

# LDX 100 Camera Series



# Introducing the Next Generation of Premium Live Image Capture

A new native IP camera platform with 3X UHD high speed that perfectly answers the needs of live sports production.

While demand for engaging live content has never been higher, creating and distributing that content has become increasingly complex. Along with local infrastructure and available bandwidth, production formats change from event to event, creative teams are scattered in multiple locations, and time for training operators or maintaining equipment is limited.

The new LDX 100 series of premium live production cameras from Grass Valley easily navigates those constraints. Working at the intersection of great technology and ease of use, each model in the series supports NativelP as well as SDI in your choice of HD, UHD, HDR and High-speed for attention-grabbing images paired with an unmatched set of usability features that greatly simplify the production process.

The first camera models in this series include:

- LDX 100
- LDX 150

| Series at a Glance    |  |  |
|-----------------------|--|--|
|                       | LDX 100  | LDX 150  |
| Shutter               | Rolling  | Global   |
| Imager                | 3X Titan capturing 100% Red, 100% Green, 100% Blue   | 3X Xenios capturing 100% Red, 100% Green, 100% Blue  |
| Sensitivity @2000 lux | F9   | F11  |
| Total pixel count     | 24,883,200   | 24,883,200   |
| High speed            | 3X UHD   | 3X HD or UHD   |
| Connectivity          | SDI or NativelP with no external conversion<br>Option activates built-in JPEG XS compression | SDI or NativelP with no external conversion<br>Option activates built-in JPEG XS compression |



# **KEY FEATURES**

- New camera platform designed for extension into the future
- UHD HDR images at 3X high-speed
- Simple, scalable multiformat image capture and distribution
- All-in-one camera with no separate base station required thanks to NativelP
- · Fastest time to deploy and configure

- Extensive operator training not required
- At-a-glance settings and diagnostics for immediate status recognition
- Software update and reconfiguration of licenses and settings (if required) in less than 7 minutes
- Field-tested rugged and reliable

- · Suite of inventory management features
- Quickly align camera configuration to production requirements for superior cost management

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- Field-replaceable SFP/QSFP
- Save time by managing camera information and licenses from the LDX Scanner app without powering up the camera

# **COMMON FEATURES IN THE SERIES**

Designed to reveal in detail the intensity and emotion behind fast-paced action and split-second decisions, LDX 100 series cameras capture Ultra High Definition (UHD) High Dynamic Range (HDR) images at 3X high speed. That's a lot of "high" functionality in one description, but that's what you should expect from Grass Valley's new flagship camera platform.

Just as compelling as its image capture capabilities is the camera's redefinition of signal distribution. Born a network native, the cameras are self-contained IP endpoints with up to 100 Gb/s IP network connections for audio, video and control directly at the camera head that enable distribution of camera sources wherever they are needed on the network — without the delays inherent in sending signals to a separate control hub.

New topologies are possible for signal acquisition and distribution. The LDX 100 series eliminates the requirement for traditional SDI interconnects, thereby enabling a high level of distribution flexibility including true REMI integration that requires less bandwidth because only the needed signals are transmitted. Efficiency also goes up as multiple creative teams have immediate, nonconflicting access to all camera sources wherever it's best for them to work. Collaborative production has never been easier.

LDX 100 series cameras offer feature sets that everyone on the team will appreciate.

# For the Production Team

Production tools for the new formats of premium content have been limited by the available bandwidth and processing capability. In particular, high-speed capture of images for 4K and higher UHD super slo-mo is not available in traditional cameras. LDX 100 series cameras break those barriers with up to 3X high-speed UHD image capture from the same camera — in a single cable — directly from the camera head.

With LDX 100 series cameras you can capture all the detail that wasn't seen in the heat of the moment at unsurpassed resolution. Three UHD imagers provide superior resolution and color reproduction. In addition, support for HDR maintains all the high-contrast detail in the image. So for the audience, it's an inside view into the action that they couldn't obtain in any other way.

Wide color gamut combined with the extensive freedom of Grass Valley's Creative Grading control allows camera shaders to easily create a uniquely branded look and apply it across all the cameras on the network for a signature production that captivates the audience. TDs will also love the on-board GPS that enables a faster response time by intuitively seeing the physical location of a camera, not just its IP address. Camera operators will love the fast boot time and at-a-glance status indicators that allow them to get right to work. Onboard diagnostics that are available even while the rest of the system is being set up provide immediate feedback to know that you're good to go. Viewfinder menus provide confidence on resolution and frame rate settings.

The function-centric menus provide quick, logical access to camera settings and are grouped so that operators can safely change settings without accidentally affecting other parameters while on-air. LDX 100 series cameras provide a secure user environment that enables operators to work with confidence — even without extensive training.

But just capturing the image isn't enough. Today's environments require multiple unique content variants from a single production. LDX 100 series cameras simplify creation of multiple formats with NativeIP connections directly into the network. Proven standards-based IP makes it simple to connect, convert resolution, map HDR and use however needed across the network. The LDX 100 series makes collaboration a functional model. Whether working locally or remotely, every creative team immediately has access to the sources they need for their parts of the production.

# **For Engineers**

The number and variety of inputs and outputs for a live production continues to grow. It's the most valuable content available so everyone wants a piece of it. Unfortunately, production budgets haven't expanded at the same pace. Fortunately, Grass Valley has a solution. Offering a significant reduction in configuration and operational complexity, LDX 100 series cameras allow you to quickly set up either on-site or REMI configurations so that you can focus on other issues.

The LDX 100 Series offers backwards compatibility with the XCU Universe UXF up to single-speed UHD. Options on the Cradle for either SDI or IP signals allow you to migrate from baseband to IP at your own pace. And once you're fully IP, you can easily switch to NativeIP mode and get more flexibility with fewer components. No XCU or cradle is required, eliminating the 2 RU of rack space and weight per camera that is required for other systems.

LDX 100 series are native IP cameras that don't rely on extra equipment to manage the communications. Instead, the camera itself is the active IP endpoint in the network. We call this NativeIP. NativeIP allows you to add a camera to your production system from wherever a network connection is available. With less hardware to set up, time to set up and configure is reduced while the number of potential camera locations is increased. When production formats change or there are restricted local infrastructure requirements, an exchange in the field to a different bandwidth SFP connector takes just seconds. The series supports field-swappable SFP and QSFP connectors at various bitrates. When bidirectional SFPs are being used, each of the two fibers in the robust SMPTE hybrid cable carries a unique bidirectional IP link that enables redundancy straight from the camera body.

When new workflows with even lower bandwidth are needed, LDX 100 series cameras uniquely support JPEG XS compression on board. No external gear is required to provide broadcast-quality compression right at the source. Achieve very efficient network utilization at 5 to 20 times less typical video bandwidth rates with the minimum possible delay — only 12 lines of encoding time!

Even faster is the dynamic connectivity available with multiplexed IP connections. You can switch to new camera configurations with a single click. Implementation of AMWA-NMOS protocols means the camera is instantly discovered and connected to a network control system such as Grass Valley's GV Orbit. The implementation of common IP standards provides simple integration of audio, video and control as well as superior PTP timing. Support includes management of camera tally information, audio levels, control panel button presses and status using industry standard integration.

All of this functionality is an integral part of the media stream so the system is much easier to scale. Cameras can be added anywhere in the network. Authorized users can simultaneously access the same video and audio streams from any workstation. Even when audio is mixed in a completely different part of the world. In addition, since return signals from a production hub are no longer required, signal delays and total network bandwidth requirements are reduced.

# **For Equipment Owners**

In a rapidly evolving production environment, the last thing you want to worry about is whether the camera can keep pace. LDX 100 series has all of the high-performance characteristics required of a professional working camera today while offering extensive upgrade capability for the requirements of tomorrow. You can start deploying it as an HD camera doing 1080p productions and then use à la carte software licensing to continue to add features up to triple-speed UHD as your production needs change.

Consider its rugged durability. The LDX 100 series' ergonomic design not only makes the camera easier to handle, its field-tested exterior sports a bumper for low shots, and its all new cooling design makes the camera "Champagne shower" proof! It's no less reliable internally. Inheriting the high reliability of the proven LDX 80 series, LDX 100 features superior cooling and fewer connections to maintain a long operational life.

Using LDX 100 series cameras on a production also enables you to more closely match production costs to a specific job. LDX 100 series allows you to pay for features only when required. Apply generic credits from your Grass Valley Order Desk to enable options as needed on a daily or multiple day basis.

Growing into tomorrow's requirements is worry-free with the LDX 100 series. If you are primarily producing in HD SDI today, LDX 100 offers you complete compatibility with Grass Valley's existing XCU. But that same camera can be taken from an SDI environment and plugged into an IP network without any transition concerns. Work in any combination or hybrid environment — and do it whenever you need to do it.

# **OPERATIONAL EFFICIENCY WITH NFC AND LDX SCANNER**

The LDX 100 series reduces time spent looking after cameras. Once you send an LDX 150 camera out on the road, it may never have to return to the warehouse again. A suite of revolutionary inventory management features for streamlined logistical operations includes wireless Near Field Communication (NFC) that reduces handling time by several minutes every time you ship a camera. With NFC you can use a mobile phone to read usage information on check-out/ check-in and load options into your equipment so that it is fully ready to operate for the next production — without ever powering up the camera! Just download and open the app, hold your phone close to the NFC mark on the camera, and then select the tabs for camera info and licenses. It's that simple.

The app for the LDX Scanner is now available on both the Apple and Android stores.

The new camera platform is planned for extensive upgrade capability while allowing a hybrid operation that evolves at your own pace. In addition to enabling just the features you need, the Grass Valley camera portfolio allows you to mix and match LDX camera models in the same system as well as components among models such as control panels, 2/3-inch lenses, and power supplies. LDX 100 series also supports field-swappable SFP connectors at speeds of 10 Gb/s, 25 Gb/s, bidirectional 25 Gb/s and 100 Gb/s QSFP to meet growing bandwidth requirements. In the uncertain world of evolving production requirements LDX 100 series is a safe investment today that will ensure best performance for years to come.

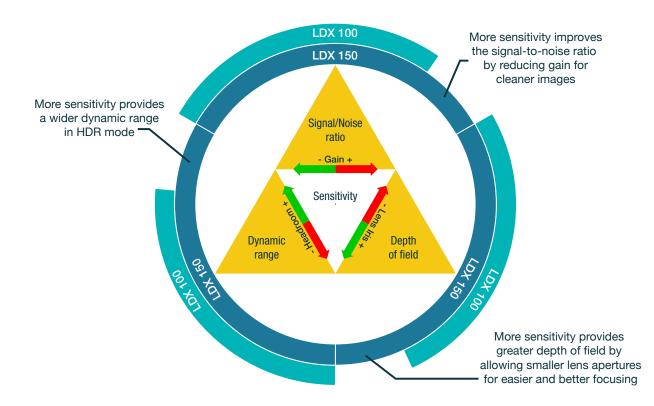
Continuing in that philosophy of creating forward-looking value, Grass Valley's new Creative Grading control panel and tablet application not only make cameras simpler and faster to access, they eliminate the requirement to match one OCP per camera. Creative Grading panels can work across multiple cameras, even in multiple formats to create a single, unified look

Creativity, Performance, Cost-effectiveness. Regardless of what aspects of the production chain concern you most, the LDX 100 series has a barrier-breaking solution for your needs.



#### WHAT SETS LDX 150 APART?

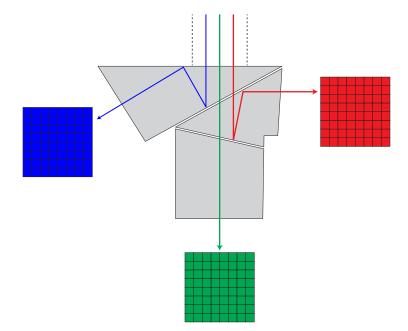
The LDX 150 is Grass Valley's highest performing live broadcast camera. Its base model is a single-speed HD camera that can connect to an XCU Universe UXF and can slide right into any existing baseband configuration. With additional software licenses, the LDX 150 offers triple-speed UHD, streaming directly into your IP infrastructure by using its NativeIP capabilities.



By using the all-new Xenios imagers, the LDX 150 can capture up to triple-speed UHD natively in Global Shutter. Based on decades of experience paired with the latest in technology, each of these imagers has been designed from scratch to achieve the next step in broadcast imaging. This means that the camera provides a stunning F11 sensitivity in UHD; twice as sensitive as the LDX 100 model and four times as sensitive as the LDX 86<sup>N</sup> model in UHD operation. In addition, the Modulation Transfer Function (MTF), a measurement of the imager's ability to capture resolution and contrast, is through the roof. An improved pixel structure precisely directs the light onto the photodiode and reduces scattering loss. This means that the finest details are captured without losing their brilliance by blending into adjacent pixels.

Unlike some competing models, the LDX 150 has three of these Xenios imagers paired with high precision to a Wide Color Gamut beam splitter. This allows you to capture even the extreme colors that are frequently used in staged events and sports team colors.

For easy color grading, the LDX 150 can be set to a compatible mode that matches with other LDX models and third-party solutions.



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# SPECIFICATIONS

#### General

 $\begin{array}{l} \textbf{Temperature range: -20^\circ to +45^\circ C (-4^\circ to 113^\circ F) (operating)} \\ \textbf{Weight: } approx. 5.9 kg (13.0 lbs.) (including handgrip and shoulder pad)} \end{array}$ 

**Dimensions:** Width: 166.5 mm, depth: 379.7 mm, height: 252.3 mm (6.56 x 15.66 x 9.93 in.)

Power consumption (typ.): 100W

#### Camera

#### Pick-up device:

LDX 100: 3x 2/3" UHD Titan CMOS imagers

LDX 150: 3x 2.3" UHD Xenios CMOS imagers

Smear: no vertical smear

Shutter: no mechanical shutter

Optical system: F1.4 prism

Lens mount: 2/3" (B4 type) Bayonet lens mount

Optical filter wheels: 2x motorized wheels

**Optical filters on first wheel:** clear, 1/4 ND, 1/16 ND, 1/64 ND, Cap

Optical filters on second wheel: clear, 4P-star, soft focus Electronic color correction: 3200°K, 5600°K, 7500°K, FL, 2 AWB presets, variable, continuous auto white Sensitivity @2000 lux (typical) + S/N ratio:

LDX 100: F9 @ 62 dB S/N ratio (in 2160p50/59.94) LDX 150: F11 @ 62 dB S/N ratio (in 2160p50/59.94)

#### Aspect ratio: 16:9

Modulation depth: 60% (typical) at 800 TV lines (27 MHz) in 1080i50/59.94 modes

 $\ensuremath{\text{Digital resolution:}}\xspace{-16-bit A/D-conversion with 34-bit processing} in RGB$ 

Horizontal resolution: >1,000 TV lines (HD), >2,000 TV lines (4K UHD)

Gain selection: -6 dB to +18 dB in 3 dB steps (user-definable presets) or continuous master gain

#### **Standards compliant:**

SMPTE ST 2110-10, -20, and -30 AMWA NMOS IS-04, -05 and -07

#### Connectivity

Microphone input (front): XLR-3 female, balanced, with switchable +48V phantom power

**REF/AES BNC connector:** Reference input, output or AES digital audio

BNC A to E connectors: Video BNC baseband connectors (1.5G, 3G or 12 G)

Camera control network (C2IP): RJ-45 Ethernet connector (1 Gb/s)

Ethernet/IP Trunk: RJ-45 Ethernet connector (1 Gb/s) Lens connector: 12p Hirose connector

Viewfinder connector: 9p Fischer MiniMax connector

Monitoring video: Micro HDMI (type D) connector Hybrid Fiber connector: SMPTE ST 304 hybrid fiber connector (swiveling)

**Mounting holes:** 2x <sup>1</sup>/<sub>4</sub>" - 20 UNC + 3x M4 threaded holes (camera thread)

Audio inputs (rear): 2x XLR-3 female, balanced, with +48 V phantom power

Intercom: XLR-5 with Engineering, Production and Program channels

**DC Power input:** 12V (12 to 17V), XLR-4 male <16A **DC Power output:** 13V, XLR-4 female < 4A

# Accessories

2" LCD viewfinder 7" LCD viewfinder

LDX 150 LDX 100 **XCU UXF** QSFP 100G 1x 1x **IP Connectivity** SFP+ 25G (incl. bidirectional) 2x (redundancy) 2x (redundancy) SFP+ 10G (inc. bidirectional) 2x (redundancy) 2x (redundancy) 4x (redundancy) C2IP In-band/out-band yes/no (via Hybrid Fiber) yes/no (via Hybrid Fiber) no/yes (via RJ45) **Camera Control** XML XML camera control yes (via CCS-one) yes (via CCS-one) yes (via CCS-one) 1-step/2-step PTP yes/yes yes/yes yes/yes (inc. redundancy) **SMPTE ST 2110-10** SMPTE ST 2059-2/ yes/yes/yes/yes yes/yes/yes/yes yes/yes/yes/yes Media profile/AES R16/user SMPTE ST 2110-20/21 Video yes yes yes **SMPTE ST 2110-22** Video JPEG XS yes yes no SMPTE ST 2110-30/31 Audio Level A/B/C yes/yes/no\* yes/yes/no\* yes/yes/no\* SMPTE ST 2110-30/31 yes/yes/no\* Intercom Level A/B/C yes/yes/no\* yes/yes/no\* NMOS IS-04 mDNS/DNS-SD yes/yes yes/yes yes/yes v1.0 / v1.1 / v1.2 / v1.3 IS-04 v1.0 / v1.1 / v1.2 / v1.3 v1.0 / v1.1 / v1.2 / v1.3 NMOS IS-05 v1.0/v1.1 v1.0/v1.1 v1.0 / v1.1 IS-07 MQTT/Websockets MQTT/no MQTT/no MQTT/no **IGMP V2/V3** ves/ves ves/ves ves/ves DHCP yes yes yes DNS yes yes yes SDP Import/export yes/yes yes/yes yes/yes SMPTE ST Redundancy Video/audio/intercom yes/yes/yes yes/yes/yes yes/yes/yes\*\* 2022-7 **Redundant Control** Control (C2IP)/NMOS yes/yes yes/yes no/yes

Notes: \*1, 2, 4, 8, 16 channels selectable. 48 kHz support only. Packet times 1 µs, 125 µs, 250 µs

\*\* Fail-over is implemented for return video, audio and intercom

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# ORDERING

# **Camera Head and Accessories**

LDX 100 LDX 100 camera head

# LDX 150

LDX 150 camera head

#### EC 2-100

2-inch Ocular Viewfinder for LDX 100 series

# VF7-100X

7-inch native HD VF for LDX 100 series with articulated arm 10GSFP-E0PT

10G Eoptolink SFP for LDX 100 series used with XCU

#### Options

3-speed UHD option perpetual for LDX 100 series NativelP Option for LDX 100 series UHD 50/59.94 option perpetual for LDX 100 series JPEG XS Option for LDX 100 series DirectIP IP+ Option for LDX 100 series UHD Filmic Modes for LDX 100 series

# **Power Supply Options**

#### HPE-300

Hybrid power extender, 300W, single AC input. UFP required HPE-300-2AC

Hybrid power extender, 300W, dual AC input with auto-failover. UFP required

#### **Camera Control**

#### CGP 500

Creative Grading Control Panel

Camera Control Server

Creative Grading App

#### Additional Components for System

#### Comms

Works with leading industry suppliers Riedel, RTS and ClearComm **Tally** Works with leading industry suppliers



# **A LA CARTE TEMPORARY SOFTWARE OPTIONS**

The LDX 100 series allows you to upgrade feature by feature, perpetually or just for one day using an à la carte model. Daily (or multiple days) options can be created in the customer's secured B.O.W.L. web portal. A section dedicated to the LDX 100 series has been added to the portal.

#### Opt-UHD-4-LDX 100

Perpetual UHD 50/59.94 option for LDX 100 series

# Opt-HS-4-LDX 100

Perpetual 3-Speed UHD option for LDX 100 series – requires UHD 50/59.94 option and NativelP option installed

**Opt-NatIP-4-LDX 100** Perpetual NativeIP option for LDX 100 series

Opt-DirlP-4-LDX 100

Perpetual DirectIP/DirectIP+ option for LDX 100 series

50CredPoint-4-LDX 100 Bundle of 50 LDX 100 series Option Credit Points

500CredPoint-4-LDX 100

Bundle of 500 LDX 100 series Option Credit Points 1000CredPoint-4-LDX 100

Bundle of 1000 LDX 100 series Option Credit Points

#### **GPS Option Perpetual**

This unique feature indicates the exact location of the camera as soon as it is connected to the network and Creative Grading system – both graphically on a map and with the coordinates displayed in the Creative Grading App. Ideal for large scale and remote operations. This option is only available as a perpetual option.

#### **UHD Filmic Modes Perpetual**

Enables UHD "filmic" acquisition, in broadcast frame rates (25/29.97) and cinema frame rates (23.98/24/60). (For the UHD Filmic option the UHD 50/59.4 Option, 9-0110000105-9, is required.) The UHD Filmic option is also available as a daily option in the B.O.W.L. portal at 3 points/day.

#### JPEG XS Video Compression Single-speed Perpetual

This high-quality low-latency video compression option creates the compressed video signal in the camera when running in NativeIP, saving external equipment. Extremely beneficial for remote productions to save significant bandwidth. Single-speed HD and UHD signals can be compressed. The JPEG XS compression option is only available as perpetual option. Any available option can easily be created in the LDX 100 section of the B.O.W.L. web portal against the above mentioned Option Credit Points.

| Options                                     | <b>Credit Points</b> |
|---|----------------------|
| Daily UHD 50/59.94 for LDX 100 series       | 9                    |
| Daily 3-Speed UHD option for LDX 100 series | 10                   |
| Daily NativelP option for LDX 100 series    | 4                    |
| Daily DirectlP option for LDX 100 series    | 3                    |

EyeCatcher EC 2-100 Viewfinder

The eyes are the most important tools used during a production. Every detail of a shot is important—and the operator must be able to rely on what they are seeing. The **EyeCatcher EC 2-100** color ocular viewfinder provides users with the confidence to know what they see is what is also being seen in the control room and by viewers.

The Grass Valley EyeCatcher EC 2-100 is a high performance color LCD ocular viewfinder for the LDX camera heads. It is part of a full line of state-of-the-art color viewfinders and is very feature-rich with an intuitive user interface. The EyeCatcher viewfinder also has a stylish look and compact design.

EyeCatcher EC 2-100 offers the best possible image performance, highspeed response time, QHD resolution of 960x540 pixels and a diagonal size of 5.1 cm (2.0 in.). The controls are easy and flexible, similar to the Grass Valley 7-inch and 7.4-inch color LCD viewfinders. It comes with two (task) assignable user buttons and a -3 to +1 diopter compensation range.

# **KEY FEATURES**

- · Stylish look and compact design
- Offers the best possible image performance:
  High resolution
- Fast response
- · High brightness and contrast ratio
- · Ergonomic design for comfortable shooting
- Easy and flexible to use
- Intuitive viewfinder menu
- · Camera menu easily accessible via viewfinder controls
- Brightness, contrast and peaking adjustment with rotary controls
- Color/monochrome picture switchable

- Tally on-low-off switch
- Operator-only tally indicator
- Underscan mode for full picture visibility off shoulder
- 2 (task) assignable buttons
- Adjustable diopter

# SPECIFICATIONS

# Connectors

Camera connector: Future proof 9-pin Fisher connector

# Controls

2 assignable user buttons Brightness rotary control Contrast rotary control Combined menu/Peaking rotary control

#### Indicators

# LED indicators inside:

ISO (yellow) On-air (red) Call (green)

# LED indicators front:

1x on-air (red) adjustable

#### General

Power consumption: 3.9W (supplied by camera head) Operating temperature: -20°C to +45°C (-4°F to 113°F) Storage temperature: -25°C to +70°C (-13°F to 158°F) Weight: 900 grams (2.0 lbs.)

#### LCD

Diagonal size: 51 mm (2.0") Resolution: 960x540 pixels (QHD) Response rate: 16 ms

#### Performance

Color depth: 16.7 million colors 8-bit color Brightness: 250 Cd/m<sup>2</sup> Contrast ratio: 200:1 Color temperature: 6500K (adjustable) Pixel pitch: 0.047 mm x 0.047 mm Supported formats: All current HD formats Input signals: Y,Pr,Pb

The viewfinder's LCD panel is manufactured using high-precision technology that yields a pixel response of 99.99% or higher.

Note: EyeCatcher EC 2-100 is compatible with the LDX 100 series cameras only



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**VF7-100X Viewfinder** 

The **VF7-100X** viewfinder for the Grass Valley LDX cameras has native HD resolution in addition to high brightness and contrast as well as fast refresh rate, making it ideal for both indoor and outdoor use.

The VF7-100X is a compact, high-quality, flat panel color viewfinder designed to work with Grass Valley LDX system cameras. The stylish design allows for direct mounting to the mini wedge plate of the camera head in both EFP and SuperXpander configurations.

With native HD 1920x1080 pixels, panel focusing becomes easy. In combination with high brightness and contrast, and a fast display refresh rate, the VF7-100X is the perfect color viewfinder for both indoor and outdoor applications.

The VF7-100X color viewfinder has an intuitive menu structure which not only allows for settings of the viewfinder, but can also be used to call up the camera system menu via the viewfinder controls. Three rotary controls, for contrast, brightness and peaking settings, are easily accessible at the front panel. In addition, three user assignable push buttons are located at the front bezel of the viewfinder.

The color temperature of the display can be adjusted to match the operator's personal preference without any affect on the main video signal, allowing the operator to match the display color temperature with the color temperature of the scene.

#### **KEY FEATURES**

- 7-inch IPS LCD panel with LED backlight
- Bonded LCD screen for reduced reflections
- · High brightness and contrast
- Full HD resolution with 1920x1080 pixels

# **SPECIFICATIONS**

# Connectors

Camera connector: Future proof 9-pin Fisher connector

# Controls

Menu button 3 assignable user buttons Brightness rotary control Contrast rotary control Peaking rotary control

# Indicators

# LED indicators front:

ISO (yellow) On-air (red) Call (green) LED indicators back:

# 2x on-air (left/right) adjustable

- Adjustable box and markers
- Camera menu access
- Supports all current and future formats
- Supports 4K/UHD operation

- Fast response time
- Easy accessible camera menu via viewfinder controls
- Versatile articulated bracket

#### General

Power consumption: 12W (supplied by camera head) Operating temperature: -20°C to +45°C (-4°F to 113°F) Storage temperature: -25°C to +70°C (-13°F to 158°F) Weight: 1.8 kg (3.97 lbs.)

#### LCD\*

Diagonal size: 177.8 mm (7 in.) Active video: 16:9 1920 (H) x 1080 (V) pixel Viewing angle: 178° horizontal, 178° vertical Response rate: 17 ms typical

#### Performance

Color depth: 16.7 million colors 8-bit color Brightness: 700 Cd/m<sup>2</sup> Contrast ratio: 800:1 Color temperature: 6500K (adjustable) Pixel pitch: 0.081 x 0.081 mm Supported formats: All current HD formats Input signals: Y,Pr,Pb

#### Supplied Accessories

Complete mounting kit Short sunhood Cabling User's guide

\* The viewfinder's LCD panel is manufactured using high-precision technology that yields a pixel response of 99.99% or higher.

Note: VF7-100X is compatible with the LDX 100 series cameras only



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