EtherLynx Vision Photo-Finish Camera

with EasyAlign Mode & LuxBoost Low-Light Upgrade

The (5L500) EtherLynx Vision Camera brings powerful new features to the EtherLynx family of photo-finish cameras. Along with the EasyAlign™ and LuxBoost™, Vision cameras offer hardware and software improvements that make FinishLynx timing systems more powerful and user-friendly than ever before.

Intelligent power management, an onboard rechargeable battery option, faster data transfers, and user-friendly upgrades all combine to make the Vision line of cameras the most versatile sports timing cameras ever made.

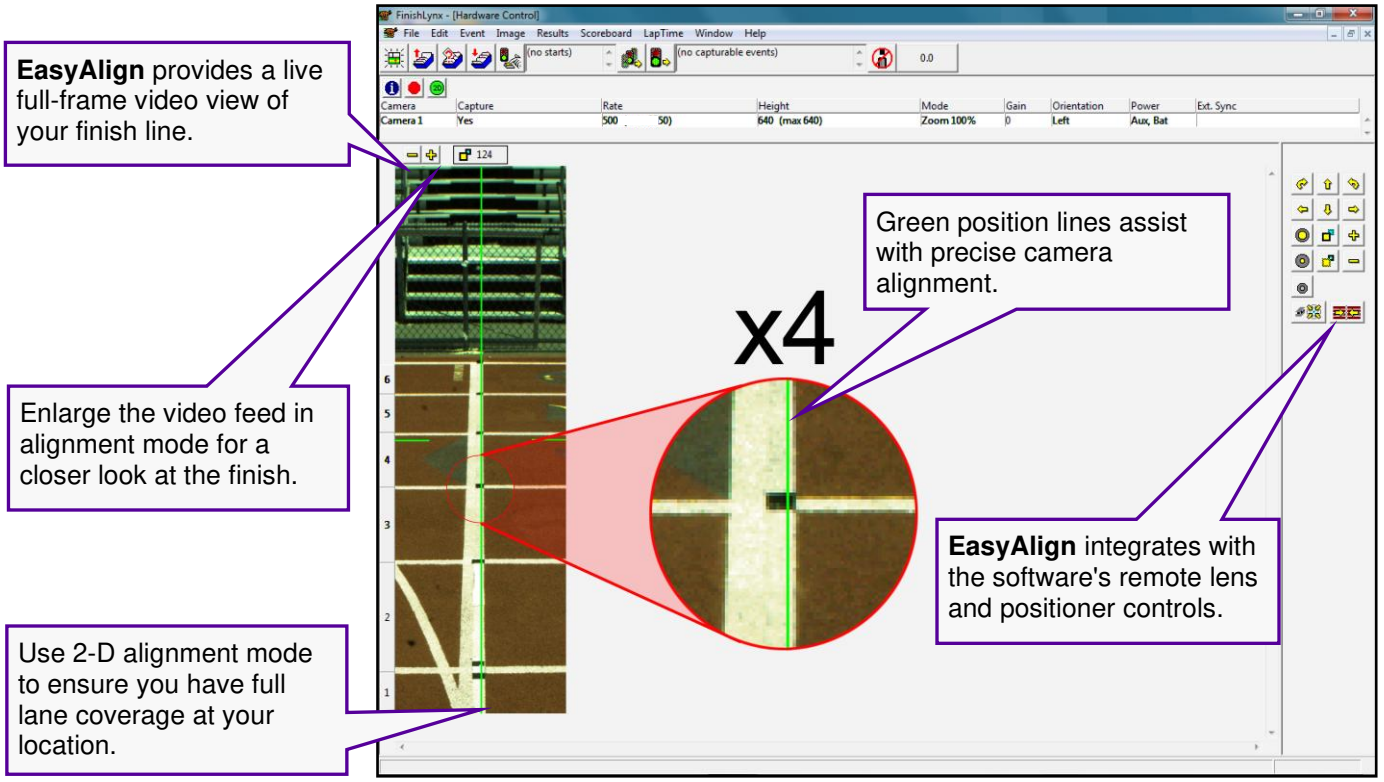
EasyAlign allows operators to switch seamlessly between 2-D (alignment) and 1-D (capture) modes for even faster setup. The base model Vision camera captures **1,000** frames per second at **640** pixels high and the high-resolution upgrade enables captures up to **2,000** fps at **1,280** pixels. The EtherLynx Vision is an ideal camera for sports like athletics and road races. To capture higher speed finish lines like motorsports or horse racing at up to 40,000 fps, we recommend the **Vision PRO X**. See below for a list of features and upgrades available with the Vision.

Powerful Features & Add-Ons

- **EasyAlign** - Full-frame video mode makes camera alignment easier than ever.
- **Power-Over-Ethernet** - All Vision cameras can draw power via the Ethernet cable.
- **Full-Color** - All Vision cameras come standard with the ability to capture color images.
- **Gigabit Transfers** - The first EtherLynx camera to allow for Gigabit Ethernet transfers (1,000 Mbps).
- **Silent Operation** - The Vision runs silently thanks to reduced power consumption and no fans.
- **Advanced Power Control** - New power controls ensure the best power source in each situation.
- **Wi-Fi [Upgrade]** – Connect a small, external Wi-Fi unit to wirelessly transfer timing & results data.
- **Onboard Level** - Monitor the camera's level and orientation directly from FinishLynx.
- **LuxBoost™ [Upgrade]** - Amplifies available light for better race images in low-light conditions.
- **Electronic Filter Control [Upgrade]** - Users can enable/disable low-light filters from FinishLynx.
- **High-Resolution [Upgrade]** – Provides captures up to **2,000** fps with up to **1,280** pixels of height.
- **Internal Battery Backup [Upgrade]** - Battery pack allows the camera to withstand power loss.
- **Electronic Viewfinder [Upgrade]** – Connect a video viewfinder to the HDMI port for alignment.
- **Video Display Module [Upgrade]** - Send live results from camera to HDMI-connected display.

EasyAlign 2-D Video Alignment Mode

All EtherLynx Vision cameras offer EasyAlign full-frame video alignment mode. EasyAlign displays a live, full-frame video preview of the camera's field-of-view on your computer screen. The 2-D preview also overlays two thin lines (vertical and horizontal) so the camera can be adjusted visually to ensure precise alignment on the finish line. Once aligned, just switch the camera back to 1-D capture mode for accurate, photo-finish results images. This new 2-D video mode makes it extremely simple to align the camera quickly and accurately on the finish line to ensure accurate results.



Advanced Power Options and Management

The Vision offers a number of advanced power options not previously available in EtherLynx cameras. The Vision can receive power via PoE, from an AC adaptor, or from an optional battery pack. These options not only give timers more flexibility, but also provide new power management options inside the FinishLynx software.

PoE or DC inputs

Power-Over-Ethernet: The Vision can run completely over a PoE connection. This means it can be operated without any AC power (just like IdentiLynx cameras). Simply connect the Vision to an Ethernet PoE switch or injector with a single CAT5/6 cable to provide both power and data connectivity.

Advanced Power Control: The Vision has a brand new advanced power control option that works with the software to monitor available power options, and it can even be used to remotely reboot distant or hard-to-reach cameras.

Optional On-Board Battery: With the optional rechargeable NiMH battery pack installed, the software reports battery levels, and seamlessly switches to battery operation in the event of a loss of power.

Software Power Controls

See Available Sources

Monitor Battery Health

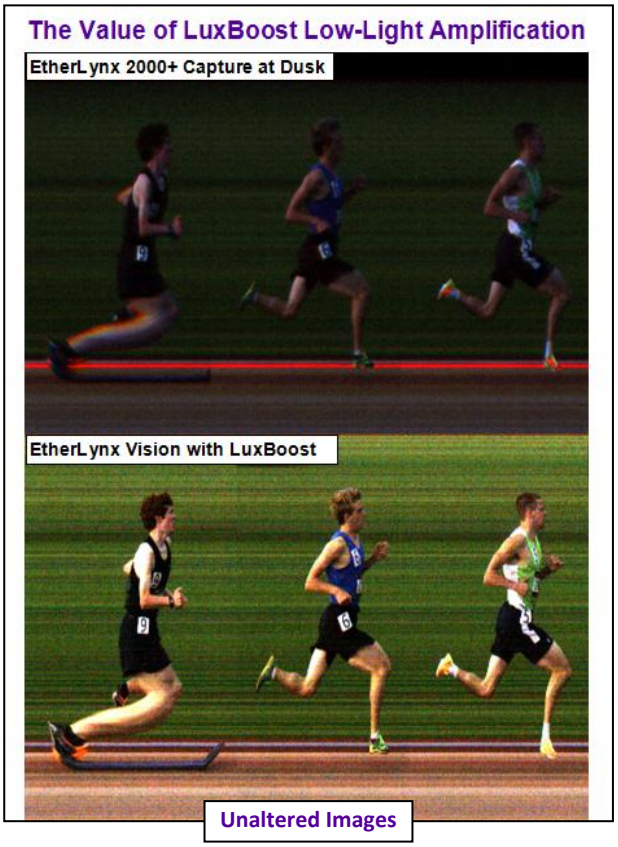
Click to Reboot Remotely

LuxBoost™ Low-Light Amplification Technology

The optional LuxBoost technology dramatically amplifies the light available for 1-D image captures. Improved light sensitivity means that the camera can capture high-quality images in very low-light conditions. Historically, once an operator had made all possible adjustments to scan rate, gain and filters, they were still limited by the available light. LuxBoost changes that.

LuxBoost employs advanced hardware and software techniques to amplify the available light. The images on the right show a direct comparison between two EtherLynx cameras capturing the same race at dusk (8:00pm). The top image was captured with an EtherLynx 2000+ while the bottom was captured with an EtherLynx Vision using LuxBoost.

With a light amplification factor that is user-configurable between 2x and 4x, LuxBoost not only illuminates the image, but it also increases the visibility of key elements necessary for athlete identification like the hip numbers.



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ETHERLYNX VISION CAMERA

Vision Hardware Specifications

Item	Specification
Pixels (vertical)	640; 1280 with High Resolution Option (continuously adjustable)
Distance Camera to Computer	100m Cat 5/6, 2,000m Fiber Optic (with converter)
PC-connection	10/100/1000Mbit/s 802.3 Ethernet Topology
#colors/pixel	Up to 31bit – 2 billion colors (user adjustable)
Sensor Type	CMOS Array
Internal Camera Memory	1Gb, Expandable to 2Gb
Acquisition Rate	100 – 1,000 frames per second; 2,000 with High-Resolution option
Frame Rate Adjustment	Continuously Adjustable
Time Base	0.5 Part Per Million (.0005s per 16.7 min) - Temp. Compensating
Lens Mount	CS Mount (C-Mount with adaptor)
Camera Alignment Aids	EASYALIGN ™ full video image preview
Remote Lens Option	Yes
Remote Alignment Option	Yes
Phased Light Compensation	Optional Add-on
Built-In Battery Backup	Optional Add-on
802.11 Wireless connectivity	Optional Add-on
Light Sensitivity	High – Extreme low-light capability with optional LuxBoost™
Switchable IR Filter	Optional - Electronically Controlled 2 stage
Digital Zoom	Optional 2x
Gamma Control	Software
Image Compression	Real-time Lossless
Built-In Battery Backup	Optional
Start Signal Options	• Manual Start • Normally Open wired sensor/switch closure • Normally Closed wired sensor/switch closure • Optional RadioLynx wireless start
Power Input	**Standard**: 802.3at POE+ **Options**: 100-240 VAC with adapter or 12v DC input, Internal rechargeable batteries
Operating Temperature	-10° - 60°C
Control multiple cameras from 1 computer	Yes
Mix and Match Camera Models	Yes
Auto-Iris (in addition to Auto-Gain)	Yes
"Hot-swap" instant replacement guarantee	Yes. Applies to in-warranty cameras
Approvals	FCC, CE, ICES
Camera Body Dimensions	15.7cm x 7.5cm x 15.5cm
Camera Body Weight (Excluding Lens)	1.4Kg

FinishLynx Software Features

- Selectable User Interface Language
- Evaluate image while race still in progress
- Allows multiple events to be active simultaneously
- Apply missed starts
- Interface to Meet Manager
- Optional Automatic Capture capability
- Optional Software Photocell function
- User Configurable Screen Layout
- IP-network connection to serial devices
- User-scriptable scoreboard interface
- Optional Interface to RFID transponders/pushbutton timers for split timing