

# LDX Series

## SOFTWARE UPGRADABLE CAMERA PLATFORM

A revolutionary series of cameras built for business flexibility and operational excellence, with superior imaging, processing, and performance. LDX Première provides standard multiformat 1080i & 720p acquisition, LDX Elite adds 1080pSF, while LDX WorldCam rounds out the series with 1080p production.



More than 50 years of imaging innovation has led to a new standard in live broadcast acquisition: the LDX Series™ of cameras. It's the ultimate achievement based on a proud legacy capturing the world's historic moments. In live television, there are no second chances to make up missing details at the crucial moment of acquisition, and HD broadcasting is all about telling the story through those details.

The introduction of the next-generation Grass Valley® LDX Series provides a multitude of capabilities and benefits to users. The camera's reliability has

been strenuously tested for the harsh demands of live production; its imaging is beyond imagination; a huge advance has been made in ease of use and special attention paid to the ergonomic design of the camera head.

### Stunning Images

The LDX camera models provide stunning images, based upon new, custom-designed Xensium-FT 2/3-inch CMOS imagers. The renowned Grass Valley imaging design team engineered the new Xensium-FT CMOS imagers to make artifact-free capture possible along with a significant improvement in sensitivity.

To make images look their best, LDX incorporates TrueTexture™—a unique feature to preserve texture throughout all processing parameters.

Another imaging innovation is ArtTouch™, an intuitive interface between the operator and hardwired controls, which significantly enhances artistic possibilities within a live broadcast. Looking back at the last five years in broadcasting, a lot has changed with respect to the way productions are being managed from an artistic point of view. To an increasing extent, there is a close collaboration between creative directors and the camera shaders, who adjust each camera feed to perfection.

## KEY FEATURES

### LDX Première/LDX Series Camera Features:

- Next-generation Xensium-FT imagers:
  - Increased sensitivity
  - Improved digital noise reduction
  - TrueTexture: texture is preserved throughout all processing parameters
- Unmatched operational performance:
  - Switchable video formats: 1080i50/60 and 720p50/60
  - ArtTouch: smart coupling of video control functions
  - Perfect picture matching across the complete LDX Series as well as the LDK installed base
  - New ergonomic designed shoulder pad with side grip
- Ergonomically designed camera head with easy access to control buttons, including the new PickMe button
- Suitability for 3D productions
- CLASS: horizontal and vertical electronic lens error correction
- Dynamic Contour Equalizer
- Advanced secondary color corrector
- Fully compatible with 3G fiber/tri-ax transmission systems
- Compatible with C2IP control systems and RefleX SuperXpander

### LDX Elite:

- All LDX Series camera features
- Switchable video formats: 1080pSF (artistic), 1080i50/60, 720p50/60

- Power curve gamma control
- Depth of field indicator
- New ergonomic designed shoulder pad with Orthoplast

### LDX WorldCam:

- All LDX Series camera features
- All LDX Elite camera features
- Switchable video formats: 1080p50/60 (3G), 1080pSF (artistic), 1080i50/60, 720p50/60
- Effortless 1080p50/60 acquisition with no increased lighting requirement

#### Notes:

- Upgrading from LDX Première to LDX Elite requires License 2
- Upgrading from LDX Première to LDX WorldCam requires License 2 & License 3
- Upgrading from LDX Elite to LDX WorldCam requires License 3

## PRODUCT DATA SHEET

With the LDX Series, a completely new level of artistic camera control is included, to support today's and tomorrow's requirements for live shading flexibility. By using the full latitude of the custom-designed Xensium-FT CMOS imager, control of every aspect of the image is available, so any degree of creative touch can be applied.

The LDX Series provides enhanced colorimetry, color-matching, and picture performance.

Color temperature and tint are just two of the parameters that can be simultaneously adjusted across multiple cameras. Knee saturation control maintains a correct hue by using secondary compression. Chromatic lens aberration correction (CLASS) is applied both vertically and horizontally, and offers impressive sharpness improvements on the left and right regions of the image. Other features assist in aperture correction, detail preservation, and more.

### Designed for the Operator

In addition to establishing a new standard for image acquisition, the design of the LDX Series focuses strongly on operator comfort and usability. Grass Valley proudly introduces the world's first truly ergonomic shoulder pad. Not only does this shoulder pad provide the ultimate freedom to capture difficult angle shots, but is also the world's first shoulder pad that can compensate for a feature that's different for every operator—the angle of the shoulder.

Until now, more than 95 percent of handheld camera operators unconsciously lift their shoulder to level the shot. This means that they continuously tense their muscles to lift equipment, which regularly is a total weight of about 10 kg (22 lbs.). The new shoulder pad can be adjusted to compensate for each individual's shoulder angle—relieving the muscles from actively lifting the weight. The new shoulder pad has been developed in close cooperation with camera operators from around the world along with physiotherapists to alleviate adverse long-term effects.

The LDX Series offers even more operational excellence. Button layouts as well as control knobs are ergonomically designed to allow the operator to find the right adjustments easily. Full control flexibility is possible thanks to well-dimensioned control knobs. With the easily accessible separated "info" knob, all important information is displayed in the viewfinder instantaneously. The user-friendliness of LDX cameras has been further improved by using a streamlined menu structure that allows operators to access commonly used functions more quickly.

### Engineered for the Bottom Line

The problem with buying a camera today is that you don't know what you'll need tomorrow. That leads to one of three outcomes: you'll be upgrading cameras in a few years, you've paid today for features you hope you'll use in a few years, or you got very lucky and bought today exactly what you need today and in the future.

The LDX Series changes all that. Buy what you need today, and upgrade to the next level of camera when you need it—with just a simple licensing procedure.

The LDX Series consists of three cameras: LDX Première™, LDX Elite™, and LDX WorldCam™. Each camera offers exceptional performance, with increased functionality as you go up the range. LDX Première provides standard multiformat 1080i & 720p acquisition, LDX Elite adds 1080pSF, while LDX WorldCam incorporates all of the features of the LDX Elite and adds effortless 1080p production as well—with the same sensitivity as shooting 1080i.

With the LDX Series, Grass Valley has paid particular attention to the ongoing costs of operation. LDX cameras fully support Grass Valley's 3G Transmission triax and fiber camera transmission systems, and are fully integrated with our Ethernet-based C2IP camera control system and Reflex SuperXpander. In addition, the Connect Gateway is a powerful link to remote production capabilities. This smart addition provides full remote control over all camera controls via any IP-link and includes DigiTally—an all-digital remote tally protocol over IP.

With the LDX Series, you now have a way to link camera CAPEX and OPEX with your business goals.

LDX is about more than just pretty pictures—LDX is built to face the realities of live production and broadcast—today and tomorrow.

The LDX Series... It's imaging, beyond imagination.



**SPECIFICATIONS**

**LDX Première (Common to all LDX Series Cameras)**

**Camera Head**

**General:**

- Power: 34W
- Temperature range: -20° to +45°C (-4° to 113°F) (operating)
- Weight: 2.1 kg (4.6 lbs.) (including handgrip and shoulder pad)
- Dimensions: width: 170 mm, depth: 200 mm, height: 180 mm (6.7 x 7.9 x 7.1 in.)

**Camera:**

- Pick-up device: 3x2/3" Xensium-FT CMOS
- Picture elements: 1920x1080
- Smear: no vertical smear
- Shutter: no shutter
- Optical system: F1.4 prism
- Lens mount: 2/3" Bayonet type
- Optical filter wheels: 2x motorized wheels

- Optical filters on first wheel: clear, 1/4 ND, 1/16 ND, 1/64 ND
- Optical filters on second wheel: clear, 4p-star, soft focus
- 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: 1080i59.94/50 & 720p50/59.94
- Sensitivity at 2000 lux: F12 (typical – 1080i mode)
- S/N ratio: 60 dB typical
- Aspect ratio: 16:9
- Modulation depth: 60% (typical) at 800 TV lines (27 MHz) in 1080i59.94/50 & 720p59.94/50 modes
- Gain selection: -6 dB to +30 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
- 4 user assignable

**Control switches:**

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

**Accessories**

- 2" CRT viewfinder (b/w)
- 2.7" LCD viewfinder
- 7" CRT viewfinder
- 7" LCD viewfinder
- 9" LCD viewfinder

**LDX Elite**

**Video modes**

**Switchable:** 1080sPF, 1080i59.94/50 & 720p50/59.94

Note: Upgrading from LDX Première to LDX Elite requires License 2

**LDX WorldCam**

**Video modes**

**Switchable:** 1080p60/50, 1080sPF, 1080i59.94/50 & 720p50/59.94

Note: Upgrading from LDX Première to LDX WorldCam requires License 2 and License 3. Upgrading from LDX Elite to LDX WorldCam requires License 3

	<b>LDX</b> SERIES Première	<b>LDX</b> SERIES Elite	<b>LDX</b> SERIES WorldCam
Imager	Xensium-FT		
Sensitivity @ 2000 lux	F12 typical (1080i mode)		
S/N ratio	60 dB (typical)		
Video modes	1080i/720p	1080sPF/1080i/720p	1080p/1080sPF/1080i/720p
1080p with full sensitivity	No		Yes
Effects filter wheel		Yes	
ComfortPad with Orthoplast	ComfortPad in basic material		Yes
Side grip		Yes	
CLASS		Horizontal and vertical	
Dynamic aperture correction		Yes	
Dynamic contour equalizer		Yes	
Power curve gamma control	No		Yes
Depth of field indicator	No		Yes



## ORDERING INFORMATION

Please contact your authorized Grass Valley representative.

[www.grassvalley.com/sales](http://www.grassvalley.com/sales)

## MAXIMIZE AND OPTIMIZE YOUR INVESTMENT



With program production and distribution becoming ever more complex and affecting business issues on a daily basis, you need a trusted partner that understands those complexities and how to convert them into opportunities. Grass Valley's team of experienced engineers and system integrators

can help you turn your challenges into opportunities in the most efficient and cost-effective way possible, from system design all the way through to commissioning. Grass Valley Professional Services helps you to:

**Define:** We consult with you to help define your business and technology requirements and then design the right solutions to meet them.

**Deploy:** Our professional service organization, backed by proven project management methodologies, can take you from design through deployment, commissioning, and training.

**Support:** We offer a complete portfolio of support services to keep your systems running, and help manage your long-term maintenance needs.

For information about Grass Valley, please visit [www.grassvalley.com](http://www.grassvalley.com).

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