## FinishLynx Fully Automatic Timing

## Athletics



## Complete

These athletics timing packages offered by Lynx are all-inclusive and provide everything you need to pro-duce certified Fully Automatic Timing. They are planned to meet every budget-level, represent the very latest in sports timing technology, and are designed to be fully upgradeable at any time.

## Approved

All FinishLynx cameras, starting systems, wind gauges, scoreboards, false start detection systems, and wireless hardware contained in these packages meet or exceed the technical standards of the USATF, IAAF and other major governing bodies for athletics.

## Powerful

FinishLynx leads the world in accuracy and reliability. Lynx cameras capture up to 20,000 frames per second and integrate seamlessly with a variety of hardware and software add-ons. Add scoreboards, chip timing, video cameras, wireless start, false start detection, and field event hardware for a truly integrated solution.

## To find your local recommended reseller:

**Email** (USA/Canada/Mexico):   domsales@finishlynx.com
**Email** (International):   intlsales@finishlynx.com
**Telephone** (USA):   USA (978) 556 9780

# Contents

## Packages and Beyond

Lynx has designed these packaged solutions to make the decision-making process easier in all situations. Every FinishLynx package contains everything you need to produce fully automatic timing – all the hardware, software, and cables.

Every package offers a completely self-contained solution and it is possible to mix-and-match any *Track* package with any *Field* package. For example, a Grand Prix Elite *Track* package integrates just as smoothly with a Competition *Field* package, as it will with a Grand Prix Elite *Field* package. From the simple to the sophisticated, the range of possible combinations provides endless options for any budget level.

Lynx timing systems are field-proven, cost-effective, and technologically advanced solutions that have been designed from a real-world perspective. Because of the modular nature of Lynx technology, products can be easily added to any of the packages–at any time, now or in the future–to provide a customized solution that meets the specific needs of any facility.

## World Athletics Specifications and Compliance

**Lynx** digital technology has been used at major athletic events around the world since 1992. Our photo-finish systems comply with the requirements of World Athletics (formerly IAAF) and are used regularly at meets sanctioned by World Athletics.

**WORLD ATHLETICS.**

Lynx System Developers, Inc.
Doug DeAngelis
179 Ward Hill Avenue
Haverhill, MA 01938
USA

Monaco, 30 January 2021

Dear Doug,

Technological devices other than the reaction time measuring module of the Start Information System (SIS) (e.g. Timing Systems, Wind Gauges, Distance Measuring Equipment etc.) used in athletics are not issued a certificate by World Athletics and therefore no certified lists for such devices are available.

All measuring equipment used in World Athletics competitions shall be manufactured and calibrated according to international standards. The accuracy has to be guaranteed by the manufacturer according to the relevant international standards and shall have been verified by an appropriate organisation accredited by the national measurement authority.

To our knowledge and experience, the equipment of Lynx meets this condition and is also successfully used in international athletics competitions organised under IAAF Rules and Regulations.

The "ReacTime Championship" accelerometer based reaction time measuring module of the Start Information System (SIS) by Lynx System Developers, Inc (software ver. 2.0 or later) was studied and tested according to the established World Athletics criteria and was found to have met the current requirements for an World Athletics Product Certificate.

Sincerely,

Imre MÁTRAHÁZI
**Technical Services Senior Manager**
**Competition & Events Department**

6-8, Quai Antoine 1er      www.worldathletics.org
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Monaco Cedex
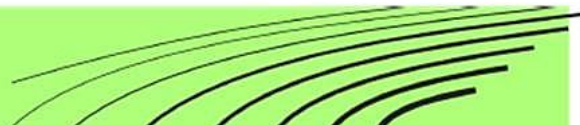
# EtherLynx Vision Photo-Finish Camera
## with EasyAlign Mode & LuxBoost Low-Light Upgrade

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 set up. 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 20,000 fps, we recommend the next generation **Vision PRO**. See below for a list of brand new 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.

**Backwards Compatible** - The Vision is compatible with **all** Lynx cameras made since 1996.

**Onboard Level [Upgrade]** - 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.

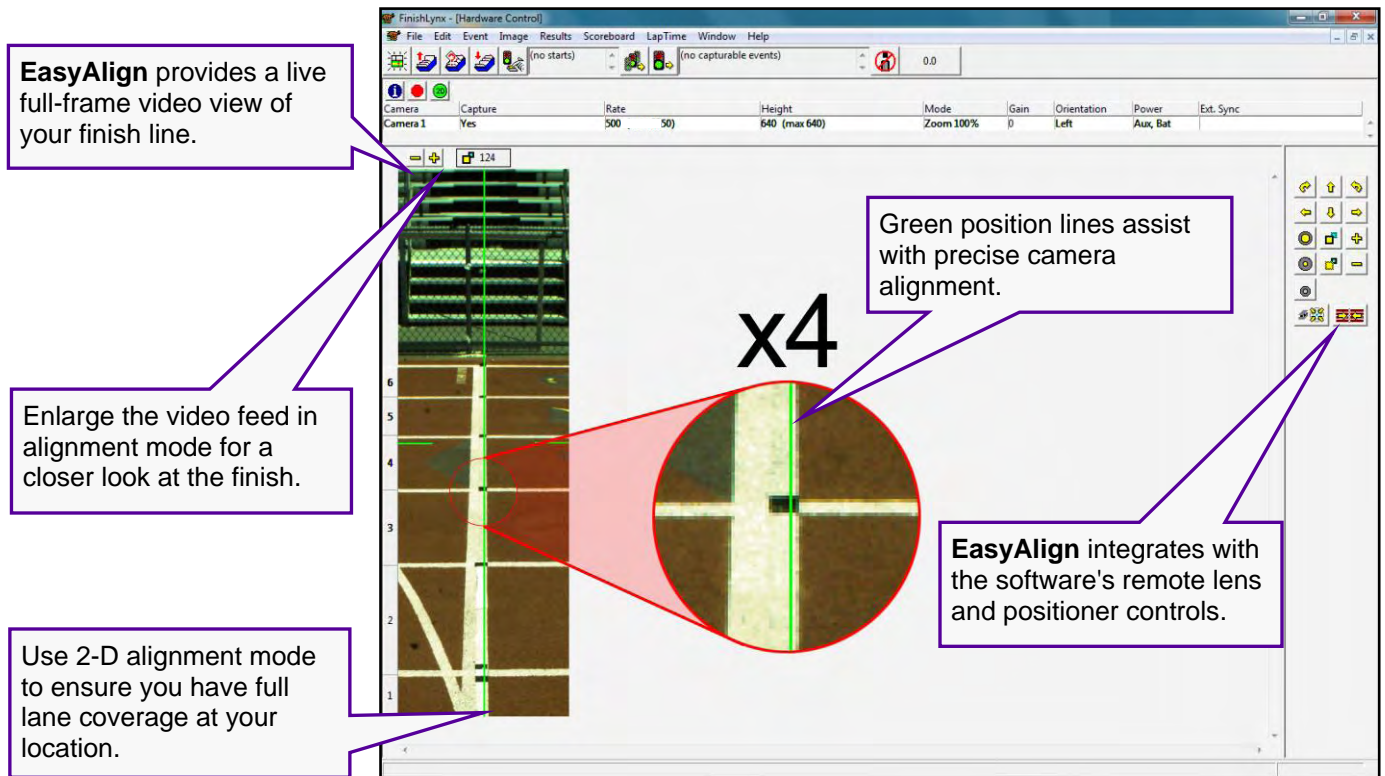**Internal Battery Backup [Upgrade]** - Battery pack allows the camera to withstand power loss.

**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.

**EasyAlign** provides a live full-frame video view of your finish line.

Enlarge the video feed in alignment mode for a closer look at the finish.

Use 2-D alignment mode to ensure you have full lane coverage at your location.

Green position lines assist with precise camera alignment.

**EasyAlign** integrates with the software's remote lens and positioner controls.

## 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**

**Software Power Controls**

**See Available Sources**

Power
Aux, Bat

**Monitor Battery Health**

Power
Bat (7.1v-Ok)

**Click to Reboot Remotely**

Power
Aux, Bat

Shut down...        Power
Restart...

**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.

# 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.



**The Value of LuxBoost Low-Light Amplification**

EtherLynx 2000+ Capture at Dusk

EtherLynx Vision with LuxBoost

**Unaltered Images**

# All-Inclusive Packaged Solutions



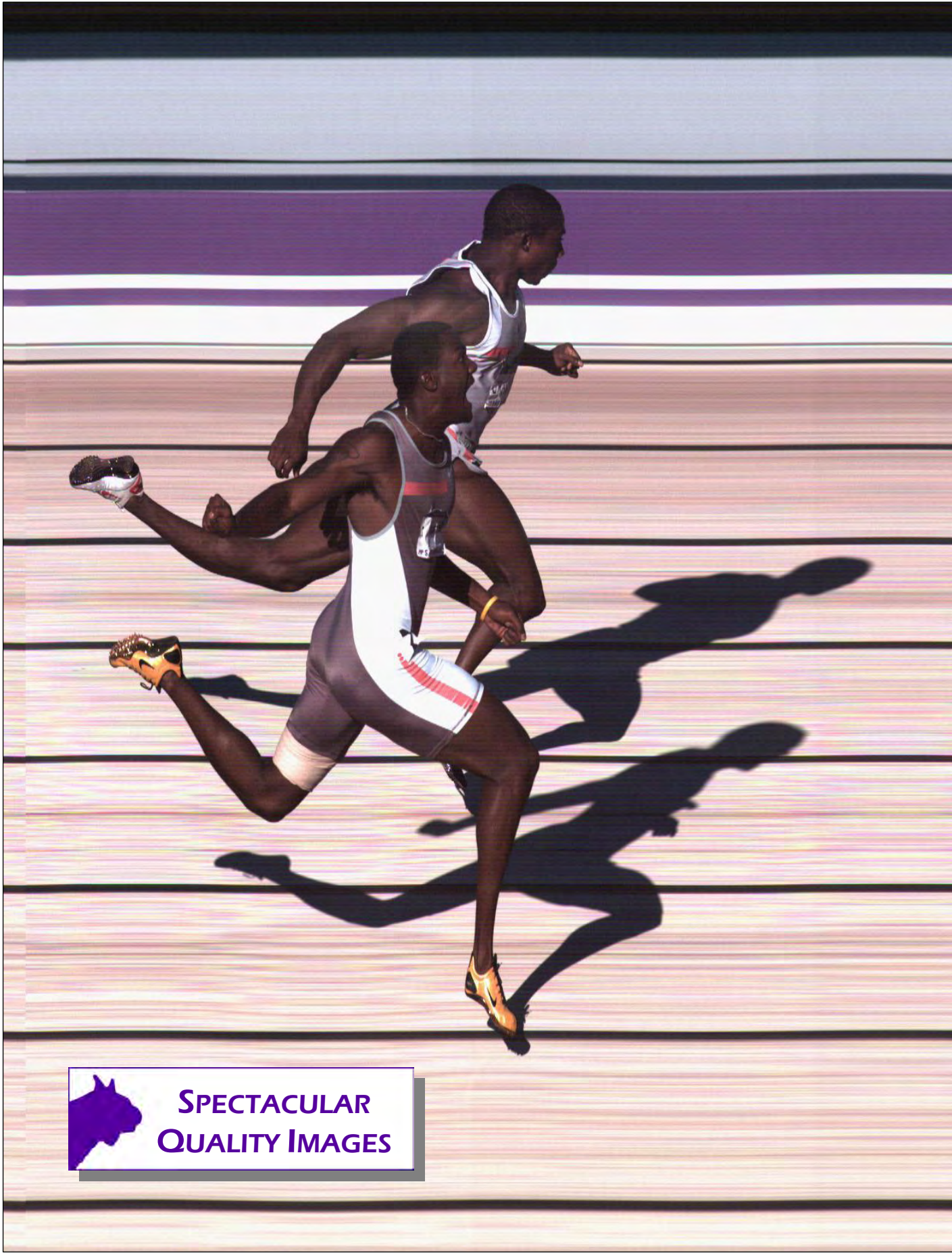**Packages Contain Everything You Need**

## 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 | 1 Part Per Million (.001s 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 |
| 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<br>• Normally Open wired sensor/switch closure<br>• Normally Closed wired sensor/switch closure<br>• Optional RadioLynx wireless start |
| Power Input | POE, internal rechargeable batteries, 100-240 VAC with Adaptor, or optional 12v DC input |
| Operating Temperature | 0° - 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 | UL and CE |
| 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
- Optional IP-network connection to serial devices
- User-scriptable scoreboard interface
- Optional Interface to RFID transponders/pushbutton timers for split timing

Tel: 978.556.9780 Toll Free: 800.989.5969 www.finishlynx.com

# EtherLynx Vision PRO Photo-Finish Camera
## with EasyAlign, LuxBoost, and up to 20,000 FPS Capture

The **EtherLynx Vision PRO** is an elite-level photo-finish camera that combines the user-friendly features of the EtherLynx Vision with the speed and power of the EtherLynx PRO. The Vision PRO is the latest in a long line of EtherLynx cameras and it brings powerful new features to the world of high-speed sports timing.

Along with the EasyAlign™ and LuxBoost™ features, Vision cameras offer hardware and software improvements that make FinishLynx timing systems more intuitive than ever. The standard Vision PRO captures **3,000** frames per second at 1024 pixels high and includes features like LuxBoost4, On-Board Level, and Electronic Filter Control all standard. There are also two high-resolution upgrades that increase image height and capture rates to **6,000 fps** (at 2048 pixels) and an unprecedented **20,000** fps. The high frame rate (20k) and advanced capture settings make the Vision PRO an excellent choice for high-speed timing applications like horse racing, cycling, motorsports, and more.

# Elite-Level Photo-Finish Camera Features

**High-Speed Capture** – Comes standard with **3,000** fps. Optional upgrades enable **6,000** & **20,000** fps.

**Power-Over-Ethernet** – Provide camera power and data transfers from a single Ethernet cable.

**EasyAlign** - Full-frame video mode makes photo-finish camera alignment easier than ever.

**Gigabit Transfers** - Capture large images quickly with Gigabit Ethernet transfers (1,000 Mbps).

**LuxBoost™** - Amplifies available light for better race images in low-light conditions.

**Advanced Power Control** - New power controls ensure the best power source in each situation.

**Backwards Compatible** - The Vision PRO is compatible with all Lynx cameras sold since 1996.

**Silent Operation** - The Vision PRO runs silently thanks to no fans and reduced power use.

**Electronic Filter Control** - Users can enable or disable low-light filters from FinishLynx.

**Onboard Level** - Monitor the camera's level and orientation directly from FinishLynx.

**Internal GPS [Upgrade]** - Sync with GPS times for use with Motorsports and Time of Day events.

**Video Display Module [Upgrade]** - Send live results from camera to HDMI-connected display.

**High-Resolution [Upgrade]** – High-Res. provides **6,000** or **20,000** fps captures at **2048** pixels high.

**Electronic Viewfinder [Upgrade]** – Connect a video viewfinder to the HDMI port for alignment.

**Wi-Fi [Upgrade]** – Connect a small, external Wi-Fi unit to wirelessly transfer timing & results data.
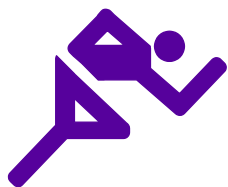
**Internal Battery Backup [Upgrade]** - Battery pack allows the camera to withstand power loss.

# Vision PRO Hardware Specifications

| Feature | Specification |
|---|---|
| Vertical Pixels | 1024; 2048 max with High Resolution Option |
| Vertical Pixel Adjustment | Continuously adjustable |
| Max Frame Rate | 3,000 frames per second standard; 6,000 fps upgrade; 20,000 fps upgrade |
| Frame Rate Adjustment | 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 2 million colors (user adjustable) |
| Sensor Type | CMOS Array (single line in photo-finish mode) |
| Time Base | 0.5 Part Per Million (.0005s per 16.7 min) - Temp. Compensating |
| Available Lens Mounts | CS-Mount; C-Mount; F-Mount |
| Camera Alignment Aids | EasyAlign full-frame video preview |
| Remote Lens & Remote Alignment Options | Yes |
| LuxBoost Low-Light Capture & Auto LuxBoost | Yes – LuxBoost4 |
| On-Board Level | Yes |
| Frame Offset | Optional Add-On |
| Built-In Battery Backup | Optional Add-On |
| Phased Light Compensation | Optional Add-On |
| 802.11 Wireless Connectivity | Optional Add-On |
| Light Sensitivity | High – Extreme low-light capability with optional LuxBoost8 |
| Switchable IR Filter | Yes – Electronically Controlled 2 Stage |
| Digital Zoom | Optional 200% |
| Gamma Control | Hardware  and Software |
| Image Compression | Real-time Lossless |
| Start Signal Options | Manual Start • Normally Open wired sensor/switch closure • Normally Closed wired sensor/switch closure • Optional RadioLynx wireless start • Image Start |
| Power Inputs | 802.3at PoE, 100-240 VAC with optional adaptor, or 12v DC input |
| Backup Power Options | Optional Internal Rechargeable Batteries;  Optional External Battery |
| Operating Temperature | 0° - 60°C |
| Control multiple cameras from 1 computer | Yes |
| Mix and Match Camera Models | Yes |
| Automatic Luminance Control | Auto-Iris; Auto-Gain;  Auto LuxBoost |
| "Hot-swap" instant replacement guarantee | Yes. Applies to in-warranty cameras |
| Approvals | UL and CE |
| Camera Body Dimensions | 15.7cm x 7.5cm x 15.5cm |
| Camera Body Weight (Excluding Lens) | 1.4Kg |



For more information on all FinishLynx cameras and accessories, visit **www.finishlynx.com**

ETHERLYNX VISION PRO CAMERA

# Track Events

# Your ❶ - ❷ - ❸ Guide To Fully Automatic Timing

## What is Fully Automatic Timing?

Fully Automatic Timing – or FAT – is the standard required today by every regulatory body in Track & Field. In general, the requirements of an approved FAT system include:

❶ The timing must be started automatically by the signal from the starting apparatus (like a starter pistol in Track and Field)

❷ The system must be capable of producing printed images showing the times

❸ It must be capable of timing to a precision of at least 1/100$^{th}$ second

FAT is mandated for record ratification at all levels, from the International Association of Athletics Federations (IAAF) to the National Federation of High Schools (NFHS).

If, *and only if*, a timing system meets all of these requirements, can it be used to sanction meet results for new state, national, and international records.

## Are FAT Systems Complicated?

**ABSOLUTELY NOT.**

There are three main components to a basic digital line-scan FAT system:

❶ A **Start Sensor** that detects the firing of a manual or electronic starting pistol

❷ A **Computer** running timing software

❸ A timing **Camera** at the finish line
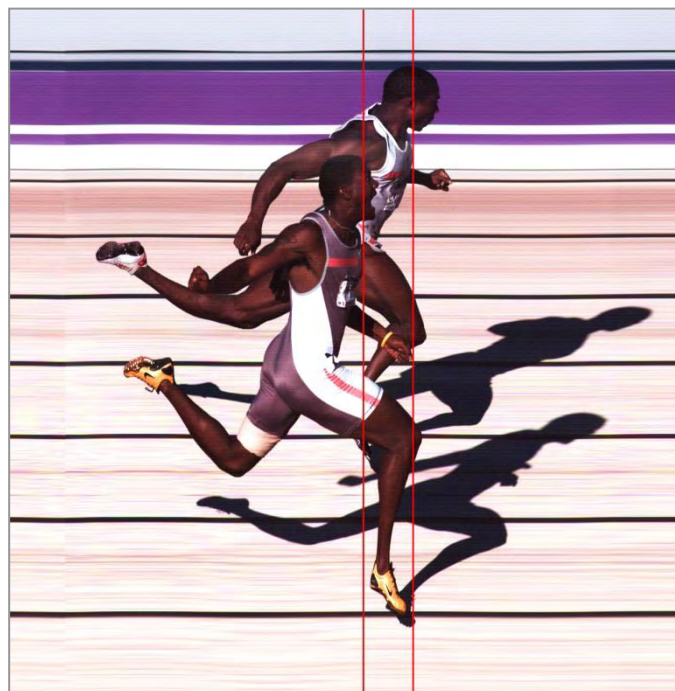


## How Accurate is a FAT System?

FinishLynx timing systems can capture anywhere from 600 frames per second (fps) up to an astounding 20,000 fps. That's why FinishLynx is trusted by world-class events like NASCAR and the Tour de France. In fact, FinishLynx cameras have an internal digital clock that is accurate to plus-or-minus one part per million.
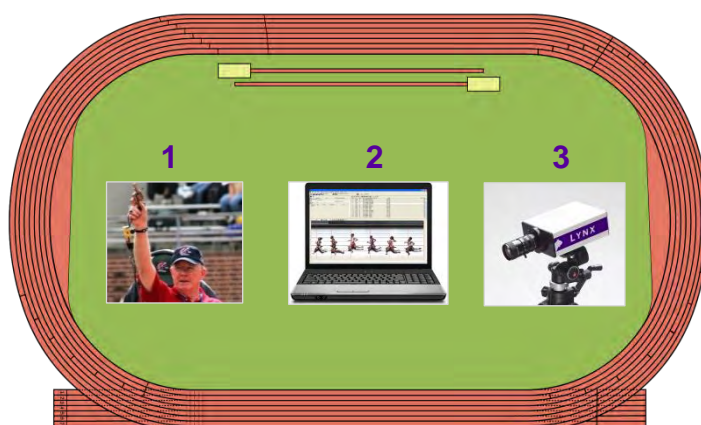
## What Are Line-Scan Images?

One way to think of line-scan photography is to imagine sitting in a room with the door open a tiny crack and watching someone from outside run past the door. As they run by, you only ever see a thin "slice" of them through the door. But, after a short period of time, they will travel completely past the doorway. Now imagine that the crack in your door is aligned perfectly with the finish line.

A line-scan photo-finish image is actually composed of a series of incredibly thin individual pictures of a finish line (and whatever is crossing it). Then, each vertical finish line image is combined one after the other to create a full image. See the diagram for an example.
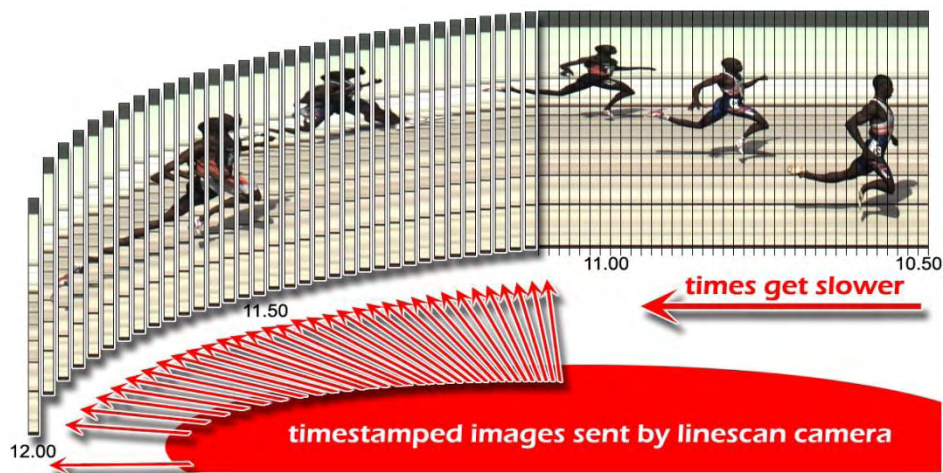
The FinishLynx software combines these thin, time-stamped images side-by-side so it becomes very easy for the timer to see exactly when each competitor crosses the finish line. Simply click the mouse on a competitor's torso and the software displays their finish time automatically down to 1/1000th of a second.



times get slower

11.00          10.50

11.50

12.00

timestamped images sent by linescan camera

## What Other Features Are Available?

**1** **Quick and easy hardware setup**
- Unlike any other FAT system, the FinishLynx software can use a Remote Positioner to adjust the camera placement and auto-align the camera precisely on the finish line.
- The RadioLynx Wireless Start technology (included with the higher-end packages) means that the days of having to string cable to all the start locations can be gone forever.

**2** **Data sharing**
- All Lynx systems (Bronze and above) have the ability to link the timing system to scoreboards and to meet management software for instant and error-free sharing of data (results, names, affiliations, etc.).

**3** **High-quality photo printing**
- The photo-finish image printouts produced by a FinishLynx FAT system meet all the requirements for record authorization at all levels of the sport.

## Why Choose a Lynx Package?

### Improved Meet Results

**1** **Fairness –** Coaches and athletes quickly learn that results are accurate and reviewable, putting an end to unnecessary disputes.

**2** **Timeliness –** Meets will start and end on time because there won't be disputes and confusion over lanes and finish times at the end of every race.

**3** **Accuracy –** Athletes won't be denied recognition for their achievements.

### Improved Financial Results

**1** **Use limited human resources better –** No need to find hand timers for every lane.

**2** **Save on costs –** No more need to pay a costly timing service to provide FAT at local meets.

**3** **Raise money for the program –** High-quality image printouts can be sold as souvenirs.

## IAAF-Approved Full-Color Photo Finish System

### I.A.A.F. Rule 165:13

*"Fully Automatic Timing and Photo Finish System approved by IAAF should be used at all competitions."*

**Contains Everything You Need.**

The Competition package is an all-inclusive, single-camera, color photo finish system for athletics. It needs only a computer to deliver I.A.A.F. compliant, Fully Automatic Times (FAT) at track and field meets of any size.

Accepted by the IAAF, and used at athletics competitions around the globe, this system is a perfect introduction to Lynx technology. It is easy to set up, easy to use, and provides high-quality timing features at an affordable price.

Although designed as a basic package, it can be upgraded at any time to a higher specification. In fact, the ability to upgrade or add components, without fear of obsolescence, is a key feature of the FinishLynx philosophy.

## Components

- **Camera: EtherLynx Vision**, 2,000 frames/second, **full color** images, timer-enabled, fully upgradeable
    - **EasyAlign** Full-Frame Video Alignment Mode
    - High-Resolution Option (2,000 fps x 1280 pixels of image height)
    - C-mount f1.2, 8-48mm Manual Zoom Lens
- Wired Start System & Capture Button
- All-inclusive Power, Ethernet, & Start Cable Set
- Tripod & Mounting Hardware for Precision Adjustment
- Built-in Interface to Scoreboards and Wind Gauges
- Full-Access to Lynx Technical Support
- 1-Year Renewable Warranty
- **FinishLynx32** Multi-Language* Photo Finish Software
- **LynxPad** Multi-Language Meet Management Software

* FinishLynx is available in English, Spanish, French, Arabic, German, Italian, Korean, Portuguese (Brazil), Russian, Swedish, Finnish, Chinese (Simp.), Chinese (Trad.), Japanese. See website for current listing.

## Why Choose FinishLynx?

When you choose a FinishLynx packaged solution, you can feel secure knowing that you have made a smart investment. FinishLynx offers everything you need to produce accurate and professional race results. Because you always have access to the latest software upgrades, you can also be sure that your system is compatible with all the latest features as our technology evolves over time. Join the thousands of other venues across the world who trust their timing to FinishLynx.

## FinishLynx Competition Package for Athletics

This IAAF-approved athletics timing system is a perfect introduction to the world-class FinishLynx technology. At the heart of the system is the **EtherLynx Vision** timing camera, a powerful photo-finish camera that captures full-color images at 2,000 frames per second (fps) and offers **EasyAlign** for quickly aligning the camera on the finish line.

Combine this next-generation camera with FinishLynx results software and you have a powerful athletics timing system for meets of any size. The system also includes advanced technical support and access to a network of timing professionals from around the globe. Join our international community of event timers.


**EasyAlign Full-Frame Video Alignment Mode**
x4
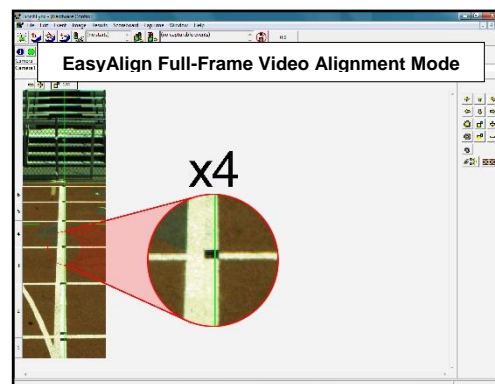
# FinishLynx Competition Package for Athletics

Part of what makes FinishLynx systems so popular is the suite of features available in the FinishLynx timing software. It allows users to customize their system by adding software plug-ins and additional 3rd-party hardware like scoreboards, wind gauges, and RFID chip timing.

We offer a number of software plug-ins to extend your timing capabilities, including Automatic Capture Mode (ACM), Network COM-Port (NCP), and RadioLynx Wireless Start. The software also includes native support for multiple EtherLynx cameras, IdentiLynx 2-D video integration, and interfaces with compatible scoreboard displays and wind gauges.
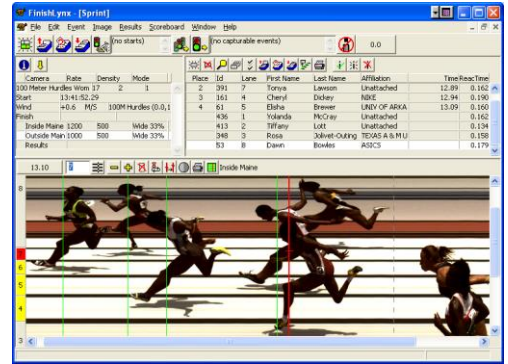
## EtherLynx Vision Camera Features

The Vision camera was released in December 2014 and is the latest in a long line of powerful EtherLynx photo-finish cameras. Key features include:

- **EasyAlign** Full-Frame Video Alignment for easily aligning your camera on the finish line
- **Power-Over-Ethernet** so the camera doesn't require AC power at the finish line
- **Full-Color Images** so you can produce high quality time-stamped images for immediate printing or online posting
- **Gigabit Transfers** so you can transfer FAT results data in real time at up 1,000 Mbps
- **Virtually unlimited captures** limited only by your hard drive - capture every lap (for every athlete) in a 10k race
- **Additional Upgrade Options** include **LuxBoost** low-light capture, **On-Board Level**, and **Internal Battery Pack**

## Athletics – Competition
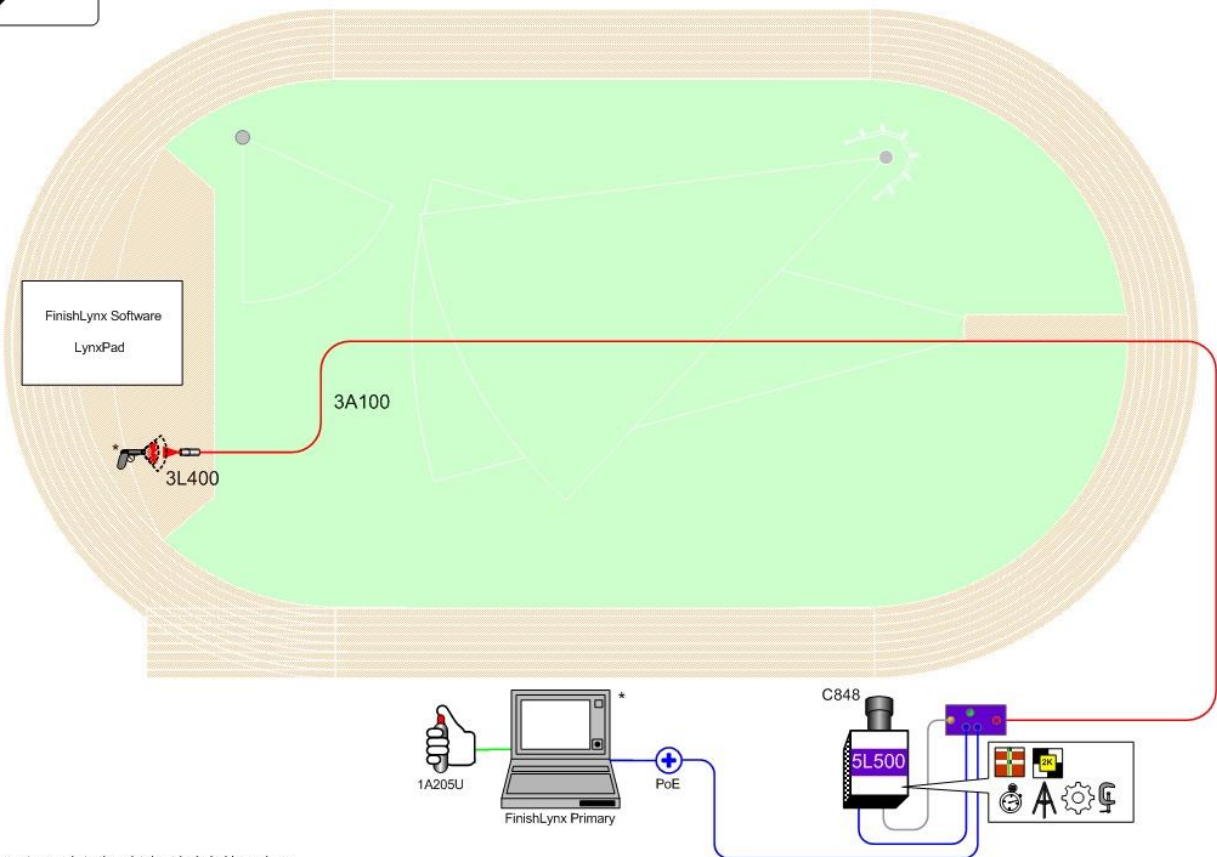
FinishLynx Software
LynxPad

3A100

3L400

1A205U

PoE

FinishLynx Primary

C848

5L500

2K

* Computers and starting pistol not included in package

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# Competition Elite Package

## LYNX SYSTEM DEVELOPERS, INC

### IAAF-Approved Full-Color Photo Finish System with Remote Control Features & Wireless Start

The **COMPETITION ELITE** Package includes all the components of the COMPETITION Package – Plus a Remote Control Zoom Lens, and a complete RadioLynx Wireless Start system.

With the addition of these components, there is no need to run long start cables, or use a ladder to adjust the lens, so the set-up and operation of the system becomes even easier.

### I.A.A.F. Rule 165:14 (2012-2013 Edition)

…[Fully Automatic Timing apparatus] shall be started automatically by the Starter's gun, so that the overall delay between the report from the muzzle or its equivalent visual indication and the start of the timing system is constant and less than 1/1000th of a second.

Remote Control Zoom Lens: Software control of Zoom, Aperture and Focus Functions

### Components

- **Camera: EtherLynx Vision**, 2,000 frames/second, **full color** images, timer-enabled, fully upgradeable
- EasyAlign Full-Frame Video Alignment Mode
- High-Resolution Option (2,000 fps x 1280 pixels of image height)
- **Internal RadioLynx option**
- **C-mount f1.2, 8-48mm Motorized Remote Control Zoom Lens:**
    - **Zoom, Focus, Iris**
- **RadioLynx Wireless Start System**
- All-inclusive Power, Ethernet, & Start Cable Set
- Tripod & Mounting Hardware for Precision Adjustment
- Built-in Interface to Scoreboards and Wind Gauges
- Full-Access to Lynx Technical Support
- 1-Year Renewable Warranty
- **FinishLynx32** Multi-Language* Photo Finish Software
    - **RadioLynx Plugin for FinishLynx**
    - **Automatic Capture Mode (ACM) Plugin**
- **LynxPad** Multi-Language Meet Management Software

* FinishLynx is available in English, Spanish, French, Arabic, German, Italian, Korean, Portuguese (Brazil), Russian, Swedish, Finnish, Chinese (Simp.), Chinese (Trad.), Japanese. See website for current listing.

## FinishLynx Competition Elite Package for Athletics

This is an all-inclusive, single-camera, full-color photo finish system for athletics The package contains several key enhancements over the Competition Package, including the RadioLynx wireless start system, the patented Lynx Automatic Capture Software plug-in, and a remote control lens.
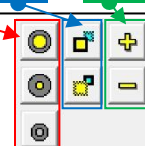
### The Automatic Capture & Virtual Photo-Eye Plugin

This is a powerful software add-on that performs two key functions. First, it allows the software to *automatically capture images* whenever an athlete crosses the finish line without the need for an external photo cell. That means timers don't need to press and hold the capture button. Secondly, it enables the software to automatically send a split or finish time to display clocks whenever the lead athlete crosses the finish line.

### Remote Control Lens Functions

Because finish line cameras are often mounted well above eye-level, the Remote upgrade ensures the camera is easily adjustable. This motorized accessory allows operators to make mid-meet adjustments to account for changes in light levels, glare, and shadows. A simple click on the remote adjustment icons will adjust your lens or field of view without having to climb a ladder to reach your camera.

Software controls for Aperture ~ Focus ~ Zoom

The RadioLynx wireless start system will eliminate the need to run cables to all the start locations around the track. The secure wireless transmission technology is powerful, portable and reliable.

Even a missed or interrupted transmission is no problem – a press on the *repeat* button will re-send the race start time to FinishLynx. With a response time of less than 1/1000th of a second, RadioLynx is fully compliant with IAAF Rule 165:14 and can be used at major international athletics competitions.

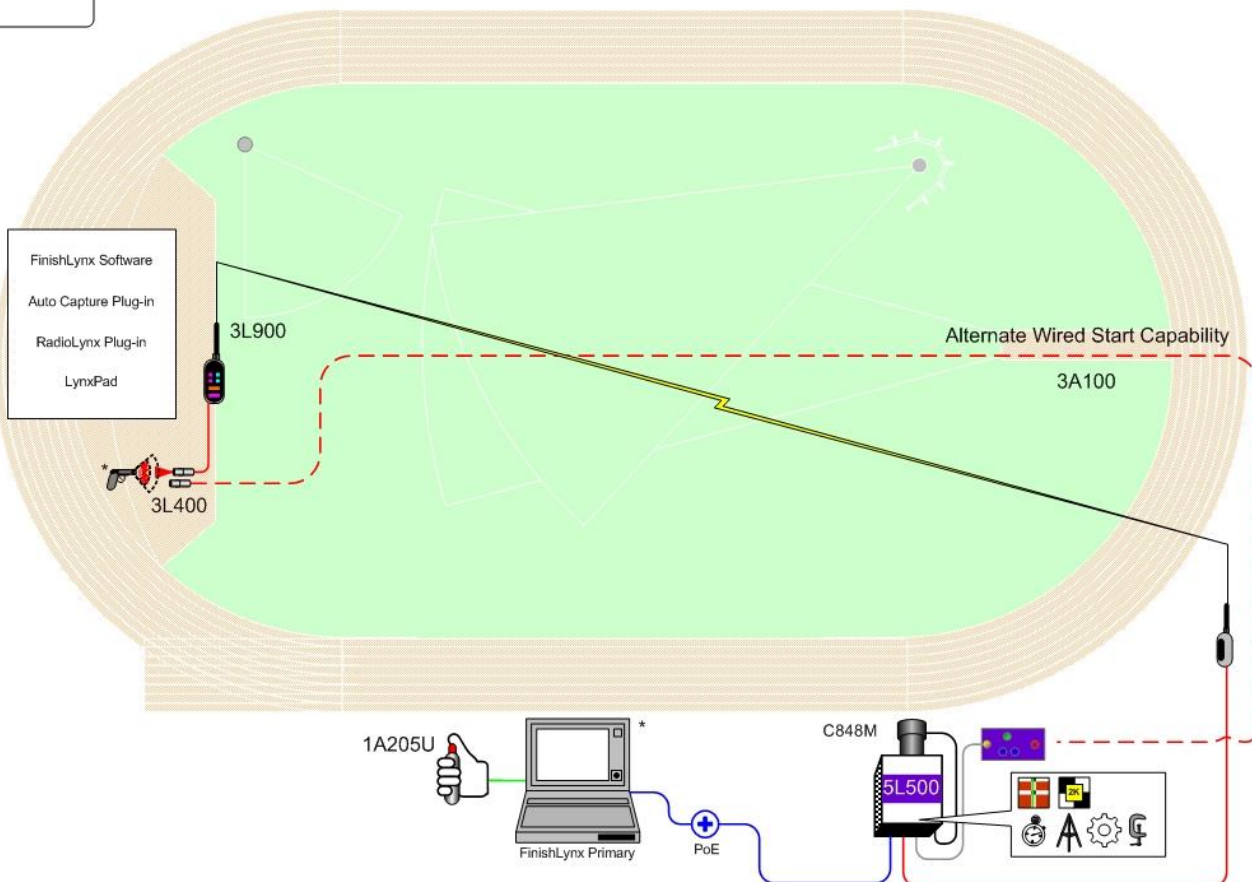**RadioLynx: IAAF-Compliant Wireless Start System**

## EtherLynx Vision Camera Features

The Vision camera is the latest in a long line of powerful EtherLynx photo-finish cameras. Key features include:

- **EasyAlign** Full-Frame Video Alignment for easily aligning your camera on the finish line
- **Power-Over-Ethernet** so the camera doesn't require AC power at the finish line
- **Full-Color Images** so you can produce high-quality results images for immediate printing or online posting
- **Gigabit Transfers** so you can transfer FAT results data in real time at up 1,000 Mbps
- **Virtually unlimited captures** limited only by your hard drive - capture every lap in a 10k race
- **Additional Upgrade Options** include **LuxBoost** low-light capture, **On-Board Level**, and **Internal Battery**

## Athletics – Competition Elite

FinishLynx Software
Auto Capture Plug-in
RadioLynx Plug-in
LynxPad

3L900

3L400

Alternate Wired Start Capability
3A100

1A205U

FinishLynx Primary

PoE

C848M

5L500

\* Computers and starting pistol not included in package

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Tel: (978) 556-9780

www.finishlynx.com

## IAAF- Approved 2-Camera Timing System (1 Photo Finish + 1 Head-On Video Camera), Remote Controls, LED Display, & Wind Gauge

The **Championship Package** is an IAAF-approved athletics timing system that includes the full-color EtherLynx Vision photo-finish camera and a time-synchronized IdentiLynx video camera.

This package includes all the components of the Competition Elite Package (like remote camera/lens capabilities and RadioLynx wireless start) as well as an IdentiLynx camera, ACM software plugin, 9-digit LED display, and IAAF-approved wind gauge. Plus all the components can be controlled directly from the FinishLynx timing software.



## Components

- **Camera: EtherLynx Vision**, 2,000 frames/second, **full color** images, timer-enabled, fully upgradeable
  - **EasyAlign** Full-Frame Video Alignment Mode
  - High-Resolution Option (2,000 fps x 1280 pixels of image height)
  - Internal RadioLynx Option
  - C-Mount f1.2, 8-48mm Motorized Zoom Lens
- **IdentiLynx Full-Frame Video Camera** (30 fps, 720p)
- **Ultrasonic Wind Gauge** (IAAF compliant)
- **9-Digit Alphanumeric LED Display** (with tripod, bag and charger)
- Remote Lens
- **Remote Camera Positioner**
- RadioLynx Wireless Start System
- All-inclusive Power, Ethernet, & Start Cable Set
- Tripod & Mounting Hardware for Precision Adjustment
- Built-in Interface to Scoreboards and Wind Gauges
- Full-Access to Lynx Technical Support
- 1-Year Renewable Warranty
- **FinishLynx32** Multi-Language* Photo Finish Software
  - Automatic Capture Mode (ACM) Plugin
  - RadioLynx Wireless Start Plugin
- **LynxPad** Multi-Language Meet Management Software

\* FinishLynx is available in English, Spanish, French, Arabic, German, Italian, Korean, Portuguese (Brazil), Russian, Swedish, Finnish, Chinese (Simp.), Chinese (Trad.), Japanese. See website for current listing.

## FinishLynx Championship Package For Athletics

The functionality of the **Automatic Capture & Virtual Photo-Eye Plugin** introduced with the Competition Elite Package is fully utilized with the addition of the LED display. By using the Virtual Photocell capability of the plug-in, the operator can automatically stop the running time on the display as the first finisher crosses the line to provide an instantaneous "Unofficial Time" for the winner.



**The 9-digit Alphanumeric LED display** connects to your FinishLynx system and can display running times and results that are clearly visible from over 200 feet away. The display also integrates with the ACM plugin to automatically display finish times or splits whenever an athlete crosses the finish line.
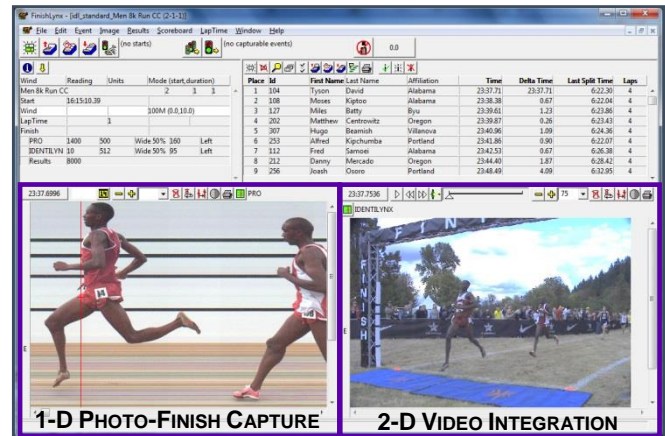
**The ultrasonic wind gauge** included in the system has no moving parts and meets the latest standards of the IAAF. Inclusion of readings into the race results is fully automated and controlled directly from the FinishLynx software, without the need for any user intervention.

**IdentiLynx** is an Ethernet-based digital video camera that captures video of the finish line integrated with the EtherLynx Vision photo-finish images. The IdentiLynx video is time-synced with the photo-finish capture inside the software so you can see multiple angles of the finish line for every competitor. This makes it extremely easy to identify and evaluate athletes no matter how crowded the race.

This all-inclusive Championship package enables you to produce fast and accurate results by combining precision FAT captures (2,000 fps) with high-quality video (30fps at up to 720p) for easy athlete identification. It also includes a high-visibility LED display and IAAF-approved wind gauge so you can capture certified photo-finish results at any level of athletics competition.



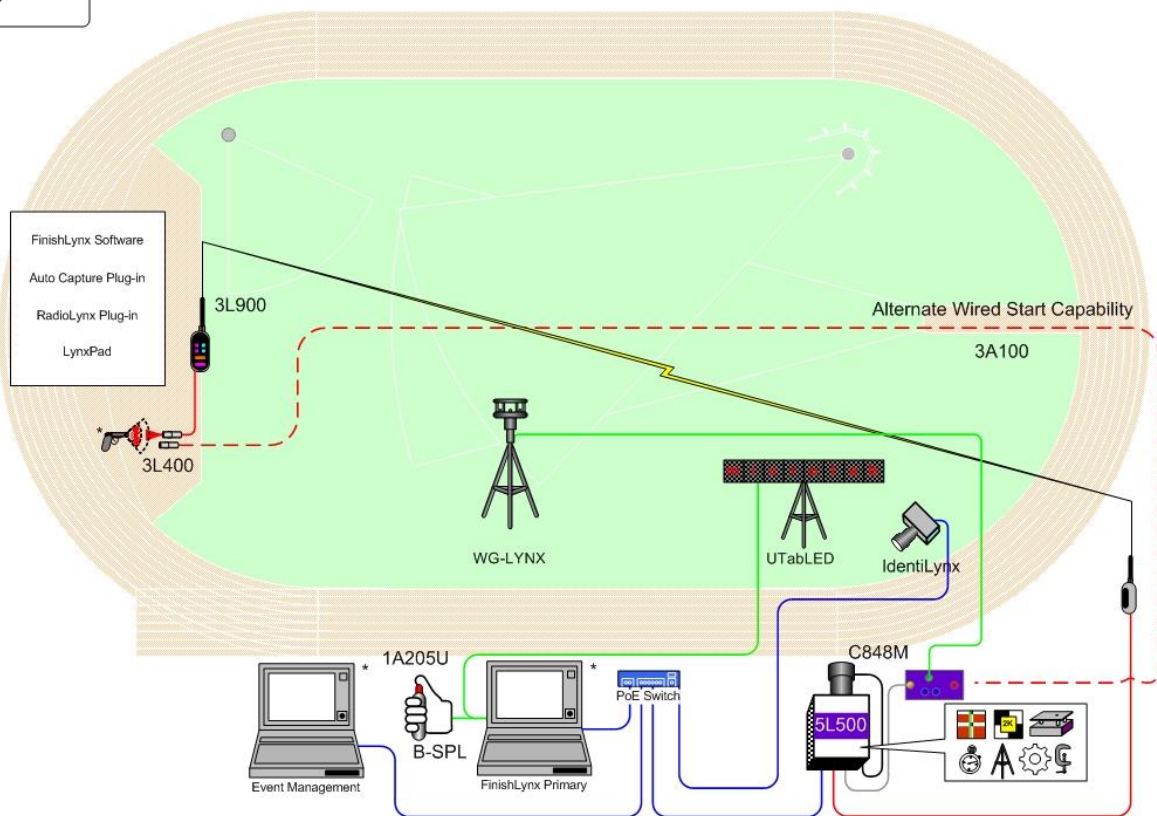**1-D PHOTO-FINISH CAPTURE**

**2-D VIDEO INTEGRATION**

## EtherLynx Vision Camera Features

The Vision camera is the latest in a long line of powerful EtherLynx photo-finish cameras. Key features include:

- **EasyAlign** Full-Frame Video Alignment for easily aligning your camera on the finish line
- **Power-Over-Ethernet** so the camera doesn't require AC power at the finish line
- **Full-Color Images** so you can produce high-quality results images for immediate printing or online posting
- **Gigabit Transfers** so you can transfer FAT results data in real time at up 1,000 Mbps
- **Virtually unlimited captures** limited only by your hard drive - capture every lap (for every athlete) in a 10k race
- **Additional Upgrade Options** include **LuxBoost** low-light capture, **On-Board Level**, and **Internal Battery Pack**



**Athletics – Championship**

Tel: (978) 556-9780

www.finishlynx.com

* Computers and starting pistol not included in package

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# Championship Elite Package
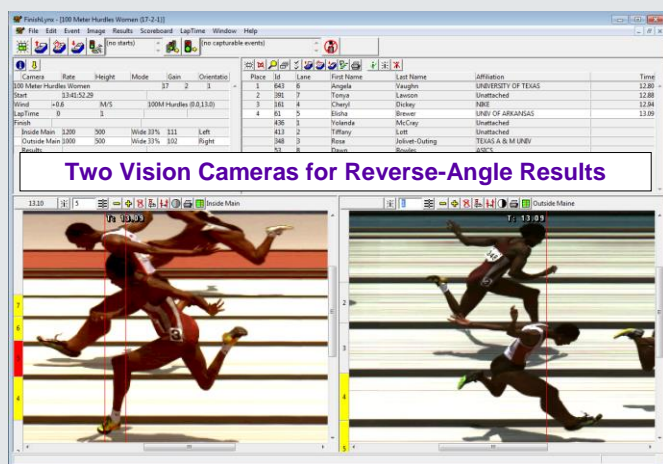
## Athletics-Track Events

### IAAF- Approved 3-Camera Timing System
### (2 Photo Finish Cameras + 1 IdentiLynx) with Advanced Camera & Network Options

The **CHAMPIONSHIP ELITE** Package includes all the components of the **CHAMPIONSHIP** Package, plus:



**Two Vision Cameras for Reverse-Angle Results**



"There should be at least two photo finish cameras in action, one from each side..." - **IAAF Rule 165:19.20 (2020-21)**

**Multiple-Camera Results System** – The Championship Elite Package includes two 2,000 fps EtherLynx Vision cameras so you can capture full-color photo finish images from both sides of the finish line. The package also includes an IdentiLynx full frame video camera so you can produce head-on video that is time-synchronized with your results.

**NCP Plug-In & SeriaLynx Network Adapter** – SeriaLynx combines with the NCP Plug-in to enable a single FinishLynx computer to interface with multiple serial devices over a wired or wireless network – including displays, wind gauges, etc.

## Components

- **Primary Camera: EtherLynx Vision,** 2,000 fps x 1280 pixels, color images, timer-enabled, EasyAlign.
  - **LuxBoost Low-Light Amplification** Option
  - **Internal Battery Pack** Option
  - **Internal Camera Level** Option
  - **Electronic Filter** Option
  - Internal RadioLynx Option
  - C-Mount f1.2, 8-48mm Motorized Zoom Lens **(x2)**
- **Second Camera: EtherLynx Vision**, 2,000 fps x 1280 pixels, color images, EasyAlign, High-Res, upgradeable
- IdentiLynx Full-Frame Video Camera (30 fps, 720p)
- Ultrasonic Wind Gauge (IAAF compliant)
- **SeriaLynx (Wired/Wireless) Network Adapter**
- 9-Digit Alphanumeric LED Display
- Remote Lens & Remote Camera Positioner **(x2)**
- RadioLynx Wireless Start System
- All-inclusive Power, Ethernet, & Start Cable Set
- Tripod & Mounting Hardware for Precise Adjustment
- **Professional Tripod** with **3m+** elevated mounting
- Built-in Interface to Scoreboards and Wind Gauges
- Full-Access to Lynx Technical Support
- 1-Year Renewable Warranty
- **FinishLynx32** Multi-Language* Photo Finish Software
  - **Network COM Port Plug-in**
  - Automatic Capture Mode (ACM) Plugin
  - RadioLynx Wireless Start Plugin
- **LynxPad** Multi-Language Meet Management Software

\* Available in English, Spanish, French, Arabic, German, Italian, Korean, Portuguese (Brazil), Russian, Swedish, Finnish, Chinese (Simp.), Chinese

## FinishLynx Championship Elite Package for Athletics

The **Championship Elite Package** is an all-inclusive athletics timing system with two photo-finish cameras and an IdentiLynx head-on video camera so you can capture 3 different views of the finish line. The system meets all IAAF timing guidelines and enables you to produce accurate, full-color, reverse-angle results.

The reverse-angle camera and IdentiLynx video are especially useful in races where the view of an athlete's torso may be obstructed by another competitor - making it difficult to establish a finish order. In this case, you can see *three different time-synchronized views* of the finish line in order to evaluate a very close finish with accuracy to up to 1/2000$^{th}$ of a second.



**Primary Camera + IdentiLynx Video**

The Championship Elite Package includes all the components from the Championship package (like IdentiLynx, ACM, and an LED display), as well as a 3+ meter camera tripod and key networking enhancements like SerialLynx and NCP so you can integrate serial devices across your timing network.

**2000+ without LuxBoost** | **Vision with LuxBoost**

The package also includes two EtherLynx Vision cameras for full color, reverse-angle results. Both Vision cameras include Automatic Capture Mode and come outfitted with remote control features for easy setup and adjustment at your venue's finish line. The primary Vision camera also includes several premium upgrades that will enhance the ease and quality of your race captures.

| | |
|---|---|
| **LuxBoost** - LuxBoost greatly amplifies the brightness during low-light captures. Evening events that were once too dark to capture can be recorded with ease. | **Onboard Level** - The on-board level upgrade allows you to monitor that the camera is level directly from within the FinishLynx software. |
| **Internal Battery Backup** - The primary Vision comes with an internal battery pack that allows the camera to continue running in the event of a power outage. | **Electronic Filter Control** - This upgrade allows you to enable or disable low-light camera filters on your Vision camera right from within the FinishLynx software. |
| **Internal RadioLynx** – Built-in RadioLynx receiver for a clean and simple set up. | |

# Athletics – Championship Elite
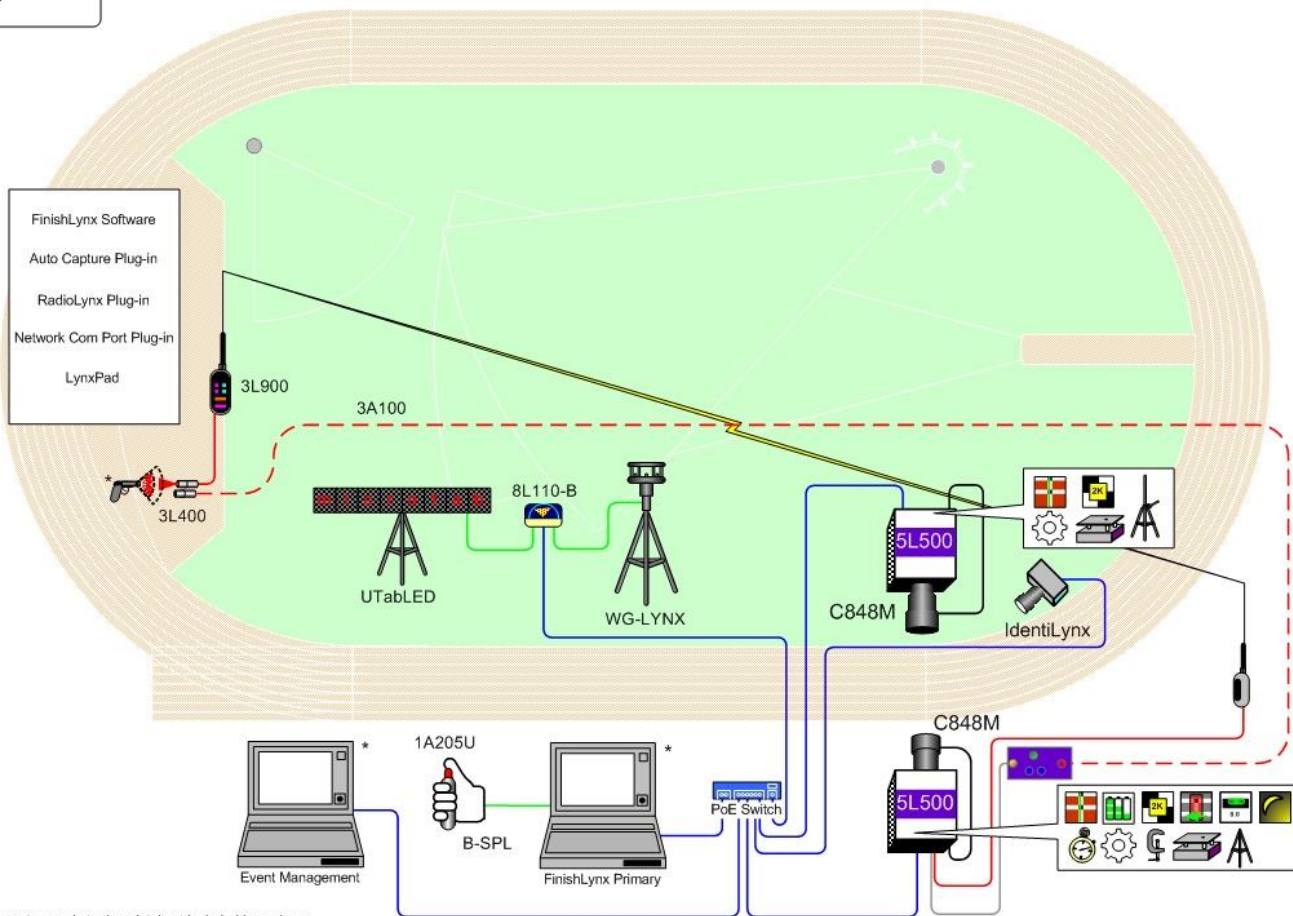
FinishLynx Software
Auto Capture Plug-in
RadioLynx Plug-in
Network Com Port Plug-in
LynxPad

3L900
3A100
3L400
UTabLED
8L110-B
WG-LYNX
5L500
C848M
IdentiLynx
1A205U
B-SPL
Event Management
FinishLynx Primary
PoE Switch
5L500
C848M

* Computers and starting pistol not included in package

Athletics - Track Events

## IAAF-Approved 3-Camera Timing System (1 Vision + 1 Vision PRO + 1 IdentiLynx) with Camera Upgrades, AirLynx Wireless, ResulTV, and 2 Start Systems For Full Timing Redundancy

**2,000 fps Vision Camera**

**3,000 fps Vision PRO**

"There should be at least two photo finish cameras in action, one from each side. Preferably, these timing systems should be technically independent, i.e. with different power supplies and recording and relaying of the Starter's signal, by separate equipment and cables." - **IAAF Rule 165:19.20 (2020-21)**

The **Grand Prix** package is a world-class athletics timing system that includes two independent photo-finish cameras and start systems for full timing redundancy. The cameras are linked to separate wireless start systems, which effectively creates two independent systems. This satisfies all the IAAF standards recommended for championship meets.

**Vision PRO Camera** – The Grand Prix package includes the Vision PRO camera as the primary timing device. The Vision PRO captures up to **3,000** frames per second and includes the Wi-Fi option for fully wireless transfers, plus an On-Board Level, Electronic Filter Control, Internal Battery Pack, and **LuxBoost**, which improves image quality and clarity in low-light conditions. Results are accurate up to 0.00033 seconds and fully independent of those captured by the secondary camera.

**ResulTV Display Software** – ResulTV is a digital data and graphic display program that integrates with FinishLynx. It allows timers to produce scalable results graphics for any compatible graphic display or scoreboard. It can even produce high-quality dynamic images suitable for broadcast television.

## Components

### CAMERAS

- **Primary Camera: EtherLynx Vision PRO,** 3,000 fps, 2,048 vertical pixels, color, timer-enabled
  - **LuxBoost** Low-Light Capture Mode
  - **Wireless-Enabled Option** for Wi-Fi Transfers
  - **Video Display Module** for HDMI Display Output
  - **Internal RadioLynx, Battery Pack** & **Level** Options
  - **Electronic Filter Control**
  - **C-Mount, 12-75mm Motorized Zoom Lens**
- **Second Camera: EtherLynx Vision,** 2,000 fps upgrade, 1,280 vertical pixels, color, timer-enabled
  - **LuxBoost** Low-Light Capture Mode
  - **Video Display Module** for HDMI display output
  - Internal RadioLynx, Battery Pack & Level Options
  - C-Mount, f1.2, 8-48mm Motorized Zoom Lens
- IdentiLynx Full-Frame Video Camera (30 fps, 720p)

### ACCESSORIES

- **AirLynx Wireless Gateway/Amplified Antenna**
- **Lynx 1-Sided 168x336 Pixel LED Video Display**
- **4-Digit LED Wind Display & Countdown Timer**
- Ultrasonic Wind Gauge (IAAF-compliant)
- SeriaLynx (Wired/Wireless) Network Adapter
- Remote Lens & Remote Camera Positioner **(x2)**
- RadioLynx Wireless Start System **(x2)**
- All-inclusive Power, Ethernet, & Start Cable Set **(x2)**
- Tripods, Mounting Hardware, & 3m+ Professional Tripod
- Lynx Tech Support & 1-Year Renewable Warranty

### SOFTWARE

- **ResulTV Live Data Display Software**
- **FinishLynx** Multi-Language Photo-Finish Software
  - Network COM Port Plug-in
  - Automatic Capture Mode (ACM) Plug-in
  - RadioLynx Wireless Start Plug-in
  - **LapTime Plug-in**
- **LynxPad** Meet Management Software

## Grand Prix Package for Athletics

The Grand Prix package builds on the components of the Championship Elite Package and adds premium features like AirLynx wireless, ResulTV display software, the Video Display Module, a 1-sided LED video display, and the 3,000 fps Vision PRO camera with LuxBoost, Wi-Fi, and other premium add-ons. Plus, the addition of the LapTime software plug-in means you can produce fast and accurate lap times during distance races using only the FinishLynx camera. Capture every lap and add split times directly to the athlete results. These components combine to create an advanced timing and results network for elite track and field meets.

**Visa Championship Standings**
**MEN ~ Indoor Season**

| | | Points |
|---|---|---|
| 1. | Reese Hoffa | 1,183 |
| 2. | Jason Lunn | 1,178 |
| 3. | Terrence Trammell | 1,172 |

**Sample ResulTV Graphic**

# FinishLynx Grand Prix Package for Athletics

**Video Display Module (VDM)** – The VDM add-on enables the live display of FinishLynx running time, results, and FinishLynx images on a video display connected to the HDMI port of Vision cameras. Simply connect a compatible video display to the Vision camera back and instantly show live results data at the finish line.

**Lynx 1-Sided LED Video Board** – This LED video display was designed by Lynx as an ideal video board for track and field events. The large in-field display (83" W x 58" H x 24" D) can broadcast live running times, finish times, athlete/event info, and custom text or images. The display is also compatible with the Video Display Module (VDM) on Vision cameras. The VDM-enabled Vision cameras in the Grand Prix package can connect directly to the video board via HDMI and allow timers to send live race data and FinishLynx results images without the need for a third-party results program.

**Advanced Wireless Networking** – A major consideration in the design of the Grand Prix package was making it suitable for facilities with no infrastructure for running cables underneath the track. The addition of an EtherLynx Vision PRO camera with the 802.11g wireless communication option means that the camera can be controlled from the opposite side of the track with no cables needed to the FinishLynx computer. Because both systems are triggered by RadioLynx Wireless start systems, there is no need for start sensor cabling. The wind gauge and scoreboard are also connected to a wireless SeriaLynx unit, which eliminates the need for cables between them and the cameras. The Grand Prix package provides a powerful track and field results network suitable for IAAF championship events.
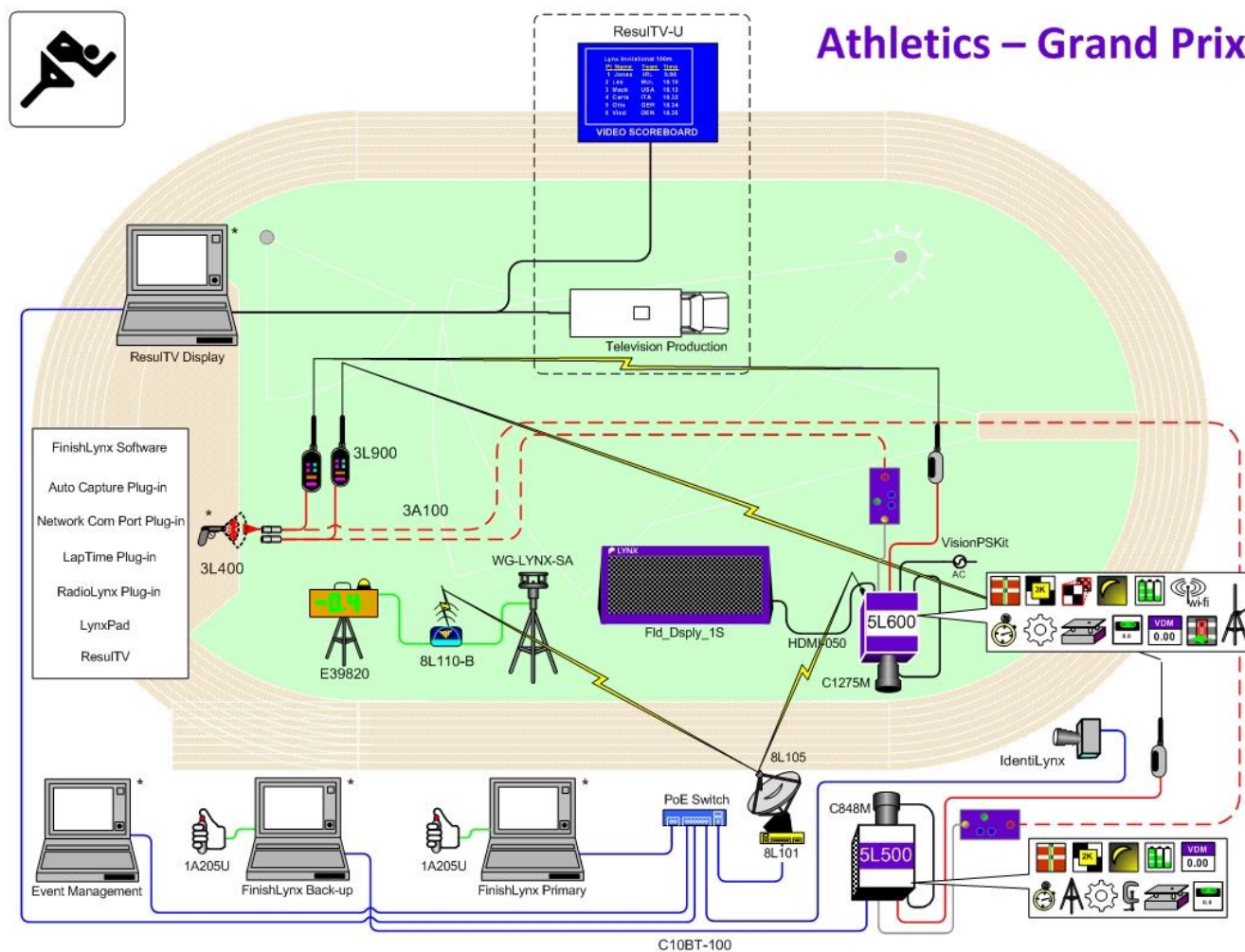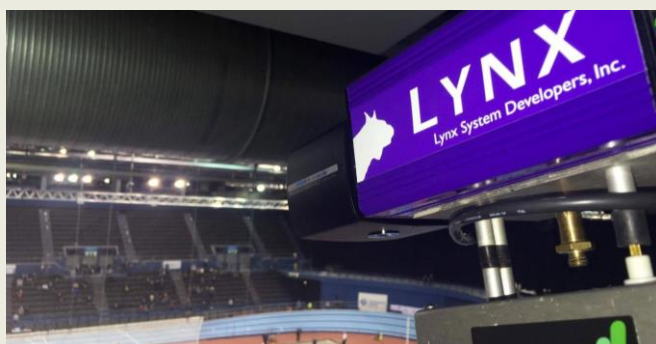
* Computers, starting pistol, video scoreboard, and television production vehicle not included in package

# Grand Prix Elite Package

## IAAF- Approved 3-Camera Timing System (2 Photo-Finish + 1 IdentiLynx) with Full Redundency, Camera Upgrades, Wireless Start & Networking, ResulTV Software, & 6 LED Displays



The **Grand Prix Elite** package is the most powerful athletics timing solution offered today. It includes all the cameras, software, displays, and wireless networking you need to produce world-class photo-finishes at international events. The system includes everything from the Grand Prix package plus a number of accessories suitable for major IAAF meets.

**The Vision PRO camera** serves as the primary timing device and provides all the power and features needed to produce fast and accurate IAAF-certified results. The Vision PRO offers **6,000 fps** captures, 2,048 pixels of vertical resolution, and powerful upgrades like LuxBoost, Wi-Fi-enabled transfers, Electronic Filter Control, an Internal Battery Pack, On-Board Camera Level, Remote Positioner, Motorized Zoom Lens, and the Video Display Module to send live race results to an HDMI-connected video display.

**The Vision Camera** is the secondary capture device and connects to a separate wireless start system to provide fully independent captures at 2,000 fps. The Vision camera comes fully loaded with features like EasyAlign, LuxBoost, Internal Battery & Level, and the Video Display Module.

## Full System Redundancy

In accordance with IAAF rule (165:19.20), both EtherLynx Vision cameras include their own wireless start systems for fully-redundant FAT results. Because both cameras receive a separate start signal, they function like two independent systems for reverse-angle (or dual finish line) captures. The package also includes an IdentiLynx front-facing camera that captures video of every athlete as they cross the finish. IdentiLynx combines with the photo-finish cameras to offer three time-synchronized views of every competitor to ensure fast and accurate results. Capture up to 6,000 frames per second and never miss a finish again.

## Components

### CAMERAS

- **Primary Camera: EtherLynx Vision PRO,** 6,000 fps upgrade, 2,048 vertical pixels, color, timer-enabled
  - LuxBoost Low-Light Capture Mode
  - Wireless-Enabled Option for Wi-Fi Transfers
  - Video Display Module for HDMI Display Output
  - Internal RadioLynx, Camera Level & Battery Pack Option
  - Electronic Filter Control
  - C-Mount, 12-75mm Motorized Zoom Lens
- **Second Camera: EtherLynx Vision,** 2,000 fps upgrade, 1,280 vertical pixels, color, timer-enabled
  - LuxBoost Low-Light Capture Mode
  - Video Display Module for HDMI Display Output
  - Internal RadioLynx, Camera Level & Battery Pack Option
  - C-Mount, f1.2, 8-48mm Motorized Zoom Lens
- IdentiLynx Full-Frame Video Camera (30 fps, 720p)

### DISPLAYS

- **Lynx 2-Sided LED Video Display**
- **Lynx 1-Sided 168x336 Pixel LED Video Display (x3)**
- **2-Digit, 3-Sided Digital Lap Counter**
- 4-Digit LED Wind Display & Countdown Timer

### ACCESSORIES

- **Short Range Wireless Photocell Kit (x2)**
- **Double Photocell Kit** with 15m Range
- AirLynx Wireless Gateway & Amplified Antenna
- Ultrasonic Wind Gauge (IAAF-compliant)
- SeriaLynx (Wired/Wireless) Network Adapter
- Remote Lens & Remote Camera Positioner (x2)
- RadioLynx Wireless Start System (x2)
- All-inclusive Power, Ethernet, & Start Cable Set (x2)
- Tripod & Mounting Hardware for Precise Adjustment
- Professional Tripod with 3m+ elevated mounting
- Lynx Tech Support & 1-Year Renewable Warranty

### SOFTWARE

- **ResulTV** Live Data Display Software
- **FinishLynx** Multi-Language Photo-Finish Software
  - Network COM Port Plug-in
  - Automatic Capture Mode (ACM) Plug-in
  - RadioLynx Wireless Start Plug-in
  - LapTime Plug-in
- **LynxPad** Meet Management Software

The Grand Prix Elite package includes (6) high-visibility LED displays for superior athlete and fan engagement throughout the venue. This includes (3) 1-sided 168x336-pixel video displays across the in-field, (1) 2-sided video display at the finish line for scrolling results/images, (1) 4-digit LED wind gauge display, and (1) three-sided Lap Counter.

**Lynx 1-Sided & 2-Sided LED Video Boards** – The large 1-sided displays (83"W x 58"H x 24"D) broadcast results, running times, athlete/event info, and custom text from any HDMI-connected source like a laptop or netbook. The 2-sided version combines two LED panels with a sturdy, weatherproof stand and is an ideal finish line display for live running times and race results. The 2-sided display also connects directly to the Vision or Vision PRO camera to show live race data and FinishLynx images using the Video Display Module.

**Video Display Module (VDM)** – All 4 Lynx video boards are compatible with the Video Display Module (VDM) on the Vision and Vision PRO photo-finish cameras. The VDM-enabled cameras can connect directly to the 2-sided display via HDMI to show live race data and FinishLynx results images without the need for a third-party results program. The 4 boards can also be connected via Ethernet cable to mirror results and images from a single data source throughout the venue.

The Grand Prix Elite package combines **power**, **reliability**, **and IAAF-compliance** into a single advanced timing and results package. All the components have been field-tested at major events and meet or exceed all IAAF requirements. Join the thousands of organizations across the world that trust their athletics events to FinishLynx.
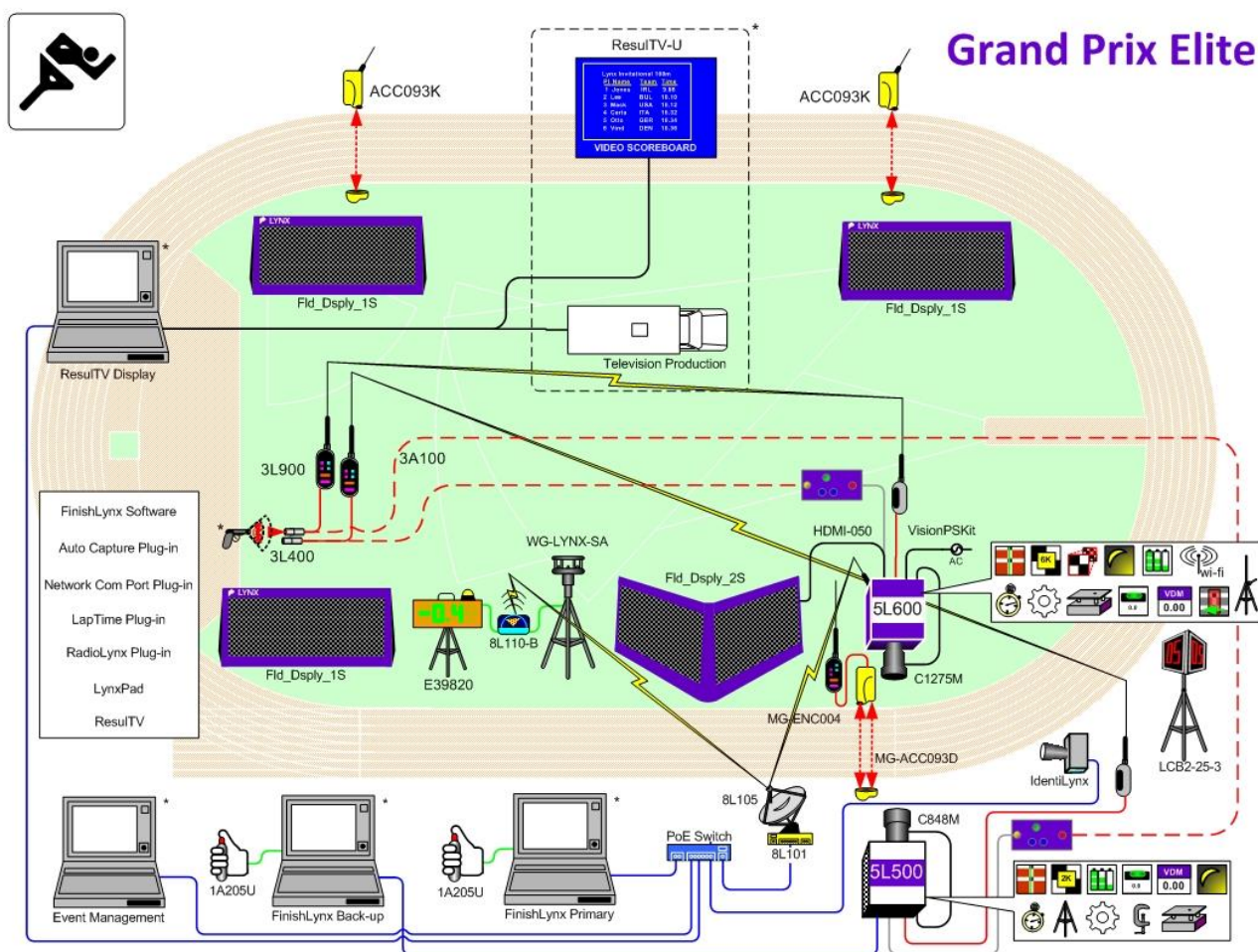


* Computers, starting pistol, video scoreboard, and television production vehicle not included in package

www.finishlynx.com

# THE LYNX TRIAD – ETHERLYNX, IDENTILYNX, TRANSPONDERS

## LYNX SYSTEM DEVELOPERS, INC

## On-Screen Information Display

The FinishLynx software combines the data from the Transponder system(s), EtherLynx camera(s) and IdentiLynx camera(s) and displays all the information about the hardware on the screen.

Changes to any Camera settings can be made quickly and easily.

## Automatic Athlete Listing

A drop down listing of the athletes in the order they crossed the finish line makes results production easy.



## EtherLynx Fusion Camera

The phenomenal light sensitivity and the availability of affordable fast lenses for the Fusion camera means that sharp and clear images can be taken even in poor light conditions.

Evaluating races with hundreds of athletes is no problem — image capture time is virtually unlimited so you never have to worry about missing a competitor.

Image can be scrolled and zoomed so that even the closest of races are easily resolved.

## Transponder Times on Image

See the lines and INSTANTLY verify that every athlete's transponder has been recorded by the system.

Actual size shoe tag
Same weight as a nickel!
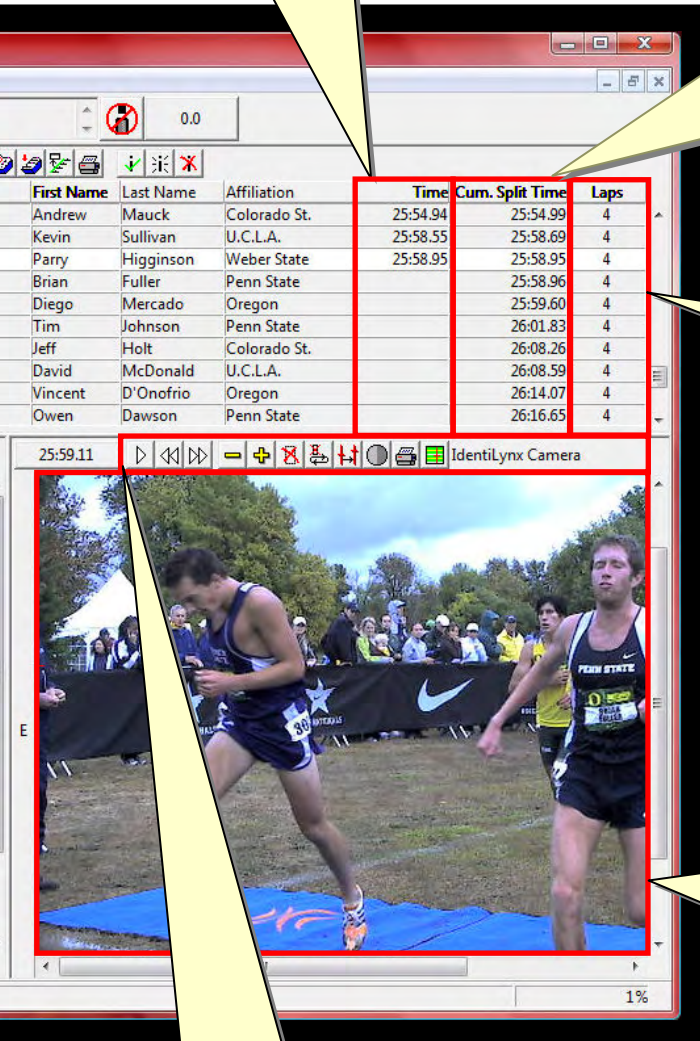
## Accurate Times from Photo Finish

When times are read from the photo finish image they are accurate and precise. Finish order generated by Transponders is based on the location of the tag, but photo finish times are accurately read from the position of the torso – for precise results.



## IPICO Elite Reader

The Elite reader produces times from detection mats covering a 10 meter wide finish line. The LITE reader can cover up to 5 meters – both have built in rechargeable batteries.

| First Name | Last Name | Affiliation | Time | Cum. Split Time | Laps |
|---|---|---|---|---|---|
| Andrew | Mauck | Colorado St. | 25:54.94 | 25:54.99 | 4 |
| Kevin | Sullivan | U.C.L.A. | 25:58.55 | 25:58.69 | 4 |
| Parry | Higginson | Weber State | 25:58.95 | 25:58.95 | 4 |
| Brian | Fuller | Penn State | | 25:58.96 | 4 |
| Diego | Mercado | Oregon | | 25:59.60 | 4 |
| Tim | Johnson | Penn State | | 26:01.83 | 4 |
| Jeff | Holt | Colorado St. | | 26:08.26 | 4 |
| David | McDonald | U.C.L.A. | | 26:08.59 | 4 |
| Vincent | D'Onofrio | Oregon | | 26:14.07 | 4 |
| Owen | Dawson | Penn State | | 26:16.65 | 4 |

25:59.11    IdentiLynx Camera



## Lap Counting

Transponders can record lap counts automatically Also, you can set a "too fast" and "too slow" time for each split and the system will warn you if an athlete is missed.

1%

## IdentiLynx Camera



The full-frame video images confirm athlete identification with ease. Video footage can be cropped and exported to AVI files or JPG's.

## Precise Image Control

Images are time-indexed and can be zoomed, advanced or rewound frame-by-frame.

Field Events

# Field Events

# ELECTRONIC DISTANCE MEASUREMENT

## LYNX SYSTEM DEVELOPERS, INC.

## YOUR GUIDE TO ELECTRONIC DISTANCE MEASUREMENT

There is no need for **any** officials to enter the throwing area during the competition. An athlete's performance for each throw is computed as shown below in the diagram by using data that was entered prior to the start of the competition and stored in the FieldLynx unit (the LaserLynx Station Reference Measurement, and the radius of the throwing circle or arc).

LaserLynx
Station

| | Reference Measurement (circle radius) |
| | Reference Measurement (LaserLynx station) |
| | Throw Measurement (distance) |
| | Throw Measurement (angle) |
| | Calculated Performance distance |

Throwing
Circle

Point of
impact

**LYNX SYSTEM DEVELOPERS, INC**

ATHLETICS-FIELD EVENTS
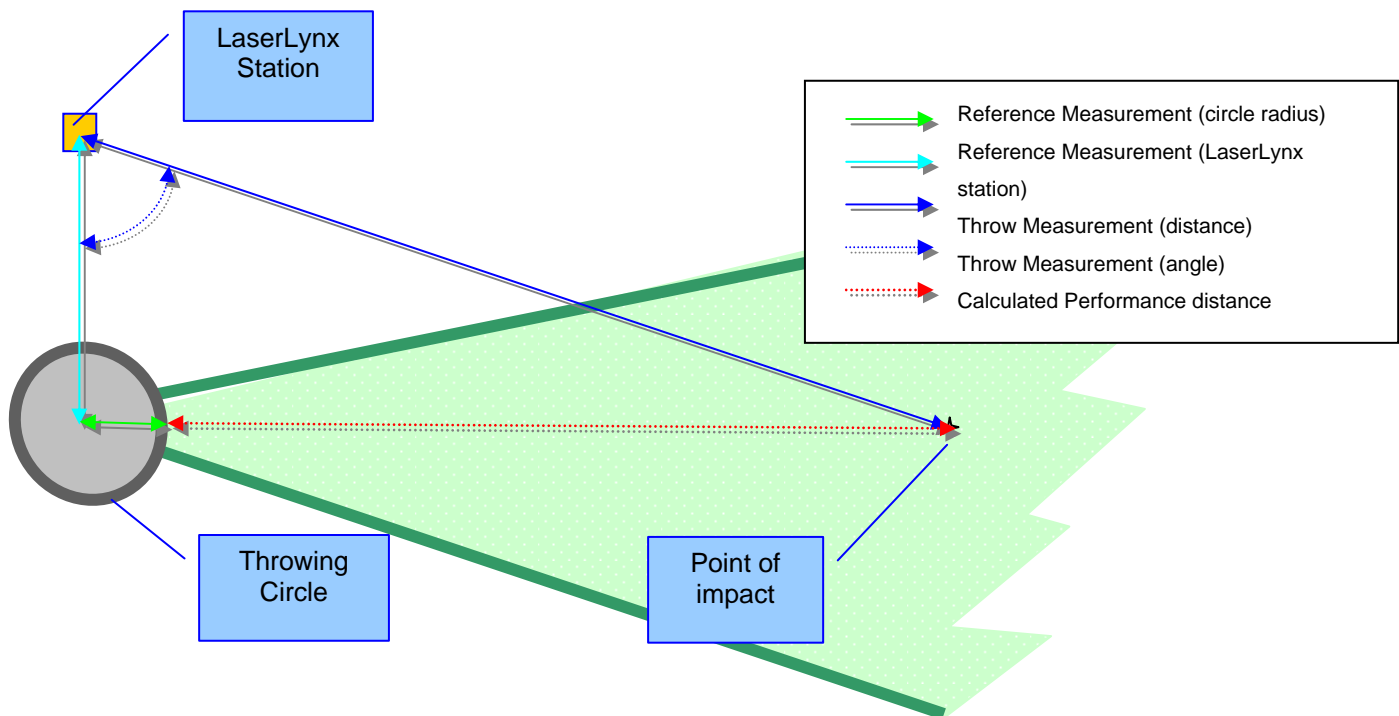
# COMPETITION FIELD PACKAGE

The FieldLynx software at the heart of the Competition Package enables the complete management of all your field events, including athlete check-in, scoring, results, and meet management integration. The package includes three Windows-based netbook computers and all the software you need to administer three events simultaneously. This modular package can also be upgraded at any time to include a wide range of add-ons like displays, wind gauges, and electronic distance measurement (EDM).

Built-in compatibility with existing wired Ethernet networks enables a simple and robust connection to your existing infrastructure for downloading athlete information and uploading results. When site conditions allow, the package also includes the AirLynx infrastructure, which enables wireless communication between the FieldLynx computers and wind gauges, scoreboards, and external meet/scoring databases.

### EVERYTHING YOU NEED

3 Windows-Based Netbook Computers, Wireless Connectivity, Amplified Antenna, & All Necessary Cables and Software.



# COMPONENTS

- **3 Windows Netbook Computers** (with USB port & wired/wireless Ethernet connectivity)

- **3 seats of FieldLynx** Field Event Administration Software

- **1 seat of ClerkLynx** Remote Clerking Software

- **AirLynx Wireless** 802.11 Gateway and **Amplified Antenna Kit**

- **NetExchange** Field Event Server License

- **LynxPad Meet Management Software** Available in multiple languages

- **Access to Complete Technical Support**

# FEATURES

- In addition to the standard wired connectivity, the package includes AirLynx for stadium-wide wireless communication. This makes it easy to expand the system later and add features like LED displays or wind gauges.

- **FieldLynx** Software suitable for administering all Field Events: Horizontal Jumps, Vertical Jumps, and all Throwing events.

- Fully configurable event setup: rule books, advancement, bar heights, attempts, etc.

- Software upgradeable to allow direct data transfer to wide range of displays, wind gauges and lasers.

## MOBILE MEET MANAGEMENT WITH NETBOOK COMPUTERS

The **Competition Field Event Package** includes two software programs that run on Windows:

- **FieldLynx** – Field Event Management Software. The world's most convenient, most portable, most flexible system for administering field events, from athlete check-in to results distribution.

- **ClerkLynx** – A simple and effective system for forming heats in the stadium at a location other than the main LynxPad event management site. ClerkLynx downloads athlete names, allows the operator to combine them into heats, and then uploads the new start lists back to the FinishLynx photo-finish system.

With FieldLynx software on the handheld computer, you can connect wirelessly to the computer running LynxPad Meet Management software to obtain a list of competitors in an event.

The handheld unit will then allow you to manage the event: keep track of the order of competition, enter results, score the event, and then upload the results back to the main computer - all without entering any information other than an athlete's marks.

**Remote Access to Event Database**

**Customizable Event Setup**

**Easy and Intuitive Mark Entry**







## Field – Competition



NOTE: Netbooks supplied are equipped with WIRED and WIRELESS Ethernet Connectivity.
Wired Stadium cabling not included in Packages

6LWinNet
(Mini Netbook with Wired And Wireless Ethernet)

Wired Ethernet Infrastructure Cable Not Included

NetExchange Server License
3 seats of FieldLynx
1 seats of ClerkLynx
LynxPad software

LynxPad

8L105

8L101

*Meet Management computer not included

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**ATHLETICS-FIELD EVENTS**

# COMPETITION ELITE FIELD PACKAGE

The Competition Elite package adds two key components to the Competition Package: a high-visibility LED display and an IAAF-compliant wind gauge. Like the Competition Package, the Competition Elite provides everything you need to comfortably manage field events over a wired or wireless network.

IAAF regulations require that any official marks in horizontal jumping events (long jump and triple jump) must be accompanied by wind readings. With this package, FieldLynx operators can instantly calculate and download wind information directly to each competitor's attempt record by simply tapping on an icon in the software. The stand-alone wind gauge kit has a weatherproof design and comes equipped with a battery pack, tripod, carrying case, and handheld controller with buttons and an LED screen.

The two SeriaLynx wireless units included with the package allow the scoreboard and wind gauge to be operated wirelessly from a netbook computer anywhere on the infield.



## COMPONENTS

- **3 Windows Netbook Computers** (with USB port & wired/wireless Ethernet connectivity)
- **3 Seats of FieldLynx** Field Event Administration Software
    - **Scoreboard Interface** Plug-in for FieldLynx
    - **Wind Gauge Interface** Plug-in for FieldLynx
- **1 Seat of ClerkLynx** Remote Clerking Software
- **NetExchange** Field Event Server License
- **Ultrasonic Wind Gauge** with Battery Pack
- **1 (7-Digit) 10" LED Display** with Tripod
- **AirLynx Wireless** 802.11 Gateway and **Amplified Antenna Kit**
- **2 Wireless SeriaLynx units** (RS232 to Ethernet convertors)
- **LynxPad Meet Management Software** *Available in multiple languages*

## SERIALYNX WIRELESS DATA

While wired field setups are standard, the package also includes two wireless SeriaLynx units to provide extreme flexibility and ease-of-use for event operators.

SeriaLynx enables fast and secure wireless communication between the FieldLynx netbooks and the LED display/wind gauge. One unit connects to the LED display to show live marks and standings from FieldLynx while the other connects to the wind gauge to wirelessly pull live wind readings for jumping events. The SeriaLynx units can also communicate with FinishLynx to display running times when necessary. SeriaLynx makes it easy to communicate wirelessly with serial devices from across the infield.

## NETEXCHANGE FIELD EVENT SERVER

NetExchange is a field event results server that allows FieldLynx and ClerkLynx devices to send database files to and from a meet management computer. The NetExchange server software acts as a network gateway between field event scoring devices and the meet management computer running LynxPad, Hy-Tek, or another meet manager. Devices connect via a wired or wireless connection so event scoring data can be transferred from events across the infield.
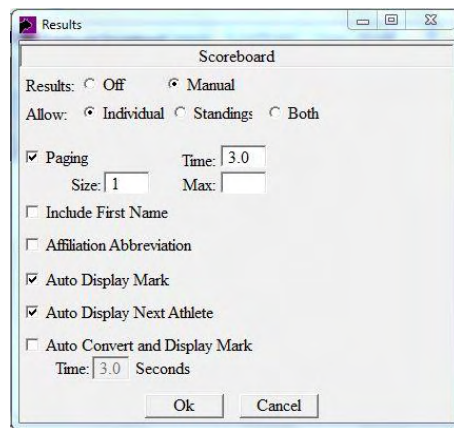
**Weatherproof Wind Gauge with Controller & Battery**

**Easy Display Configuration for many scoreboard types**
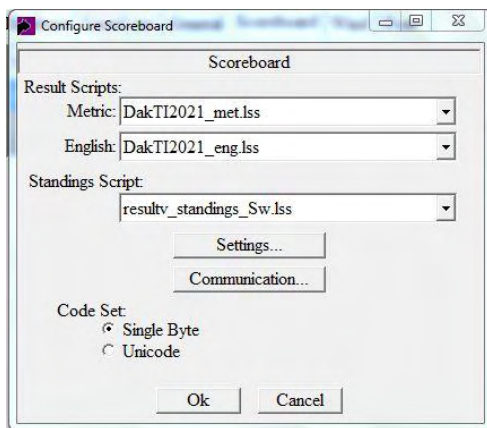
**Customizable Display Information and Protocol**

**Configure Scoreboard**

Scoreboard

Result Scripts:

Metric: DakTI2021_met.lss

English: DakTI2021_eng.lss

Standings Script:

resultv_standings_Sw.lss

Settings...

Communication...

Code Set:
- Single Byte
- Unicode

Ok   Cancel

**Results**

Scoreboard

Results: Off ● Manual

Allow: ● Individual  Standings  Both

☑ Paging          Time: 3.0
  Size: 1         Max:

☐ Include First Name

☐ Affiliation Abbreviation

☑ Auto Display Mark

☑ Auto Display Next Athlete

☐ Auto Convert and Display Mark
  Time: 3.0 Seconds

Ok   Cancel

## Field – Competition Elite

TI-2021

68 10.75
COMP./PERFORMANCE  ATTEMPT

8L110-B

TS02

6LWinNet
(Mini Netbook with Wired
And Wireless Ethernet)

WG-LYNX-SA-B

8L110-B

6LWinNet
(Mini Netbook with Wired
And Wireless Ethernet)

6LWinNet
(Mini Netbook with Wired
And Wireless Ethernet)

RS 232 Cable

8L110

(for optional wireless operation)

Wired Ethernet Infrastructure
Omitted for Clarity

NetExchange Server License

3 seats of FieldLynx

Scoreboard Interface

Wind Gauge Interface

1 seat of ClerkLynx

LynxPad software

8L105

8L101

LynxPad

*Meet Management computer not included

www.finishlynx.com

LYNX SYSTEM DEVELOPERS, INC

ATHLETICS-FIELD EVENTS

# CHAMPIONSHIP & CHAMPIONSHIP ELITE FIELD PACKAGES

The two Championship-level Field Packages build on the components of the Competition packages, adding additional displays and the **LaserLynx PRO** Electronic Distance Measurement system. LaserLynx is a laser-based distance measurement device that produces accurate, computer-generated measurements for field events (throws: Shotput, Javelin, Discus, and Hammer; and horizontal jumps: Long Jump and Triple Jump). LaserLynx combines with the FieldLynx event software to integrate laser measurements across the FinishLynx results network with meet management databases, and scoreboards. LaserLynx is accurate to ±2mm and ±2 angular seconds, which easily exceeds IAAF guidelines.

Integrating LaserLynx with FieldLynx computers is simple. Just select the menu option and all the settings are loaded automatically. The FieldLynx software is pre-programmed with the offset radii for all the standard field events and the unit can measure, calculate, and display athlete marks in a matter of seconds.
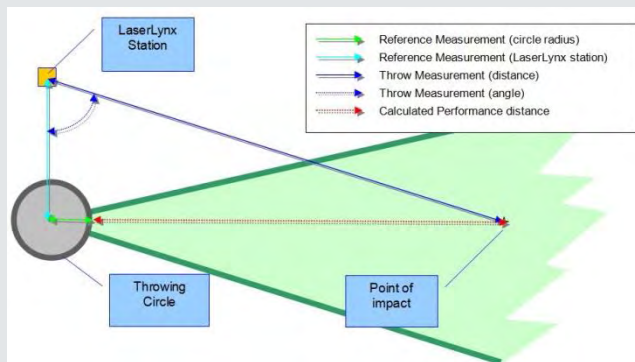


## CHAMPIONSHIP ELITE BENEFITS

The Championship Elite Field Package adds an additional IAAF-compliant wind gauge kit (2 total), 2 extra LED displays (4 total), and a second LaserLynx EDM unit (2 total). It also includes 3 more SeriaLynx wireless units (6 total), which enable data from all the peripheral devices to be shared wirelessly with FieldLynx netbooks, meet management computers, or FinishLynx timing computers. The additional displays, stand-alone wind gauge, and LaserLynx unit make the Championship Elite Package an excellent choice for large meets looking to capture IAAF-certified field event results.



## LASERLYNX FEATURES

- **Fast**       15-minute equipment setup
- **Accurate**   Exceeds IAAF accuracy standards
- **Easy**       One-touch measurement
- **Portable**   Long-lasting rechargeable batteries
- **Powerful**   Integrates with compatible displays and databases across the network

## SIGHT, CLICK, AND DISPLAY

Measuring throws with LaserLynx is simple. After a throw is complete, a meet official places the prism at the point of impact and the LaserLynx operator "sights" it with the laser. Then tapping the icon on the FieldLynx unit will instantly calculate the athlete's mark. LaserLynx measurements can be sent wirelessly to the LED displays for excellent engagement of fans, athletes, and announcers. Marks can also be sent to the meet management software instantly using the NetExchange server.

## COMPONENTS: FIELD CHAMPIONSHIP PACKAGE

- **4 Windows Netbook Computers**
- **4 Seats of FieldLynx** Field Event Software
    - **Scoreboard Interface** FieldLynx Plug-in
    - **Wind Gauge Interface** FieldLynx Plug-in
    - **LaserLynx Interface** FieldLynx Plug-in
- **1 Seat of ClerkLynx** Remote Clerking Tool
- **NetExchange** Field Event Server License
- **Ultrasonic Wind Gauge Kit** & Battery Pack
- **2 (7-Digit) 10" LED Displays** with tripods
- **AirLynx Wireless** 802.11 Gateway and **Amplified Antenna Kit**
- **3 Wireless SeriaLynx units** (RS232 to Ethernet convertors)
- **2 (4-Digit) 6" LED Wind Gauge Displays & Countdown Timers**
- **LaserLynx PRO** Electronic Distance Measurement System
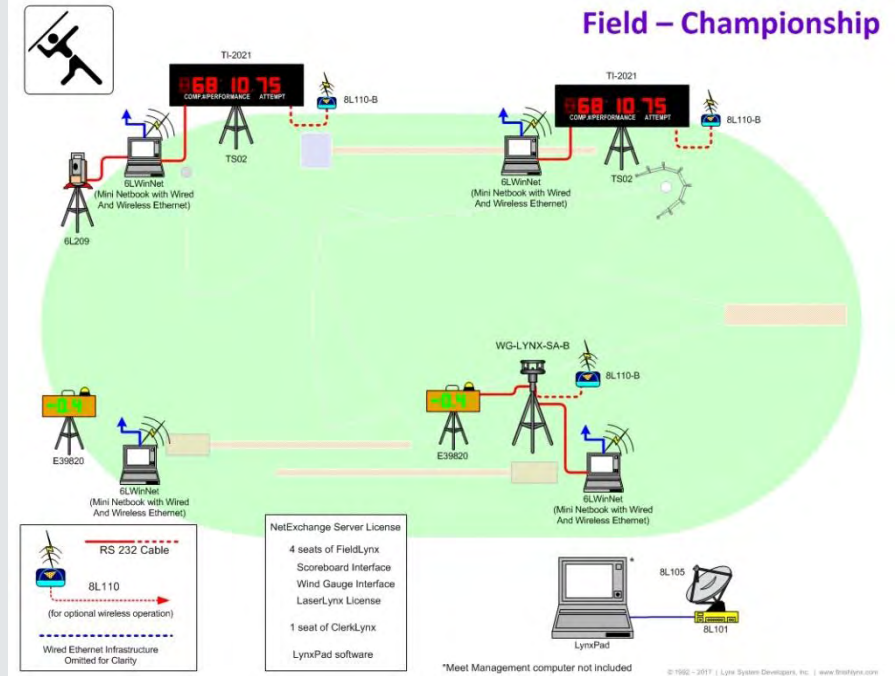


## COMPONENTS: FIELD CHAMPIONSHIP ELITE PACKAGE

- **4 Windows Netbook Computers**
- **4 Seats of FieldLynx** Field Event Software
    - **Scoreboard Interface** FieldLynx Plug-in
    - **Wind Gauge Interface** FieldLynx Plug-in
    - **LaserLynx Interface** FieldLynx Plug-in
- **1 Seat of ClerkLynx** Remote Clerking Tool
- **NetExchange** Field Event Server License
- **2x Ultrasonic Wind Gauge Kit** & Battery Pack
- **4x (7-Digit) 10" LED Displays** with tripods
- **AirLynx Wireless** 802.11 Gateway and **Amplified Antenna Kit**
- **6x Wireless SeriaLynx units** (RS232 to Ethernet convertors)
- **2 (4-Digit) 6" LED Wind Gauge Displays & Countdown Timers**
- **2x LaserLynx PRO** Electronic Distance Measurement System

ATHLETICS-FIELD EVENTS
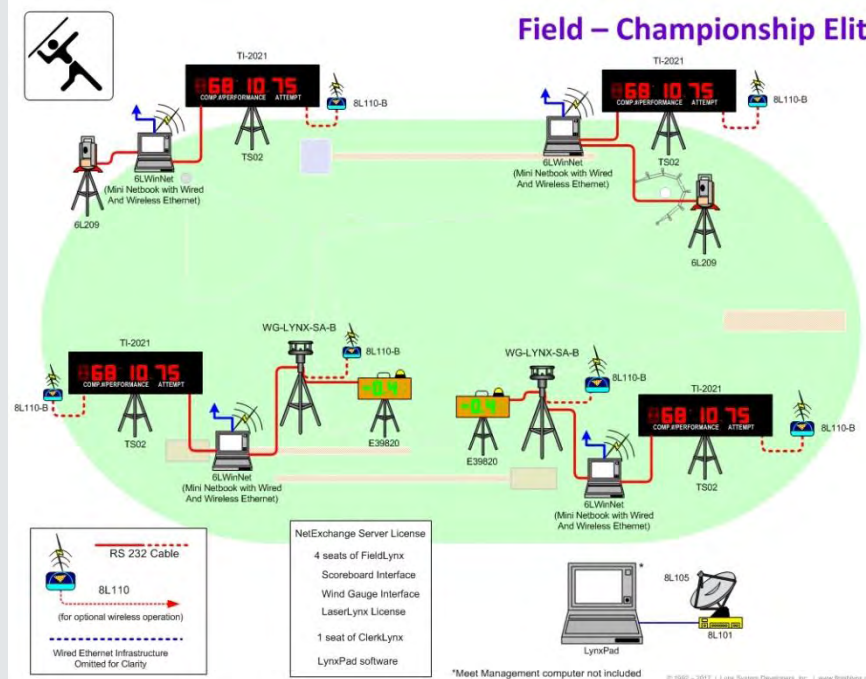
# GRAND PRIX & GRAND PRIX ELITE
## FIELD EVENT PACKAGES

The Grand Prix and Grand Prix Elite Field Packages bring the highest levels of technology to the world of field event management. These two Grand Prix-level packages include all the major components from the Championship Elite Package, while adding several custom LED video displays and the ResulTV software for world class results and fan engagement throughout the infield.

### Custom LED Video Boards

The Grand Prix Package includes four 4-digit wind gauge/countdown displays plus four **1-sided LED video boards** for high-quality graphics at every field event station. The four video boards show real-time field event marks from FieldLynx as they are entered by meet officials. The LED panels are 2 meters long by 1 meter tall (336x168 pixels) and support text, images, and animated gifs—all powered by a netbook computer running FieldLynx and ResulTV.

### ResulTV Live Results Display Software

Field event marks are entered into FieldLynx on a netbook computer and then the ResulTV software outputs vector graphics directly to the video board. Athlete names, performances, rankings, and other event info can be sent directly from the netbook using ResulTV to display dynamic, high-visibility graphics. Choose from a number of default templates or customize your graphics for the event by adding custom colors, images, logos, or gifs.

# GRAND PRIX ELITE BENEFITS



The Grand Prix Elite is the most advanced field event administration package on the market today. It includes all the technology from the Grand Prix Package (2 LaserLynx, 2 wind gauges, 2 SeriaLynx wireless units, 6 Netbooks, 6 FieldLynx licenses, ResulTV, etc.) plus it adds two additional countdown timers (6 total) and swaps out the 1-sided displays in favor of four premium 3-sided LED video boards.

The 3-sided video displays provided with the package are suited for the highest levels of competition and have been used at IAAF meets around the world. They combine three 2x1 meter (336x168-pixel) LED panels using a custom-designed aluminum frame. The graphics are mirrored on all 3 panels to provide 360 degree visibility from throughout the stadium.

Each board includes a weatherproof vinyl cover to protect the rear connections and a sturdy wheel assembly base for easy transportation and movement throughout the venue.



Grand Prix Package Includes Four 1-Sided Video Displays
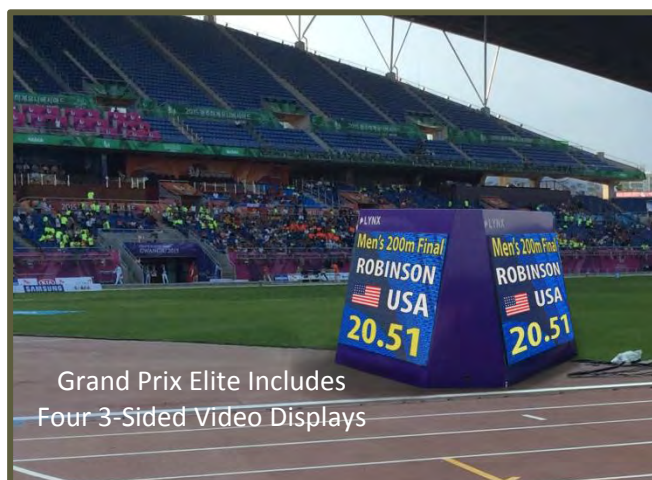


Grand Prix Elite Includes Four 3-Sided Video Displays

## COMPONENTS: FIELD GRAND PRIX PACKAGE

- **6x Windows Netbook Computers**
- **6x Seats of FieldLynx** Field Event Software
    - **Scoreboard Interface** FieldLynx Plug-in
    - **Wind Gauge Interface** FieldLynx Plug-in
    - **LaserLynx Interface** FieldLynx Plug-in
- **1 Seat of ClerkLynx** Remote Clerking Tool
- **NetExchange** Field Event Server License
- **4x ResulTV** Display Software License
- **2x Ultrasonic Wind Gauge Kit** & Battery Pack
- **AirLynx Wireless** 802.11 Gateway and **Amplified Antenna Kit**
- **2x Wireless SeriaLynx units**
- **2x LaserLynx PRO** Electronic Distance Measurement System
- **4x (4-Digit) 6" LED Wind Gauge Display & Countdown Timer**
- **4x 1-Sided 336x168-pixel LED Video Display**
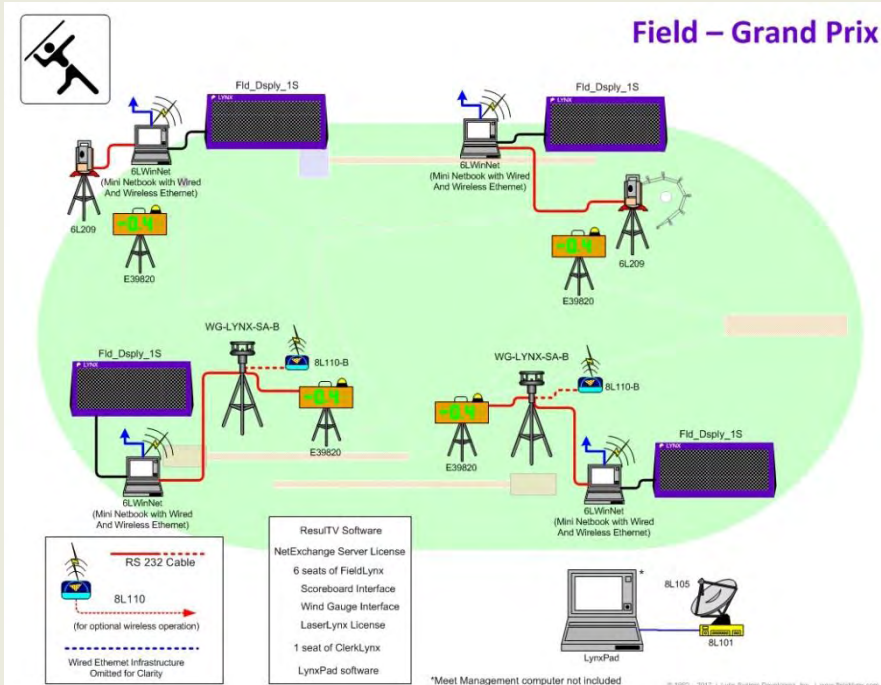


## COMPONENTS: FIELD GRAND PRIX ELITE PACKAGE

- **6x Windows Netbook Computers**
- **6x Seats of FieldLynx** Field Event Software
    - **Scoreboard Interface** FieldLynx Plug-in
    - **Wind Gauge Interface** FieldLynx Plug-in
    - **LaserLynx Interface** FieldLynx Plug-in
- **1 Seat of ClerkLynx** Remote Clerking Tool
- **NetExchange** Field Event Server License
- **4x ResulTV** Display Software License
- **2x Ultrasonic Wind Gauge Kit** & Battery Pack
- **AirLynx Wireless** 802.11 Gateway and **Amplified Antenna Kit**
- **2x Wireless SeriaLynx units**
- **2x LaserLynx PRO** Electronic Distance Measurement System
- **6x (4-Digit) 6" LED Wind Gauge Display & Countdown Timer**
- **4x 3-Sided 336x168-pixel LED Video Display**
    - **4x Wheel Assembly** for 3-sided Displays

**ATHLETICS-TRACK EVENTS**
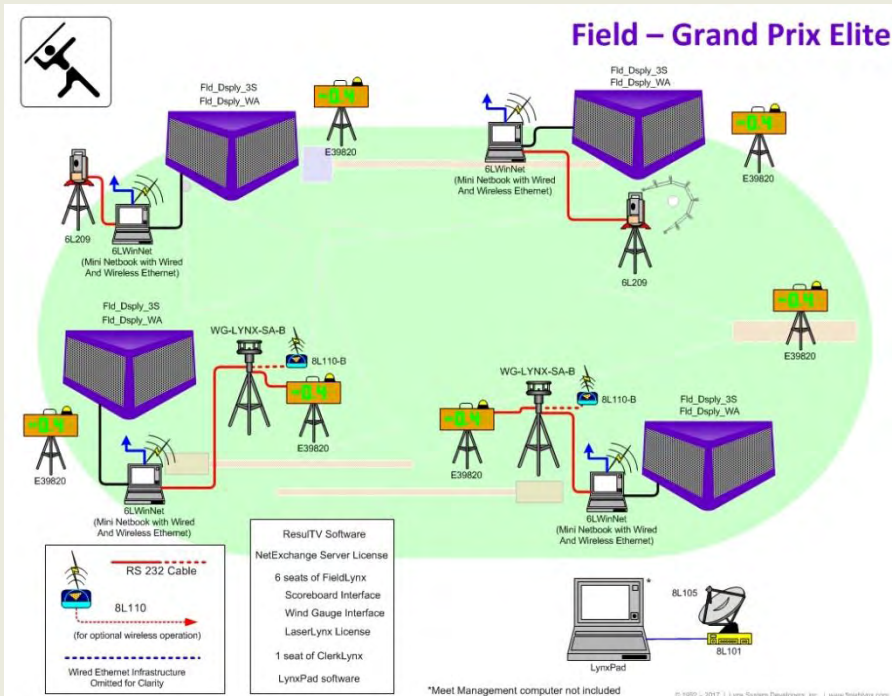
### I.A.A.F. Rule 161 Clause 2

*In competitions held under Rule 12.1(a), (b) and (c), the starting blocks shall be linked to an IAAF approved false start apparatus. The Starter and/or an assigned Recaller shall wear headphones in order to clearly hear the acoustic signal emitted when the apparatus detects a false start (i.e. when reaction time is less than 100/1000ths of a second). As soon as the Starter and/or an assigned Recaller hears the acoustic signal, and if the gun is fired, or the approved starting apparatus is activated, there shall be a recall and the Starter shall immediately examine the reaction times on the false start apparatus in order to confirm which athlete(s) is/are responsible for the false start. This system is strongly recommended for all other competitions.*



ReacTime is a world's only completely wireless Championship False Start Detection System that can also be used as a modular Reaction Training System. Unlike some simpler systems, ReacTime has no "contact pads", and it cannot be tricked.

The system is easy to use and rugged. The battery or AC powered blocks are weatherproof and are designed to withstand the tough demands of a track environment.

When used as a stand-alone personal training system to help sprinters improve their starting technique, an individual ReacTime module can be used to record and display an athlete's gun-to-motion times to an accuracy of $1/1000^{th}$ of a second.

The Competition ReacTime system detects false starts (as defined by IAAF rule 162.10 and USATF rule 60.18)-also to an accuracy of $1/1000^{th}$ of a second-and instantly signals this information to the starter.

## Components

- 8 Block Sensor units with Speaker Module
- 8 Block Sensor Clamps for mounting to most models of IAAF Approved Starting blocks
- False Start Command Center
- Wireless Hardware option on all Block Sensors and False Start Command Center
- Starter and Recall Starter's Headset and Microphone
- Line Printer for Reaction Times
- ReacTime False Start System Software License
- False Start Operating & Storage Unit
- ReacTime False Start System Power Supply & Charger
- 8 External Battery Packs for Block Sensors
- Transport Cases
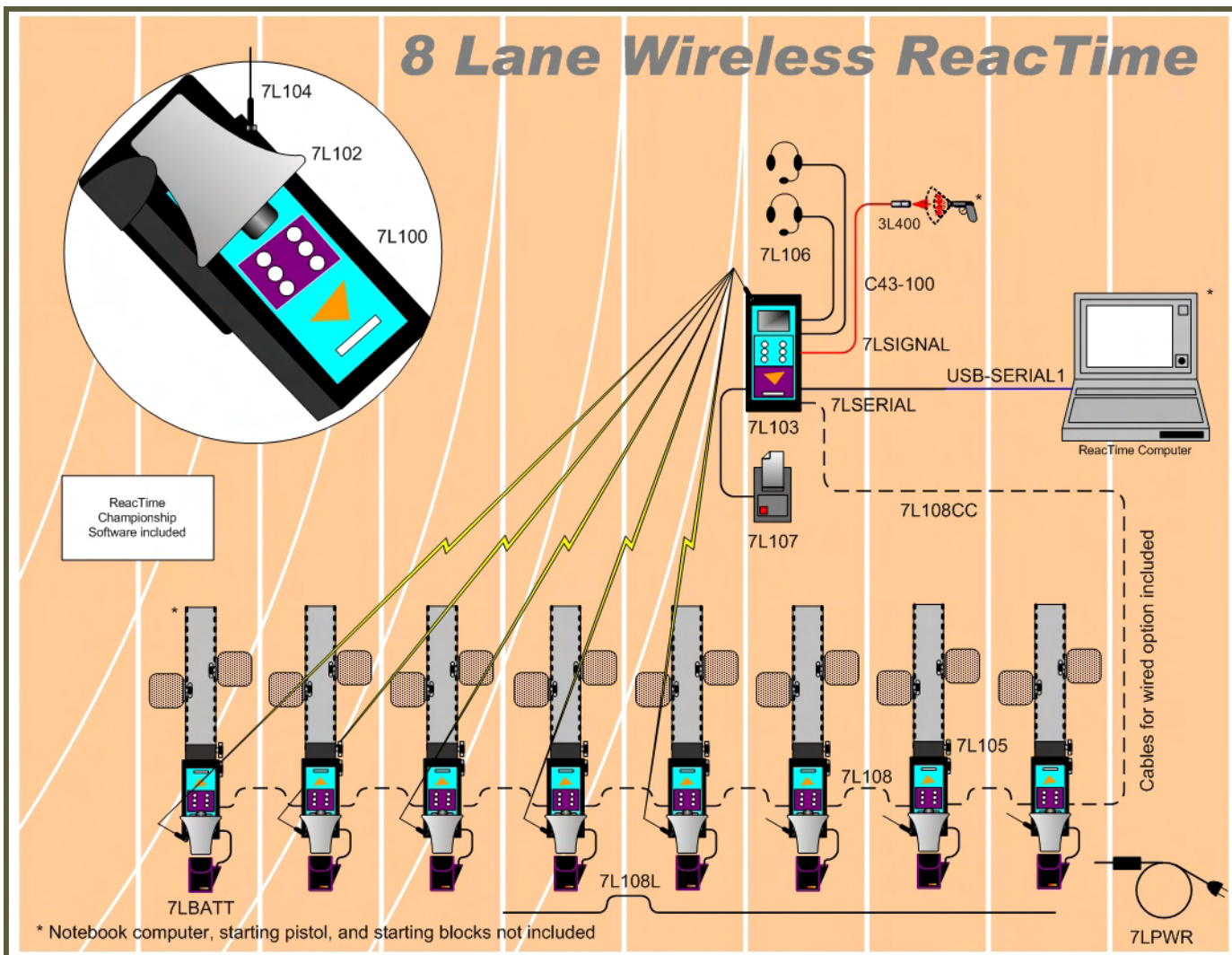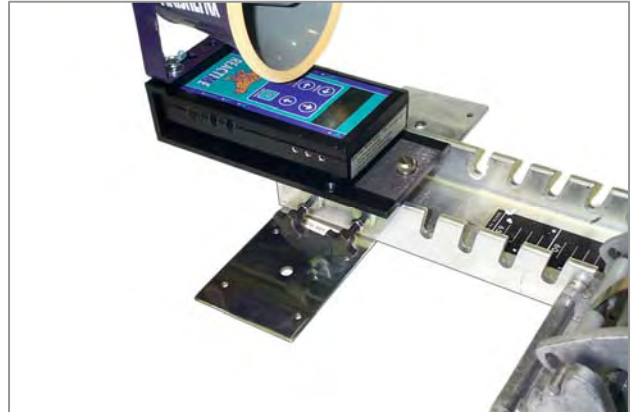- All Necessary Cables to allow wireless operation as well as wireless

Software available in many languages: English, French, Italian, Spanish, Russian, German – other languages (even character based languages) are available

## REACTIME

- Measures reaction times to $1/1000^{th}$ of a second
- Detection mechanism clips to virtually every manufacturer's starting blocks.
- Control Center for the starter is lightweight and portable
- Battery operated and rechargeable, or AC powered
- All athletes hear the starter's commands or the sound of the gun simultaneously
- Includes all required cables as well as headsets for the starter and recall starter
- 100% integration with the FinishLynx timing system, including the ability to store the reaction time of the athletes in the Finishlynx results area and print with results
- Optional wireless adapters eliminate the need to lay out cables to each of the starting blocks
- ReacTime Software for Windows allows the power waveforms for all the athletes in a race to be graphed, compared, saved, and printed
- Paper tape printer allows reaction times of the athletes to be printed trackside for each race

- Same technology for Reaction-Time Training System and Championship False-Start System. Buy a Training System today and simply upgrade to the Championship System at a later date.

- Accurate to 1/1000$^{th}$ of a second

- Downloadable reaction traces for detailed start analysis

- Battery operated and rechargeable

- Clips to virtually any starting block

- Cannot be "tricked" like many other systems

- Training system starter commands can be personally recorded

- Rugged, weather resistant construction designed to withstand the rigors of everyday use

- The world's top sprinters have shown that reaction times can be improved by training- and ReacTime can be the cornerstone of that training process

- Can be operated with an external starter giving the commands and the firing gun, or, with speaker option, can be pre-programmed to give the commands "On your marks", "set" and a gun sound. The timing of the instructions is randomized within a programmable range.

- Two Personal Training Systems can be linked for competitive training. Can be connected to photoeyes or a FinishLynx system for total sprint timing.

- Protects your investment. Personal ReacTime units can be used as components of a full false start detection system



## 8 Lane Wireless ReacTime

7L104
7L102
7L100
7L106
3L400 *
C43-100
7LSIGNAL
7L103
7LSERIAL
USB-SERIAL1
ReacTime Computer
7L107
7L108CC

ReacTime Championship Software included

Cables for wired option included

7L105
7L108
7LBATT
7L108L
7LPWR

* Notebook computer, starting pistol, and starting blocks not included

# Lynx LED Video Displays for Track & Field Results

The LED infield video displays from Lynx are custom designed to meet the demands of championship-level IAAF athletics events. These modular displays are available in 1, 2, or 3-sided units and integrate seamlessly with FinishLynx technology to display live results throughout the venue.

Each LED panel is **2 meters** long by **1 meter** high and provides high-visibility text, images, or animated graphics for superior fan engagement in large indoor or outdoor venues. Each display unit can receive data independently over an HDMI connection, or multiple units can be connected with an Ethernet cable to broadcast a single video/graphic feed simultaneously to displays located across the infield.



**Software Compatibility**

The displays are compatible with the ResulTV live display software, FieldLynx field event software, the Video Display Module for EtherLynx Vision cameras, or any custom software capable of outputting graphics to an HDMI-connected display. Infield displays can connect to a laptop or netbook to show live field event scores and measurements using the FieldLynx software. Finish line displays can connect to ResulTV for advanced broadcast-ready graphics, or display race results and images directly from FinishLynx cameras using the Video Display Module.
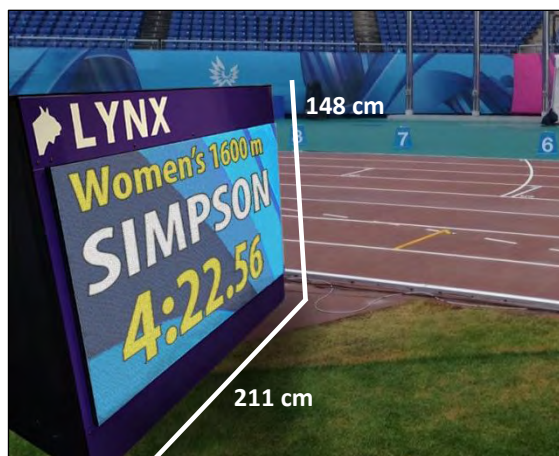
**Video Display Module on Lynx Cameras**

The 1, 2, and 3-sided displays can connect directly to an EtherLynx Vision series photo-finish camera running the Video Display Module to display live finish times, results, custom text, and even FinishLynx results images directly from the camera's HDMI output. The VDM plug-in uses custom scoreboard scripts to output live race data and the options can be controlled from inside the FinishLynx software interface. Select images, send custom messages, or edit the display layout with a click of the mouse.



**Construction & Frame**

The premium aluminum frame offers solid, weatherproof construction and a lightweight design. Plus, the optional wheel assembly for the 2 and 3-sided units makes it easy to move the display within the infield or transport it between events. The large LED panels fit snugly into the aluminum frame and the rear connections are easily accessible during setup. The frame also includes removable vinyl panels to cover the rear of each display. Because the display units are modular, a 1-sided display can be turned into a 2 or 3-sided at a later date if necessary. Any of the four modular LED panels can also be swapped out or replaced at any time.

**Key Features**

- Large 336x168-pixel panels produce high-visibility graphics suitable for outdoor events
- Weatherproof design protects the LED hardware from harsh weather conditions
- Custom aluminum frame supports the LED panels and provides a polished, professional design
- Seamless data integration with FinishLynx cameras and software
- HDMI input is compatible with most graphic display programs
- Connect multiple display units using an Ethernet cable
- Modular design means you can choose any combination of 1, 2, or 3-sided displays

LED Video Field Display

# Lynx LED Video Displays for Track & Field

**Live Field Event or Race Results**



**Custom-Built Aluminum Frame**



**Weatherproof Internal Connections**



**Modular 1, 2, or 3-Sided Designs**



## Hardware Specifications

| | |
|---|---|
| **LED Panel Dimensions** | 200cm W x 100cm H |
| **LED Matrix** | 336 x 168 pixels |
| **Full Unit Dimensions** | **1-Sided**: 211cm x 148cm x 61cm |
| | **2-Sided**: 285cm x 148cm x 183cm |
| | **3-Sided**: 285cm x 148cm x 247cm |
| **Full Unit Weight** | **1-Sided**: 107.5 kg |
| | **2-Sided**: 208 kg |
| | **3-Sided**: 301 kg |
| **Pixel Pitch** | 5.952mm |
| **Refresh Rate** | >2000 Hz |
| **Brightness** | >5000 nits |
| **Pixel Density** | 28224 Dot/sqm |
| **Input Voltage** | AC100-240V/50-60Hz |
| **Average Power Consumption** | 290 W/m$^2$ (580W per side) |
| **Max Power Consumption** | 820 W/m$^2$ (1640W per side) |
| **Operating Temperature** | -20°C to +60°C |
| **Operating Humidity** | 10% to 90% RH |
| **Life Span** | 100,000 Hours |
| **Front Ingress Protection Class** | IP65 |
| **Back Ingress Protection Class** | IP54 |
| **Frame Materials** | Aluminum Frame, Vinyl Cover |
| **Mounting** | Optional Wheel Assembly Base |
| **Connections** | HDMI, AC Power |

LED Video Field Display

**ATHLETICS**

## BUILDING LYNX INTO THE DESIGN PROCESS

One area of track and field design where Lynx has been able to provide assistance to many of today's top architects is by helping to increase their knowledge of, and infrastructure planning for, a facility's Fully Automatic Timing (FAT) system. Every quality facility can expect to host at least a few meets per year that incorporate fully automatic timing, so the necessary infrastructure should always be considered during the design process.

This infrastructure is frequently already in place, but it is not always in the optimal position or designed with adequate redundancy. Many facilities are forced to adapt their timing system's setup due to infrastructure designed solely for soccer. With a little foresight and minimal additional costs, every track facility can be designed to mesh with the needs of a multi-sport stadium.
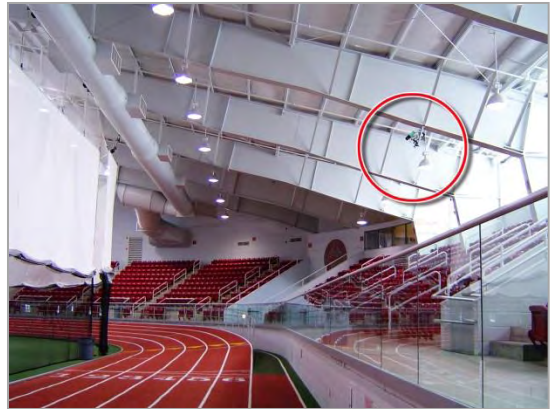
## ENTRY-LEVEL (MULTI-USE) INFRASTRUCTURE

A pair of junction boxes located inside and outside of the track near the finish line (and connected by 2" conduit) are the bare minimum for a track facility. However, in situations where it is not possible to place conduits under the track, it is possible to install a totally wireless infrastructure. Contact Lynx and talk to our technical staff if your project demands this solution.

As you will see from the basic diagram, the infrastructure requirements for a simple timing system at an entry-level track facility are very easy:

- A pair of junction boxes located inside and outside the track close to the finish line
- An Ethernet cable running through the conduit under the track, connecting the primary EtherLynx finish line camera with the FinishLynx computer
- A power outlet for the EtherLynx camera, preferably on its own circuit breaker. It is preferable to have power both inside and outside the track to allow for future expansion to a two-camera system.

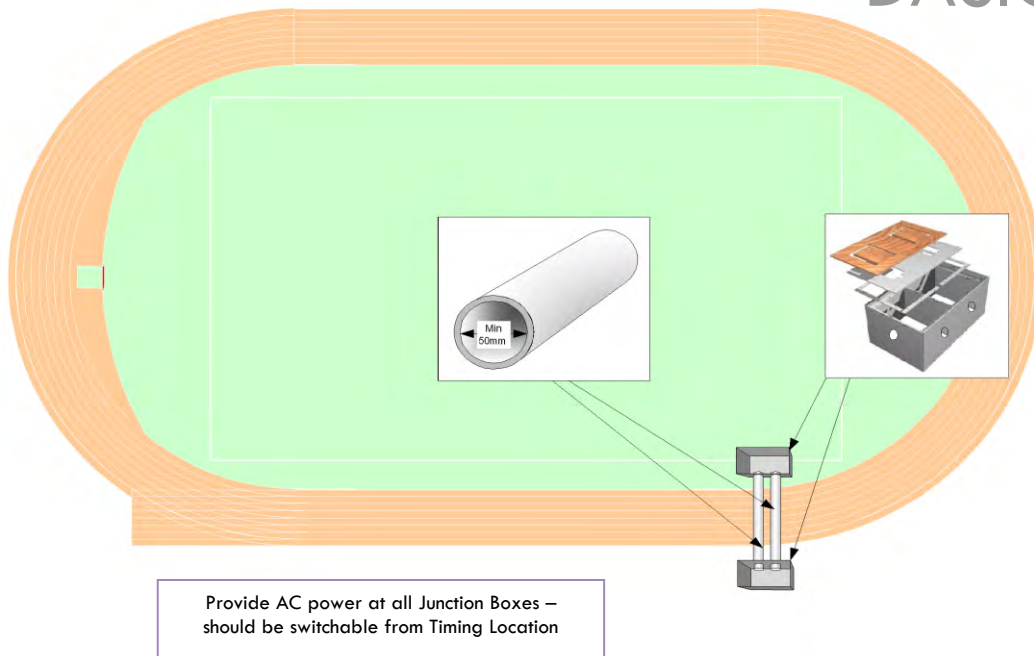**In-Ground Junction Box**

## ADVANCED INFRASTRUCTURE

Some facilities require the flexibility to reverse the direction of the 100 and 200-meter sprint races to avoid headwinds. This will entail another set of junction boxes at every position where a race would potentially finish. Most large facilities run their starting gun cable underground to keep it away from athletes' spikes. If your customer prefers this, you will need three additional long conduit runs and junction boxes at the inside of the beginning of each straightaway.

The first conduit should run from the main infield junction box at the finish line along the straightaway to the beginning of the 100-meter dash. The second conduit will run from the 100-meter start under the infield to the beginning of the 200-meter start. The third conduit will run from the 200-meter start to the 1500-meter start.
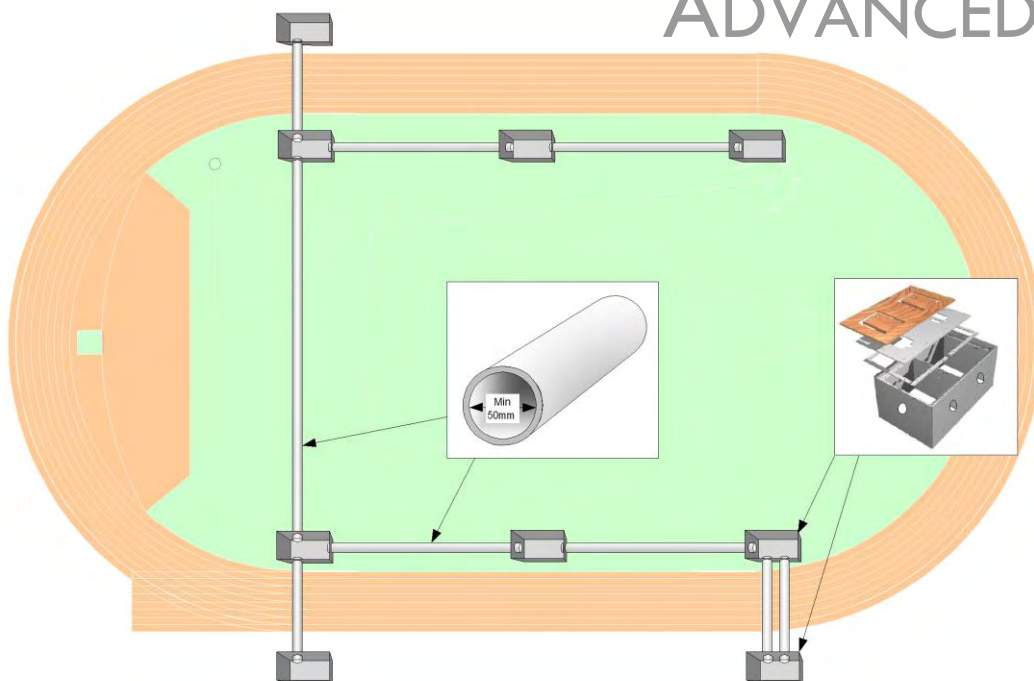
- Start Signal Cable – Belden 9533
- Start Signal Connectors - 3 pin XLR
- Ethernet Network Cable Options
    - Industry Standard Cat 5 (T568A/B RJ45)
    - Industry Standard Fiber Optic with applicable  Transceivers



BASIC

Min 50mm

Provide AC power at all Junction Boxes –
should be switchable from Timing Location



ADVANCED

Min 50mm

FINISHLYNX

## Major Athletics Events

- **USA Track & Field Olympic Team Trials** (USA)
- **IAAF World Challenge Meeting Zagreb** (Croatia)
- **IAAF Winter Permit Meeting** (Russia)
- **DECASTAR IAAF World Combined Events Challenge** (France)
- **Pan-American Games** (Mexico)
- **Pan-Arab Games** (Qatar)
- **Ibero-American Games** (Puerto Rico)
- **Russian Athletics National Championships** (Russia)
- **Grande Premio Brasil Caixa de Atletismo** (Brazil)
- **IAAF World Challenge Meeting** (Morocco)
- **IPC Athletics World Championships** (France)
- **USATF Indoor Track & Field Championships** (USA)
- **USATF Outdoor Track & Field Championships** (USA)
- **Meeting Pas de Calais - IAAF Indoor Permit Meeting** (France)
- **Great City Games** (United Kingdom)
- **Finnish Championships in Athletics** (Finland)
- **Balkan Athletics Senior Championships** (Bulgaria)
- **Millrose Games** (USA)
- **Penn Relays** (USA)
- **Drake Relays** (USA)
- **Nike Cross Nationals** (USA)

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