



# The Solution of Horse-Racing



## 1. Introduction

This is a professional timing program for horse racing.

Through the cooperation of Timing Software, Chip Timing Host, Chip Timing, Detection loop, Race Timing Software, Finish Arrival 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.

### 1.1 System Chart



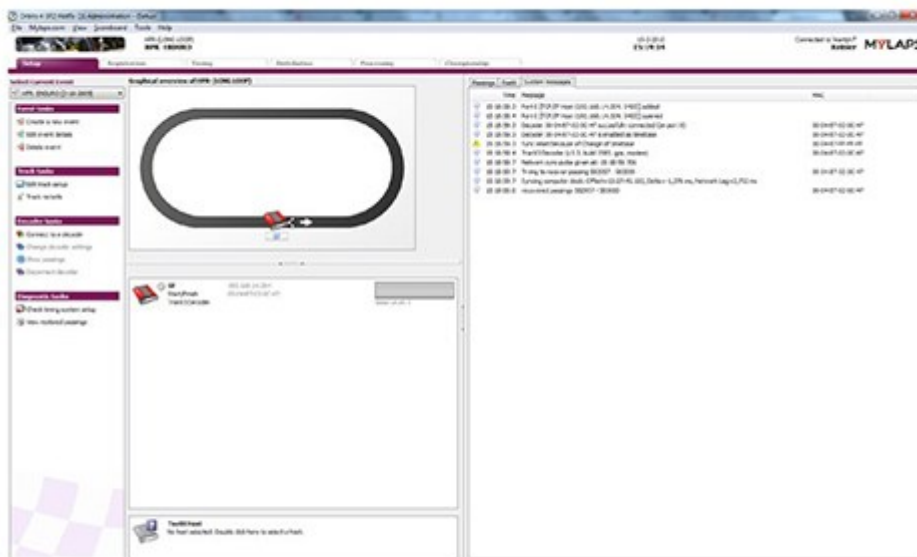
## 1.2 Product Configuration

Products	Type	Number
<b>Chip Timing System</b>		
Timing Software	Orbits	1
Chip Timing Host	KS-Prochip	1
Timing Chip	KS-TC100	20
Detection loop (50m/100m)	KS-Probe	1
Stand of Detection loop	/	1
<b>Finish Arrival System</b>		
Score Display Software	Standalone	1
Color Finish Arrival Camera	KS-PHFC10	1
Black and White Finish Arrival Camera (optional)	KS-PHFWB10	1
Meet Management Server	KS-MMS-MINI	1

## 2. Specification for Products

### 2.1 Timing Software

Products	Details
Timing Software	<ul style="list-style-type: none"><li>◆ Operating system: win10</li><li>◆ Support competition arrangement,</li><li>◆ Support the display of the list of players registered for each event,</li><li>◆ It supports real-time display of timing and scoring information,</li><li>◆ Support the processing, printing and publishing of official event results</li><li>◆ The display screen can be customized</li></ul>



## 2.2 Chip Timing Host

Products	Details
Chip Timing Host	<p>Type: KS prochip</p> <p>Track width: 2-16m</p> <p>Weight: 1.7kg</p> <p>Accuracy: 0.003s</p> <p>Support power supply of power bank</p> <p>Function:</p> <ul style="list-style-type: none"><li>◆ By connecting the Detection loop, the signal of the timing chip can be converted into the ID information of the contestant and the precise time of passing the detection coil</li><li>◆ High accuracy GPS synchronization function Ethernet connection</li></ul>



### 2.3 Timing Chip

Products	Details
Timing Chip	<p>Size: 30x47x13mm</p> <p>Weight: 17g</p> <p>Shell: waterproof and shockproof</p> <p>Maximum speed measurement: 75km/h</p> <p>Time resolution: 0.004s</p> <p>Signal conversion: electromagnetic induction</p> <p>Function:</p> <ul style="list-style-type: none"><li>◆ Identify contestants</li><li>◆ Record the precise time when the contestant passes the detection loop</li><li>◆ Ultra low power consumption and long battery standby time</li></ul>



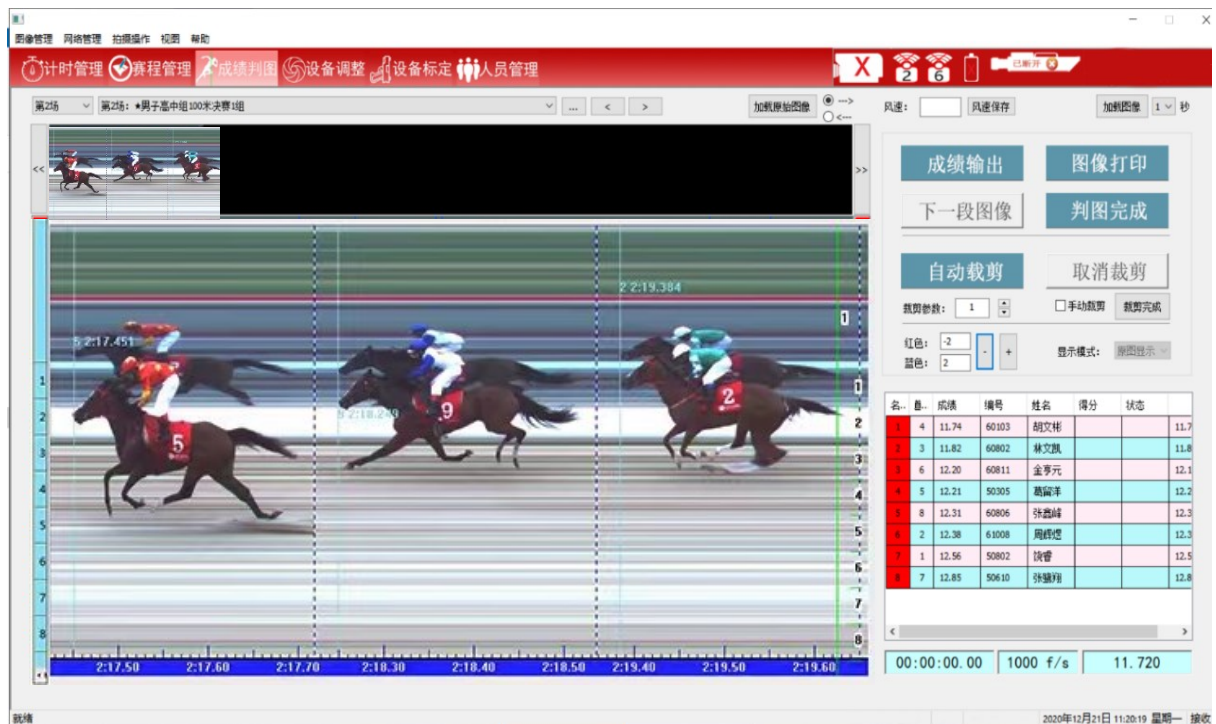
## 2.4 Detection loop

Products	Details
Detection loop	<p>Type: KS probe</p> <p>Detection coil track width: 50m/100m (optional)</p> <p>Ring width: 60cm</p> <p>Distance from coaxial cable to timing host: 100M</p> <p>Loop wire: 3mm wide, tinned copper wire 0.75mm<sup>2</sup> function:</p> <ul style="list-style-type: none"><li>◆ Send an activation signal to activate the timing chip and receive the signals sent by all timing chips</li><li>◆ Embedded on the finish line of the sports field</li><li>◆ Strong and durable, high anti-interference</li></ul>



## 2.5 Score Display Software

Products	Details
Score Display 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"> <li>◆ Support zero time calibration function;</li> <li>◆ Support stop timing to continue shooting;</li> <li>◆ Support automatic image clipping and filtering redundant images;</li> <li>◆ Support large screen display of scores and images;</li> <li>◆ Support automatic scoring;</li> <li>◆ Support the printing of transcripts and the generation of Excel sheets and TXT documents;</li> <li>◆ Support selecting wrong groups and associating images with corresponding groups after the competition.</li> </ul>



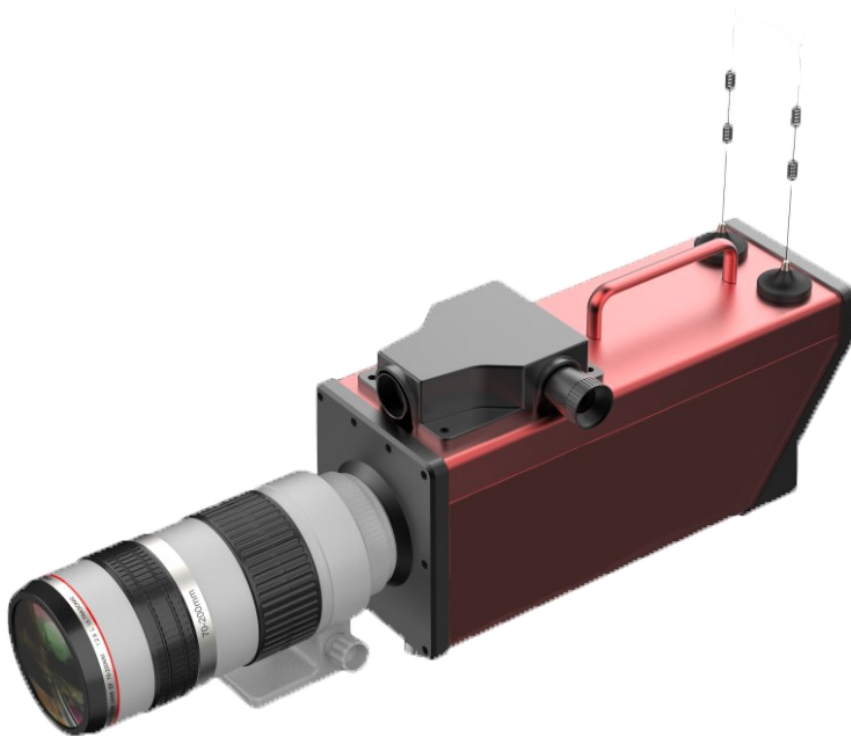
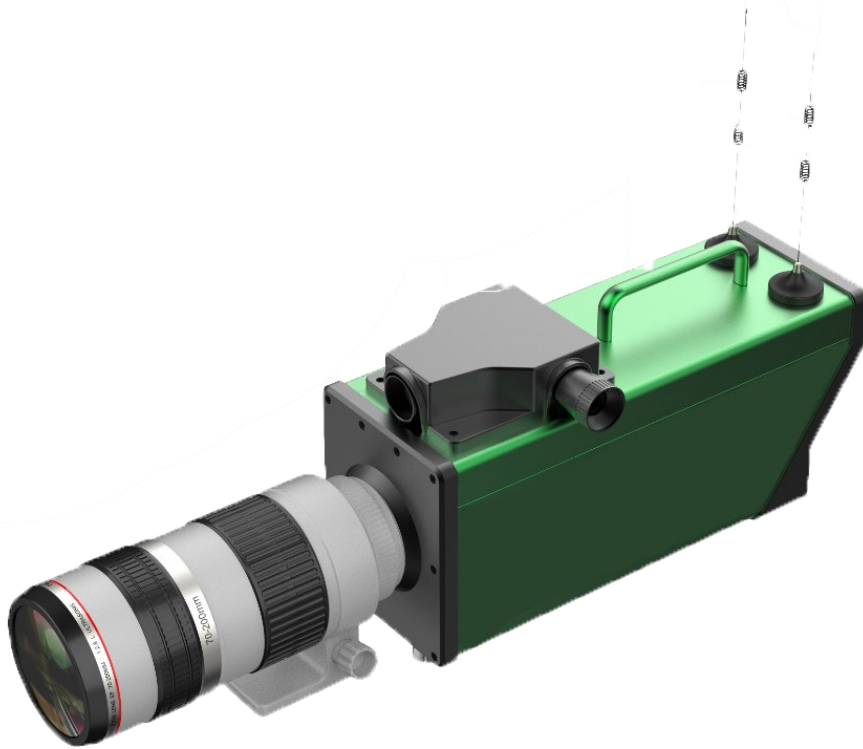


## 2.6 Color Finish Arrival Camera

Products	Details
Color Finish Arrival 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: &lt; 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: &lt; = 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"> <li>◆ Support image automatic exposure processing;</li> <li>◆ Support positioning athlete sprint image;</li> <li>◆ Support front capture sprinter chest number cloth;</li> <li>◆ Support multiple orders and reset the order time;</li> <li>◆ Support zero time calibration function;</li> <li>◆ Support stop timing to continue shooting;</li> <li>◆ Support image local magnification function;</li> <li>◆ Automatic image clipping to filter redundant images;</li> <li>◆ Support remote interpretation: one computer for shooting and another computer for interpretation;</li> <li>◆ Support thumbnail display to quickly locate athletes;</li> <li>◆ Support video playback;</li> <li>◆ Support PNG and BMP image generation.</li> </ul>

### Black and White Finish Arrival Camera (optional)

Products	Details
Black and White Finish Arrival 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: &lt; 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: &lt; = 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"><li>◆ Support image automatic exposure processing;</li><li>◆ Support positioning athlete sprint image;</li><li>◆ Support front capture sprinter chest number cloth;</li><li>◆ Support multiple orders and reset the order time;</li><li>◆ Support zero time calibration function;</li><li>◆ Support stop timing to continue shooting;</li><li>◆ Support image local magnification function;</li><li>◆ Automatic image clipping to filter redundant images;</li><li>◆ Support remote interpretation: one computer for shooting and another computer for interpretation;</li><li>◆ Support thumbnail display to quickly locate athletes;</li><li>◆ Support video playback;</li><li>◆ Support PNG and BMP image generation.</li></ul>



## 2.7 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"><li>● Multi-court arrangement, auto generate the order form.</li><li>● Multi-project arrangement, make the schedule more smoothly.</li><li>● Monitor the status of each court in real time, including the current field, rotation and player info.</li><li>● Court adjustment, can manually modify the match court and session info.</li><li>● Summary and print integrated report.</li></ul>





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