



Timing Solution for Athletics



1. Introduction

This is a professional timing program for Athletics.

Through the cooperation of Timing Software, Chip Timing Host, Chip Timing, Detection loop, Race Timing Software, Photo Finish Camera, Meet Management Server and other systems, using high-speed color CCD digital camera and advanced image data processing technology, the timing accuracy of the equipment meets the requirements of professional competitions, with high timing accuracy, fast and accurate interpretation, strong stability It has the characteristics of simple operation, convenient carrying and installation, and less consumables.

The system realizes the automation of the measurement process, thus ensuring the fairness and justice of the competition process and results.

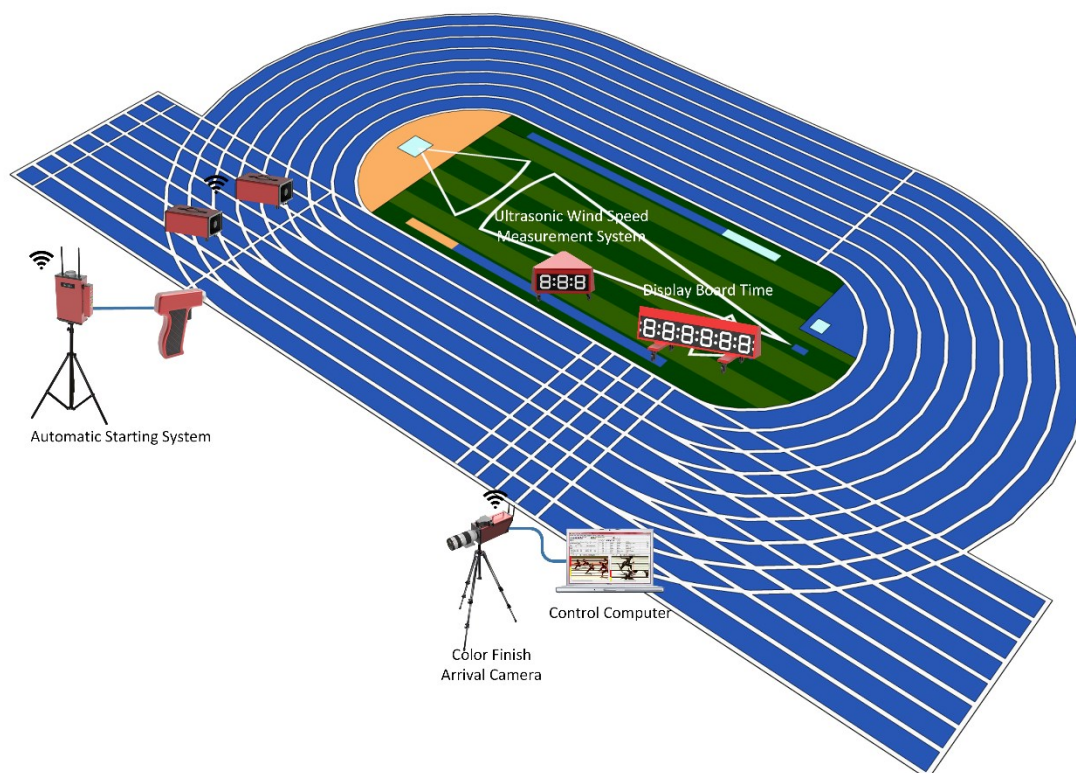
Applicable rules of the system:

- 《IAAF Competition Rules 2012-2013》

2021, The 10th track and field competition in Dongguan



1.1 System Chart



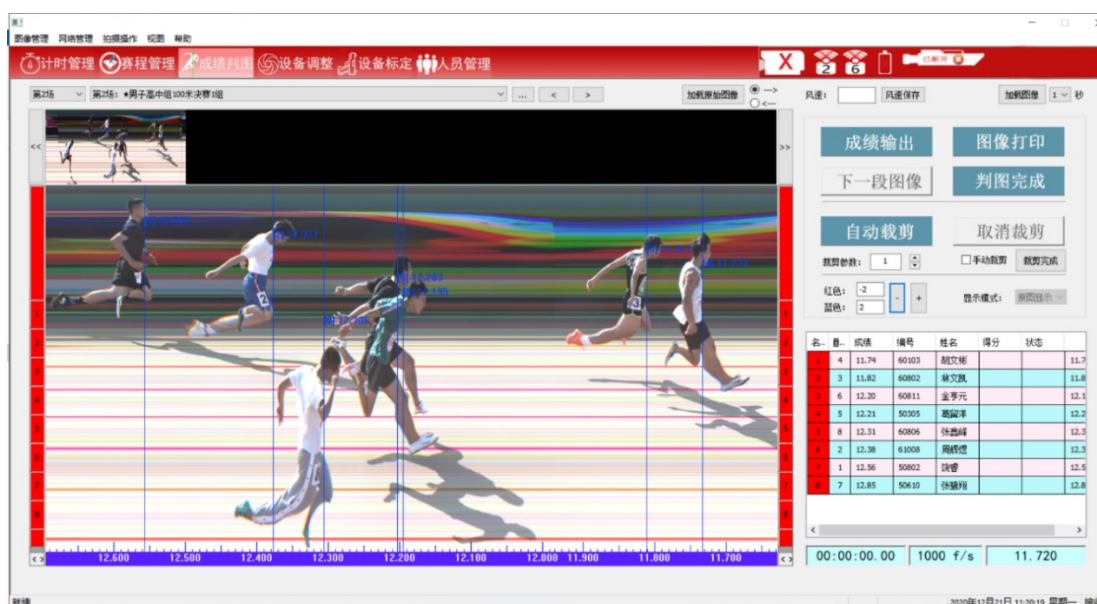
1.2 Product Configuration

Products	Type	Number
Match Timing Software	ULTRASCORE STANDALONE	1
Automatic Starting System	KS-STM100	1
Colorful Photo Finish Camera	KS-PHFC10	1
Black & White Photo Finish Camera (optional)	KS-PHFWB10	1
Ultrasonic Wind Speed Measurement System	KS-WSP-TRID	1
Display Board Time	KS-SPLIT-D	1
Electronic Distance Measurement System	KS-MD100	1
LED Display	KS-SCRN-LED960480	1
Score Display Software	SCB Viewer	1
Meet Management Server	KS-MMS-MINI	1

2. Specification for products

2.1 Match Timing Software

Products	Details
Match Timing Software	<p>Operating system: support win7, 10, 32 / 64 bit systems</p> <p>Function:</p> <p>Support the simultaneous operation of shooting and score interpretation;</p> <p>When the computer crashes and the software is restarted, the timing can be restored with one click;</p> <p>The accuracy of score output is 0.0001s ~ 1s;</p> <p>multiple orders and reset the order time;</p> <ul style="list-style-type: none"> ◆ Support zero time calibration function; ◆ Support stop timing to continue shooting; ◆ Support automatic image clipping and filtering redundant images; ◆ Support large screen display of scores and images; ◆ Support automatic scoring; ◆ Support the printing of transcripts and the generation of Excel sheets and TXT documents; ◆ Support selecting wrong groups and associating images with corresponding groups after the competition.



2.2 Score Display Software

Products	Details
Score Display Software	<p>Type: SCB VIEWER</p> <p>Functions:</p> <ul style="list-style-type: none"> ◆ Layout of scoreboard can meet international game rules. ◆ All contents on the scoreboard including fonts, color and layout can be modified to meet clients' needs. ◆ Used for displaying player information, score and bureau score of a single court. ◆ Used for displaying player information, score and bureau score of multiple sites. ◆ The summary display screen can automatically adjust the display layout according to the competition process. ◆ The picture is updated in real time according to the referee's operation. ◆ Automatic data backup. In case of computer failure or power

Women's 100m Race			
Rank	Team	Name	Score
1	Brazil	Adela	11:47
2	India	Nanettle	11:53
3	Liberia	Rebekah	12:03
4	Nepal	Magnolia	12:23
5	America	Gerda	12:33
6	Malta	Wendy	12:51
7	Japan	Bealty	13:11
8	France	Helen	13:21

2.3 Automatic Starting System

Products	Details
Automatic Starting System	<p>Supporting items: Track and Field, Dragon Boat, Kayak, Horse Racing, Dog Racing, Bicycle, Racing, UAV, Short Track Speed Skating, Long Track Speed Skating, Skiing and other competitions.</p> <p>Including starting host*1, electronic starting gun*1, wireless speaker*2, safety box*1.</p> <p>Size of starting host: 23*13.5*5.5(cm), weight: 1.5kg</p> <p>Size of speaker: 31*26* 33(cm), weight: 7kg</p> <p>Function:</p> <ul style="list-style-type: none"> ◆ Support electronic starting gun; ◆ The starting distance is up to 1000 meters; ◆ Support wireless start button; ◆ Support microphone voice input; ◆ Voice and starting shot dual output; ◆ The host can work continuously for 8 hours without external power; ◆ The sound can work continuously for 8 hours without external power; ◆ Support zero calibration of electric meter; ◆ Support multiple orders and multiple trigger record storage.



Products Photo:

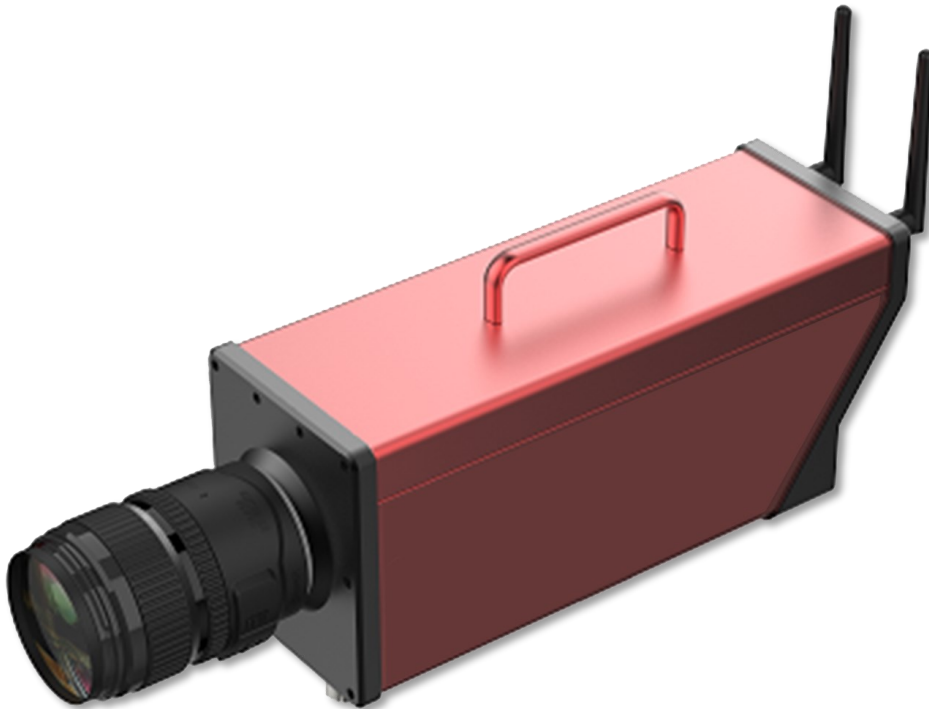
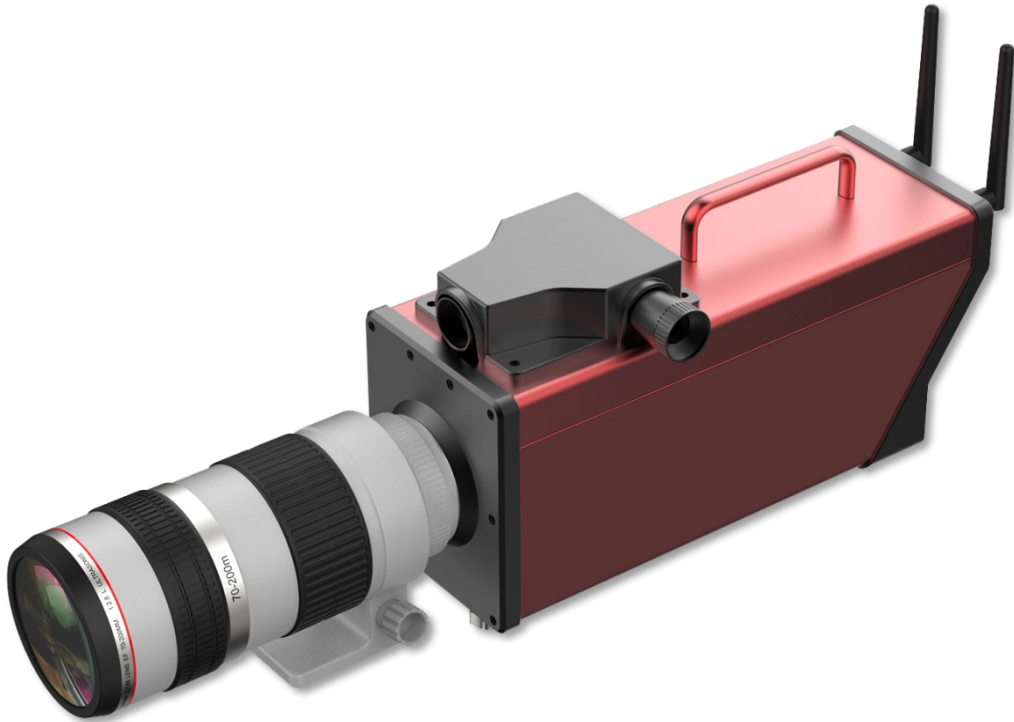


2.4 Colorful Photo Finish Camera

Products	Details
Colorful Photo Finish Camera	<p>Supporting items: Track and Field, Horse Racing, Dog Racing, Bicycle, Racing, UAV</p> <p>Frame rate: 1000 frames /s, 2000 frames /s, 5000 frames /s.</p> <p>Timing accuracy: 0.001 second, 0.0005 second, 0.0002 second</p> <p>System error: < 0.0002s</p> <p>Cumulative error: 0.5ppm</p> <p>Image display resolution: 1024 × 1024</p> <p>Color: full color image</p> <p>Host size: 29.8*14*15.6(cm)</p> <p>Weight: 2kg</p> <p>Power adapter: 14.8-16.8v/1-2a</p> <p>Communication interface: Gigabit Ethernet port</p> <p>Wireless sending transmission distance: < = 1000m</p> <p>Battery type: lithium battery</p> <p>Battery life: 4 hours at full power</p> <p>Operating environment:</p> <p>Ambient temperature range: - 10 °C ~ 60 °C , relative humidity range: 10% ~ 80%</p> <p>Storage conditions:</p> <p>Temperature range: 0 °C ~ 40 °C , humidity range: 10% ~ 60%</p> <p>Closure length of tripod: 61cm</p> <p>Maximum height of tripod: 170cm</p> <p>Net weight of tripod: 2.5kg</p> <p>Size of safety box: 64.2*37.9*23(cm)</p> <p>Functions:</p> <ul style="list-style-type: none"> ◆ Support image automatic exposure processing; ◆ Support positioning athlete sprint image; ◆ Support front capture sprinter chest number cloth; ◆ Support multiple orders and reset the order time; ◆ Support zero time calibration function; ◆ Support stop timing to continue shooting; ◆ Support image local magnification function; ◆ Automatic image clipping to filter redundant images; ◆ Support remote interpretation: one computer for shooting and another computer for interpretation; ◆ Support thumbnail display to quickly locate athletes; ◆ Support video playback; ◆ Support PNG and BMP image generation.

Black & White Photo Finish Camera (optional)

Products	Details
Black & White Photo Finish Camera (optional)	<p>Supporting items: Track and Field, Horse Racing, Dog Racing, Bicycle, Racing, UAV</p> <p>Shooting frame rate: 1000 frames /s.</p> <p>Timing accuracy: 0.001 seconds</p> <p>System error: < 0.0002s</p> <p>Cumulative error: 0.5ppm</p> <p>Image display resolution: 512 × 1024</p> <p>Color: 8-bit black and white image</p> <p>Host size: 29.8*14*15.6(cm)</p> <p>Weight: 2kg</p> <p>Power adapter: 14.8-16.8v/1-2a</p> <p>Communication interface: Gigabit Ethernet port</p> <p>Wireless sending transmission distance: < = 500m</p> <p>Battery type: lithium battery</p> <p>Battery life: 4 hours at full power</p> <p>Operating environment: ambient temperature range: - 10 °C ~ 60 °C, relative humidity range: 10% ~ 80%</p> <p>Storage conditions: temperature range: 0 °C ~ 40 °C, humidity range: 10% ~ 60%</p> <p>Closure length of tripod: 61cm</p> <p>Maximum height of tripod: 170cm</p> <p>Net weight of tripod: 2.5kg</p> <p>Size of safety box: 64.2*37.9*23(cm)</p> <p>Functions:</p> <ul style="list-style-type: none">◆ Support image automatic exposure processing;◆ Support positioning athlete sprint image;◆ Support front capture sprinter chest number cloth;◆ Support multiple orders and reset the order time;◆ Support zero time calibration function;◆ Support stop timing to continue shooting;◆ Support image local magnification function;◆ Automatic image clipping to filter redundant images;◆ Support remote interpretation: one computer for shooting and another computer for interpretation;◆ Support thumbnail display to quickly locate athletes;◆ Support video playback;◆ Support PNG and BMP image generation.



2.5 Ultrasonic Wind Speed Measurement System

Products	Details
Ultrasonic Wind Speed Measurement System	<p>Operating system: support win7, 10, 32 / 64 bit systems</p> <p>Measuring range: 0-60m/s</p> <p>Measurement accuracy: $\pm 2\%$ (12m/s)</p> <p>Resolution: 0.01 m/s</p> <p>Size of display: 96 × eighty-three × 51CM</p> <p>Weight of display: 30kg</p> <p>Power adapter of display: 42V / 2A</p> <p>Material: Alloy</p> <p>Led three side display, display digit: 3</p> <p>Display color: Red</p> <p>Measuring range: 12.8m/s,</p> <p>Measurement accuracy: 0.01m/s,</p> <p>Measurement error: plus or minus 2%</p> <p>Average calculation time: 5S, 10s, 13s (optional)</p> <p>Battery type: lithium battery.</p> <p>Battery life: 8 hours at full power</p> <p>Tripod:</p> <p>Closure length of tripod: 61cm</p> <p>Maximum height of tripod: 145cm</p> <p>Net weight of tripod: 1.65kg</p> <p>Operating environment:</p> <p>Ambient temperature range: - 10 °C ~ 60 °C, relative humidity range: 10% ~ 90%</p> <p>Storage conditions:</p> <p>Temperature range: 0 °C ~ 40 °C, humidity range: 10% ~ 60%</p> <p>Function:</p> <ul style="list-style-type: none"> ◆ Parallel to the running direction of the athlete, when the wind is downwind, the wind speed shows a positive value; ◆ Parallel to the running direction of the athlete, when facing the wind, the wind speed shows a negative value; ◆ Branch response speed $\leq 1s$; ◆ It also has the functions of wind speed measurement and countdown; ◆ The measurement of wind speed can be controlled wirelessly; ◆ The countdown can be controlled wirelessly.



2.6 Display Board Time

Products	Details
Display Board Time	<p>Operating system: support win7, 10, 32 / 64 bit systems Laser interception distance: < = 20m Timing accuracy: < = 1ms Corresponding interception time: < = 1ms Digital display color: red (monochrome) Battery type: lithium battery Battery life: 8 hours at full power Waterproof grade: outdoor waterproof IP65 Size: 159*55*54(cm) Weight: 32kg Power: 42V / 2A</p> <p>Operating environment: ambient temperature range: - 10 °C ~ 60 °C Relative humidity range: 10% ~ 90% Storage conditions: temperature range: 0 °C ~ 40 °C, humidity range: 10% ~ 60%</p> <p>Functions:</p> <ul style="list-style-type: none"> ◆ Multiple interception systems can be used at the same time (through wireless series connection); ◆ Computer control or wireless key control can be selected; ◆ It can display the timing time or Beijing time.



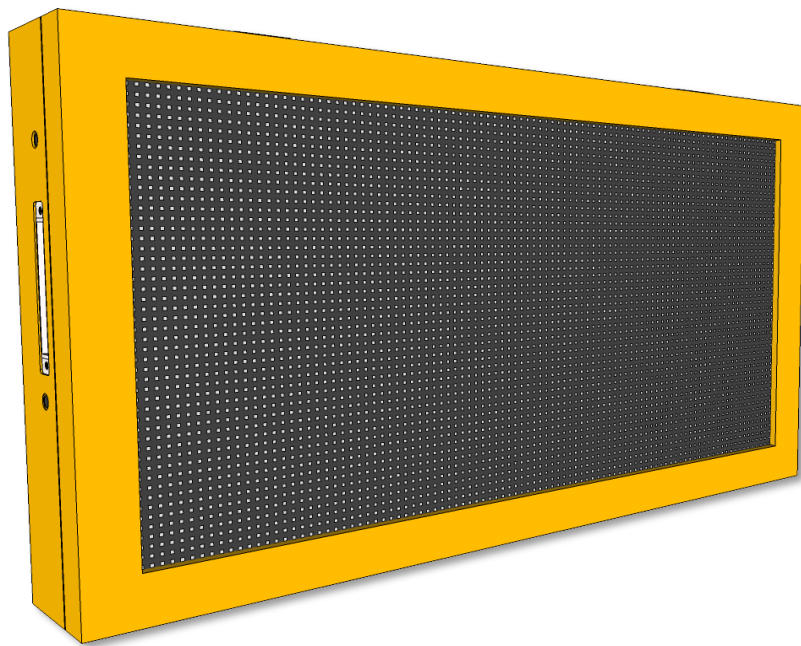
2.7 Electronic Distance Measurement System

Products	Details
Electronic Distance Measurement System	<p>Supporting items: Long Jump, Triple Jump, Javelin, Shot Put, Solid Ball, Hammer, Discus, Softball, Bat Throwing, etc.</p> <p>The software supports XP, win7 and win10 operating systems.</p> <p>Battery: Lithium battery</p> <p>Endurance time: 8 hours without external power supply</p> <p>Measuring distance: $\leq 100\text{m}$</p> <p>Measurement accuracy: $2\text{mm} \pm 0.001\text{mm}$</p> <p>Measurement time: ≤ 1.2 seconds</p> <p>Closure length of tripod: 61cm</p> <p>Maximum height of tripod: 170cm</p> <p>Net weight of tripod: 2.5kg</p> <p>Size of safety box: 64.2*37.9*23(cm)</p> <p>Function:</p> <p>For field events, laser is used to accurately measure the distance;</p> <ul style="list-style-type: none">◆ Support real-time sending to the sports meeting management system.



2.8 LED Display

Products	Details
LED Display	<p>Type: KS-SCRN-LED960480 Size: 1080*600*145(mm) Material: Aluminum Function:</p> <ul style="list-style-type: none">◆ Must be used together with Athletics Scoring Software.◆ Display athlete's rank, name and match time.



2.9 Meet Management Server

Products	Details
Meet Management Server	<p>Type: KS-MMS-MINI</p> <p>Size: 170x150x35 (mm)</p> <p>Weight: 1.0 KG</p> <p>Features:</p> <ul style="list-style-type: none">◆ Multi-court arrangement, auto generate the order form.◆ Multi-project arrangement, make the schedule more smoothly.◆ Monitor the status of each court in real time, including the current field, rotation and player info.◆ Court adjustment, can manually modify the match court and session info.◆ Summary and print integrated report.

