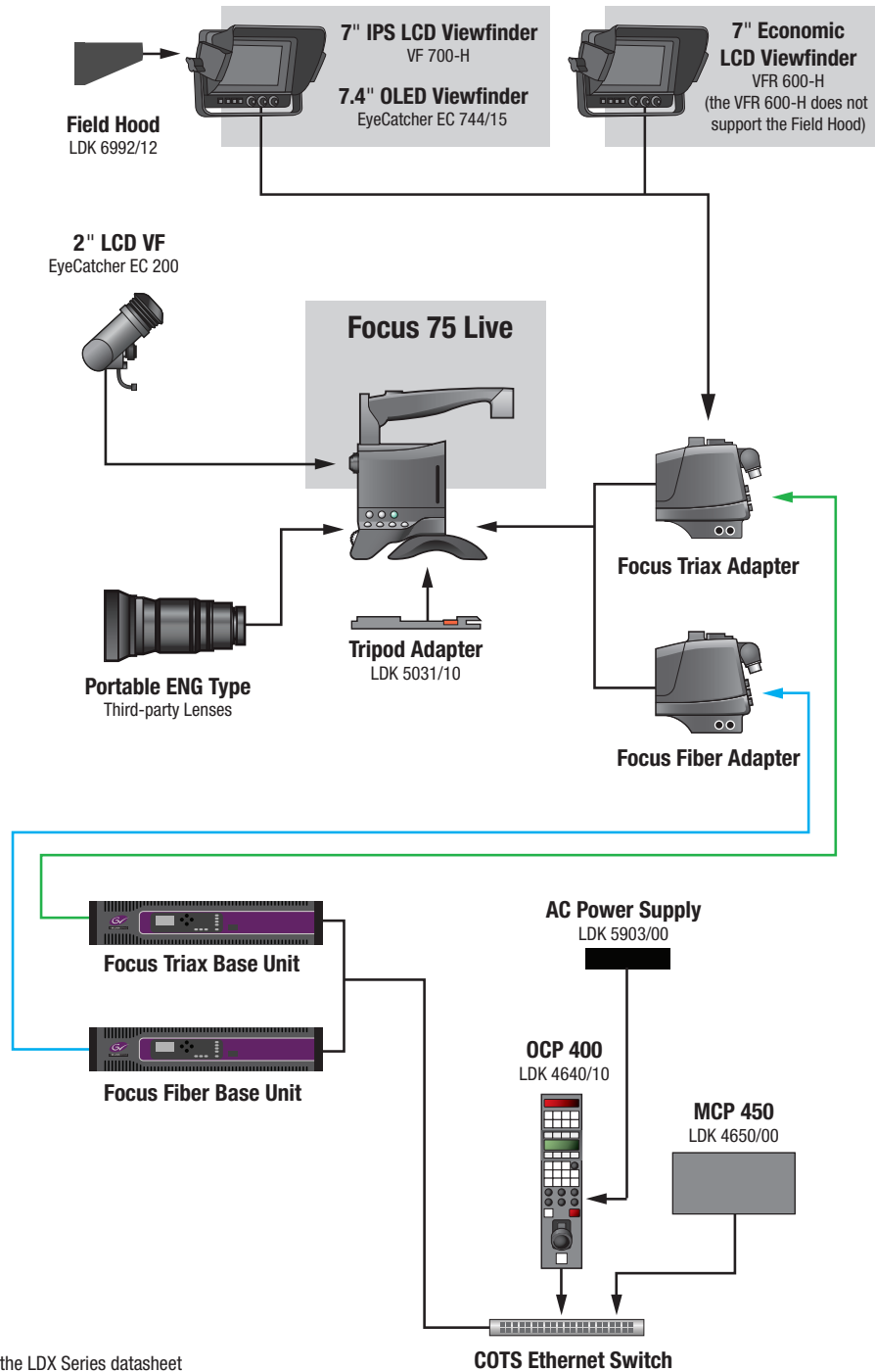
– VF-Ext

**EXT video output connector:** BNC connector HD-SDI 0.8 Vp-p; 75Ω

**Rear microphone inputs:** 2x XLR-3, balanced, +48V phantom power

**Intercom:** XLR-5 with 3 channels (engineering, production and program)

### Focus 75 Live and Accessories



Note: For details about accessories, refer to the LDX Series datasheet

### ORDERING

Please contact your authorized Grass Valley representative.

GVB-2-0571A-EN-DS



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