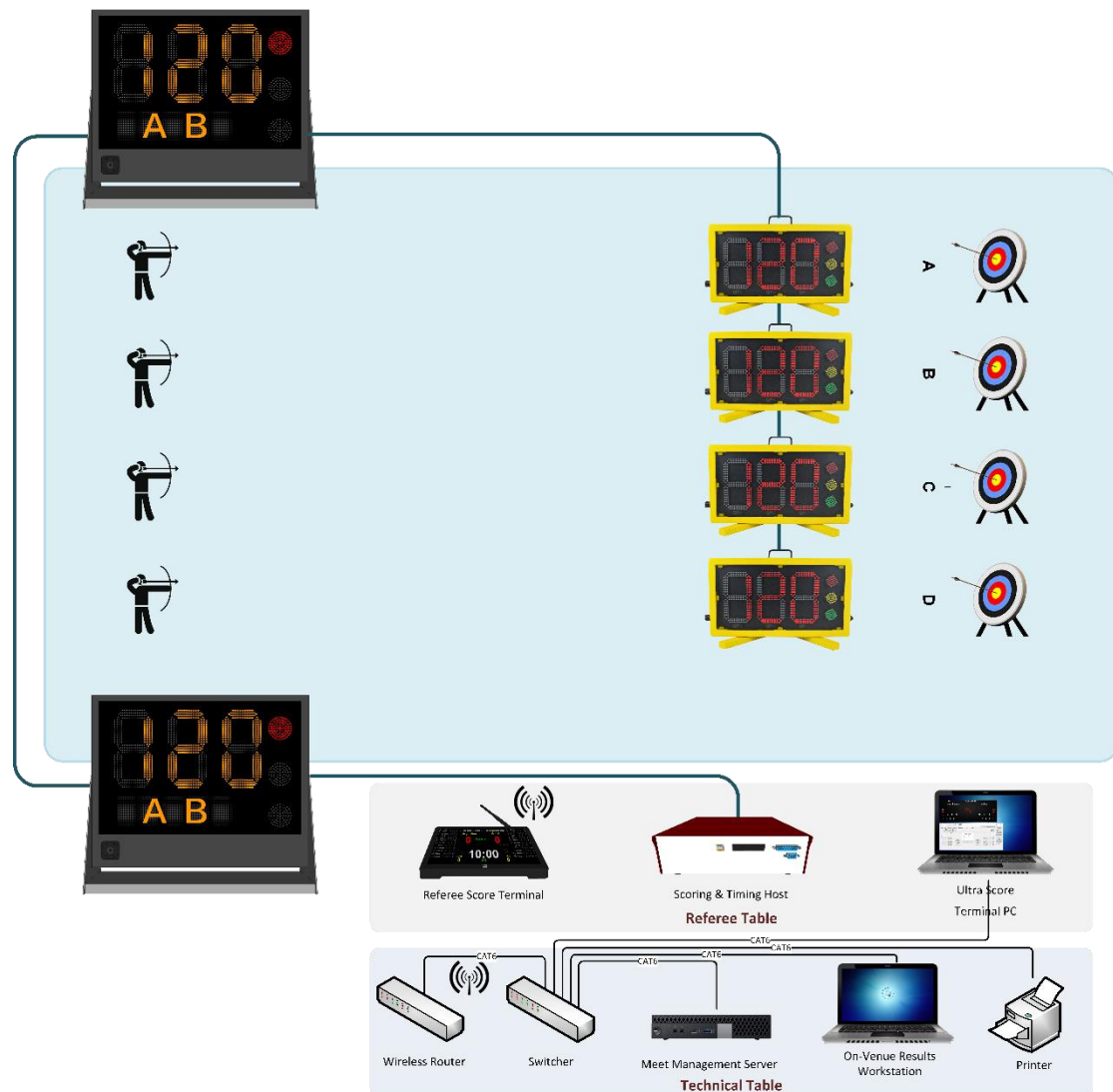


Scoring & Timing Solution For Archery

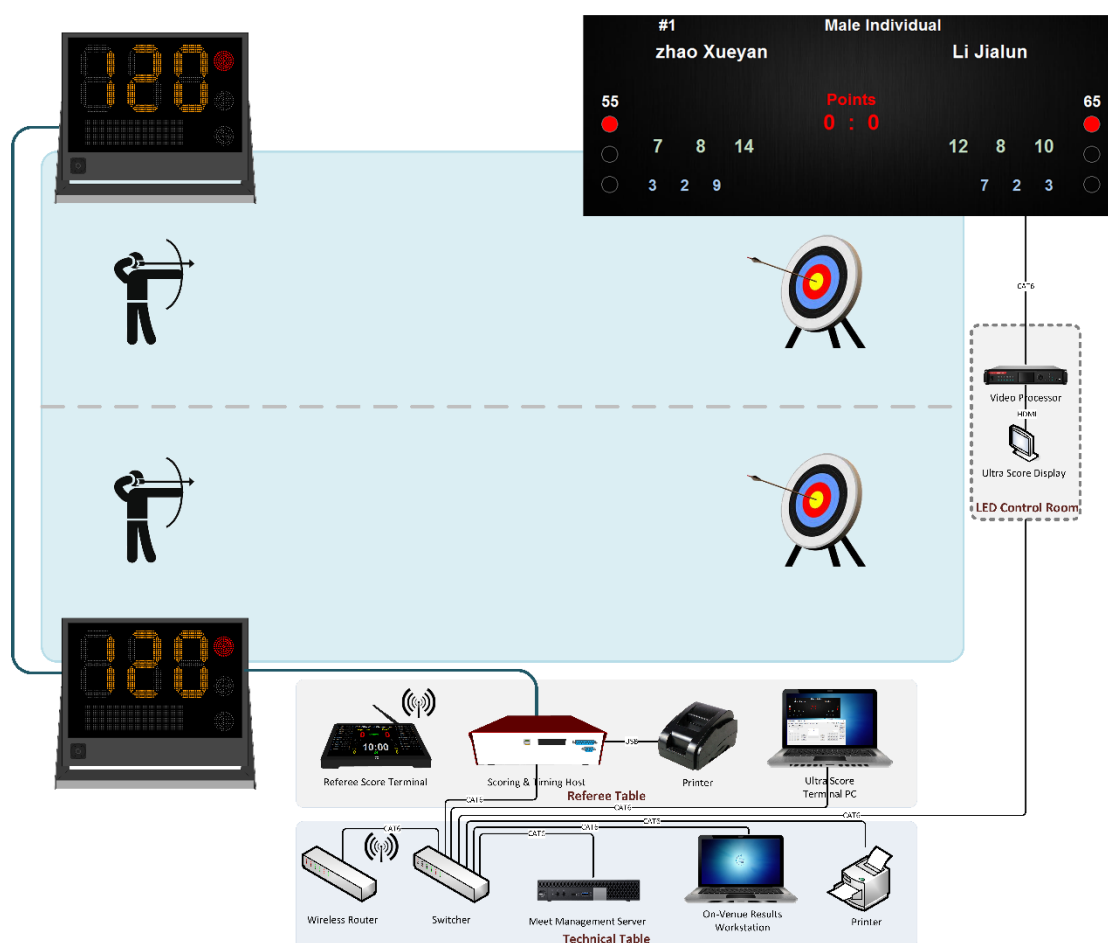
This is a general solution for LED display in archery stadium which has the functions of timing, scoring, displaying advertisement, notification, the information of referees and teams. It is an ideal choice for most of stadiums.

1. System Introduction

1.1 System Chart for Qualifying



1.2 System Chart for Knockout



1.3 System Structure Description

- 1) **LAN:** A LAN is set up in the stadium. Connect the LED control PC, Ultra Score Terminal PC, Scoring & Timing Host, Referee Score Terminal, Meet Management Server, On-Venue Results Workstation and Printer to the LAN.
- 2) **LED Screen:** One or two LED screens are controlled by separate computers which connect with LED sending cards. Both of the LED screens can show the same contents or different contents as required.
- 3) **Match Scoring & Timing Host:** It is the core scoring & timing equipment which is installed in the Officials Table and has the function of hot backup.
- 4) **Referee Scoring & Timing Terminal:** Installed in the Officials Table for referee's operation of score. It can be connected to the LAN through network cable or WIFI.
- 5) **Meet Management Server:** It is the core data processing equipment which is installed in the Technical Table and connected to the LAN by network cable.
- 6) **Archery Timing Screen:** Connected with Match Scoring & Timing Host to display match timing and information of players and teams.
- 7) **Archery Mini Timing Screen:** Connected with archery timing screen to display match status and timing.

1.4 Functions

Event arrangement

- One key to import and to input the players' information are both available.
- To draw lots.
- To generate, export and print the bracket.
- To generate, export and print the order form.

Scoring & timing operation

- Supported match rules includes: Individual qualifying, Individual knockout, Team knockout, and Combination match.
- To display countdown in a real time.
- To manage the match states.
- To manage the match round.
- To make a point.

Results treatment

- Quick printing and exporting the result form.
- Quick printing and exporting player rankings list.
- Quick printing and exporting the form of referee operations.

System advantages

- Information will be saved automatically in case of power out and other emergency situations.
- Providing free software upgrading service in lifetime.

2. Match Scoring System

2.1 Ultra Score Software

Products	Details
Standalone edition	<ul style="list-style-type: none">◆ Installed on one PC.◆ Supports: Archery◆ English version◆ Including 1 dongle
Standard network edition	<ul style="list-style-type: none">◆ Referee terminal + 1 Display◆ Supports: Archery◆ English version◆ Including 1 dongle
Professional network edition	<ul style="list-style-type: none">◆ Referee terminal + 2 Display◆ Supports: Archery◆ English version◆ Including 1 dongle

Difference:

Standalone Edition:

Match management, Scoring, and Media display functions, all in one installed on a PC. Referee must do operation on the PC for display directly.

It is suitable for the stadium where has just one screen, which doesn't have strict needs of the scoring and timing accuracy.

Network Standard Edition:

Score terminal and media player functions can be installed on 2 PCs respectively. So that one independent PC can be setup on the court side special for referee's operation, the other PC running as media player to manage the LED display.

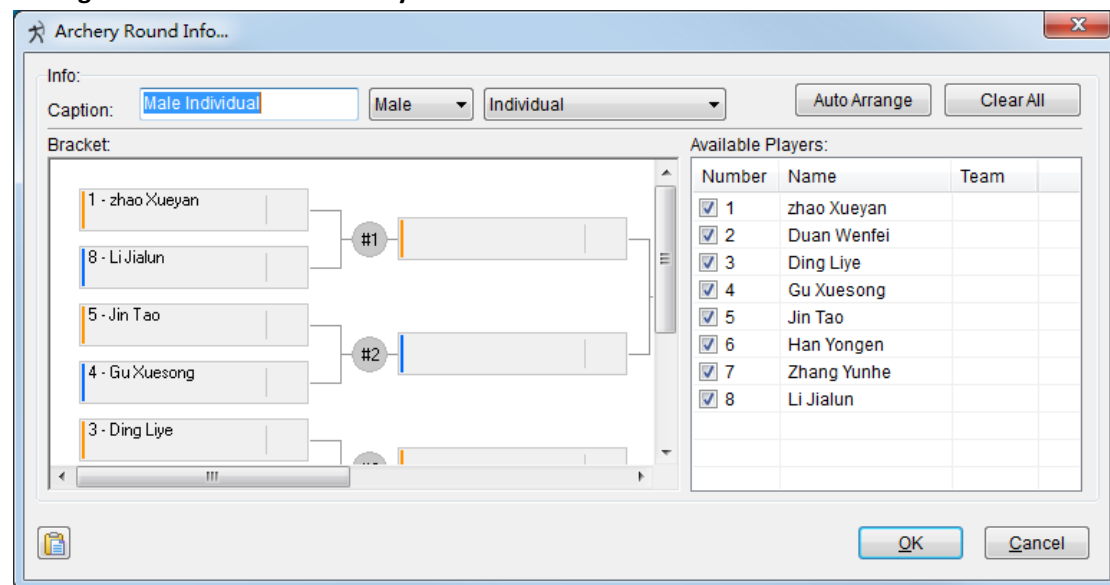
It is suitable for the stadium where has one screen, needs to do the scoring and timing on the court side.

Network Professional Edition:

Except the function of score terminal, 1-3 media players can be equipped on PCs separately, in order to display different contents on several LED screens.

It is suitable for the stadium where has more than 2 screens where referee need to do scoring on the court side and LED screens need to display different contents separately. (For example, one LED screen is for scoreboard and another is for advertising or player info).

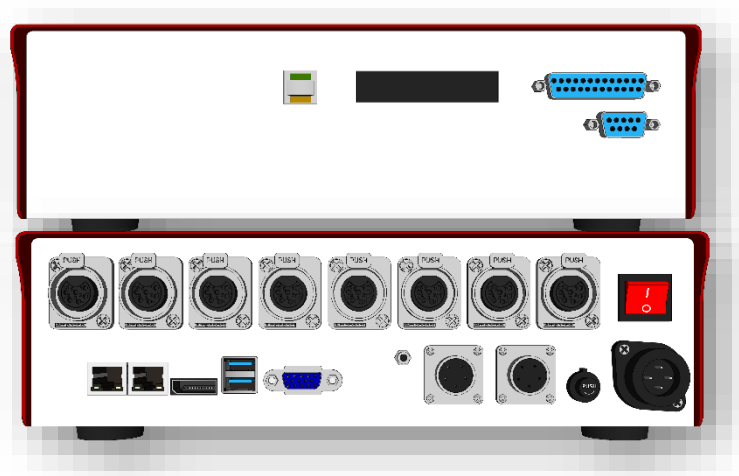
Arrangement interface for archery:



Scoring and timing display for archery:



2.2 Match Scoring & Timing Host



Match Scoring & Timing Host

Type	KS-MONSTER
Size	260 x 280 x 80 (mm)
Support	Archery
Other	Supports hot switching of the main and backup servers.

Item	Details	Item	Details
Product	Match Scoring & Timing Host	Type	KS-MONSTER
Size	260 x 280 x 80 (mm)	Net weight	3 KG
Material	Iron	Power	100W
CPU	Intel J3160	RAM	8GB
Communication	RJ45×2	Hard disk	64GB
Video output	VGA×1, DP×1	Input voltage	AC 100~240V
Working Temp	0-60℃	Relative humidity	5%-95%, non-condensing
Language	Chinese, English	Timing accuracy	<=10ms
Port	G-Port×8, 24S port×2, Audio×1, USB port×2, Serial port×1		
Supporting games	Archery		
Functions			

1. Timer functions: Match timer control.
2. Scoring functions: Modify the score of the team and player.
3. Supports match rule setup.
4. Synchronous control of archery timing screen and archery mini timing screen.
5. Provides buzzer sound output, which can be connected to the venue's public address system or speakers.
6. Supports hot switching of the main and backup servers. In case of the main server fails, just manually switch to the backup server to ensure the data intact. And in case of power failure, the previous screen will be restored after restarting.
7. Supports the post-match celebration mode.
8. Supports real-time data output, which can be used for live broadcast.
9. Monitoring the status of scoring devices, providing convenient fault diagnosis (with a separate monitor).
10. Anti-loose port ensure the safety of match data.

2.3 Referee Timing & Scoring Terminal



Item	Details	Item	Details
Product	Referee Timing & Scoring Terminal	Type	KS-GC18
Size	250 x 175 x 70 (mm)	Material	PVC
Touch LCD	10.8 inch	Resolution	1920*1280
OS	WIN 10	Battery Capacity	10000mAh
Communication	LAN / WLAN	Hard disk	64GB
Video output	HDMI*1	RAM	4GB
Functions	<ol style="list-style-type: none"> 1. Timing function: Match timer control. 2. Scoring function: Modify the score of the team and player. 		

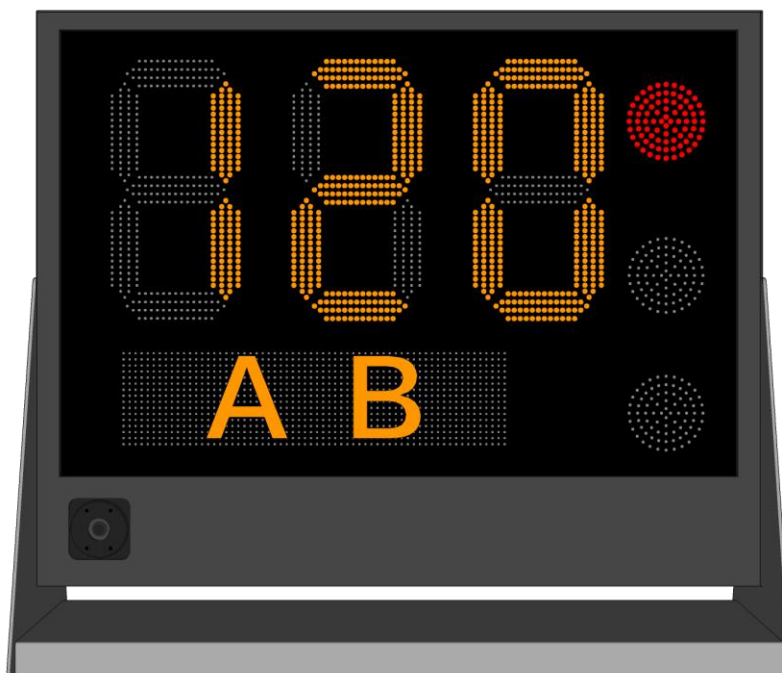
2.4 Lite Console

Item	Details
Lite Console	<p>Type: KS-GC15-AR Size: 265x220x100(mm)</p> <ul style="list-style-type: none"> ◆ Used with the Ultra score software ◆ Communication: USB, RS485 ◆ With 4.3" color LCD screen ◆ Material: Iron + Plastic ◆ Support: Archery ◆ Functions: Scoring, control the match timer, group and individual ranking, group and individual knockout, etc.



2.5 Timing Screen

Item	Details
Timing Screen	Type: KS-AR10 Size: 1200x950x80(mm) <ul style="list-style-type: none">◆ Used with the Ultra score system.◆ Communication: RS485◆ Waterproof: IP65◆ Material: Aluminum cabinet◆ Net weight: 30kg◆ Support: Archery◆ Functions: display match timer and the info of player.



2.6 Archery Mini Timing Screen

Item	Details
Archery Mini Timing Screen	Type: KS-AR10-mini Size: 630x350x60(mm) <ul style="list-style-type: none">◆ Used with the Ultra score system.◆ Material: Aluminum cabinet◆ Waterproof: IP65◆ Support: Archery◆ Net weight: 6kg◆ Functions: display match timer; support series connection; real time display

Physical picture



2.7 Communication Spool

Item	Details
Communication Spool	Type: KS-AR-W ◆ Size: 365x240x415 (mm) ◆ Material: Iron ◆ Cable: 100M



2.8 Wireless Host for Arrow Speed Sensor

Products	Detail
Wireless Host	<p>Type: KS-WH-BSP Size: 140x120x30 (mm) Communication: 433MHz Function:</p> <ul style="list-style-type: none">◆ System: Must be used together with Ultra score software.◆ Communication Setting: allow to customize the communication frequency band.◆ Communication distance: 20m



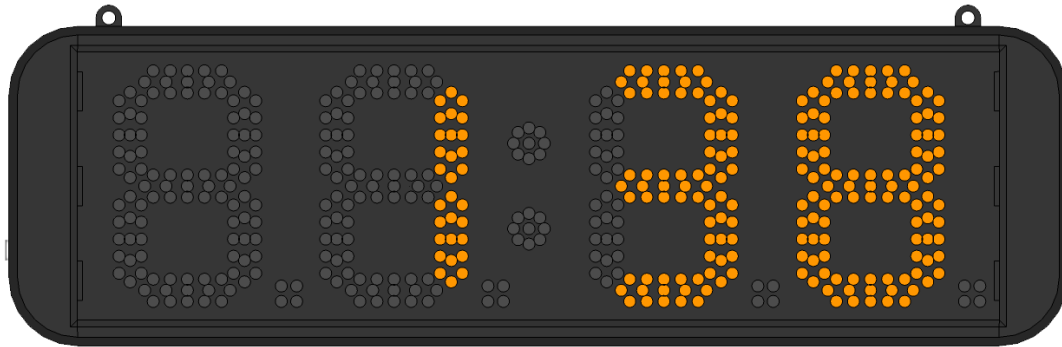
2.9 Arrow Speed Sensor

Item	Details
Arrow speed sensor	Type: KS-BSP-Sensor ◆ Speed Range: 5-890MPH ◆ Accuracy: +/-0.1 MPH ◆ Max Distances: 300 feet ◆ Support: Archery ◆ Compatible with Ultra score software. ◆ Track arrow speed on serves and returns from courtside.



2.10 Display for Arrow Speed Sensor

Products	Details
Display for Arrow Speed Sensor	Type: KS-MT-D Size: 620x190x45 mm Color: Yellow Support: Display arrow speed Communication Interface: RJ45 network cable



2.11 Wind Speed Sensor



Item	Details	Item	Details
Product	Wind Speed Sensor	Type	KS-WSP-Sensor
Power	0.9W	Weight	0.5KG
Start wind speed	$\leq 0.5\text{m/s}$	Resolution	Wind speed: 0.1m/s Direction: 1°
Accuracy	Wind speed: $\pm(0.3+0.03V)\text{m/s}$ Direction: $\pm 3^\circ$	Work environment	Temperature: $-35^\circ\text{C} \sim 60^\circ\text{C}$ Humidity: $\leq 100\% \text{RH}$ without condensation
Level of protection	IP64	Cable grade	Rated voltage($300\text{V } 80^\circ\text{C}$)
Measuring range	Wind speed: $0 \sim 45\text{m/s}$ (electricity & voltage output), $0 \sim 70\text{m/s}$ (impulse, 485, 232 output) Direction: $0 \sim 359^\circ$		
Functions	<ol style="list-style-type: none"> 1. Must be used together with Archery Scoring Software. 2. Gather the wind speed on the court, and display on the scoreboard. 		

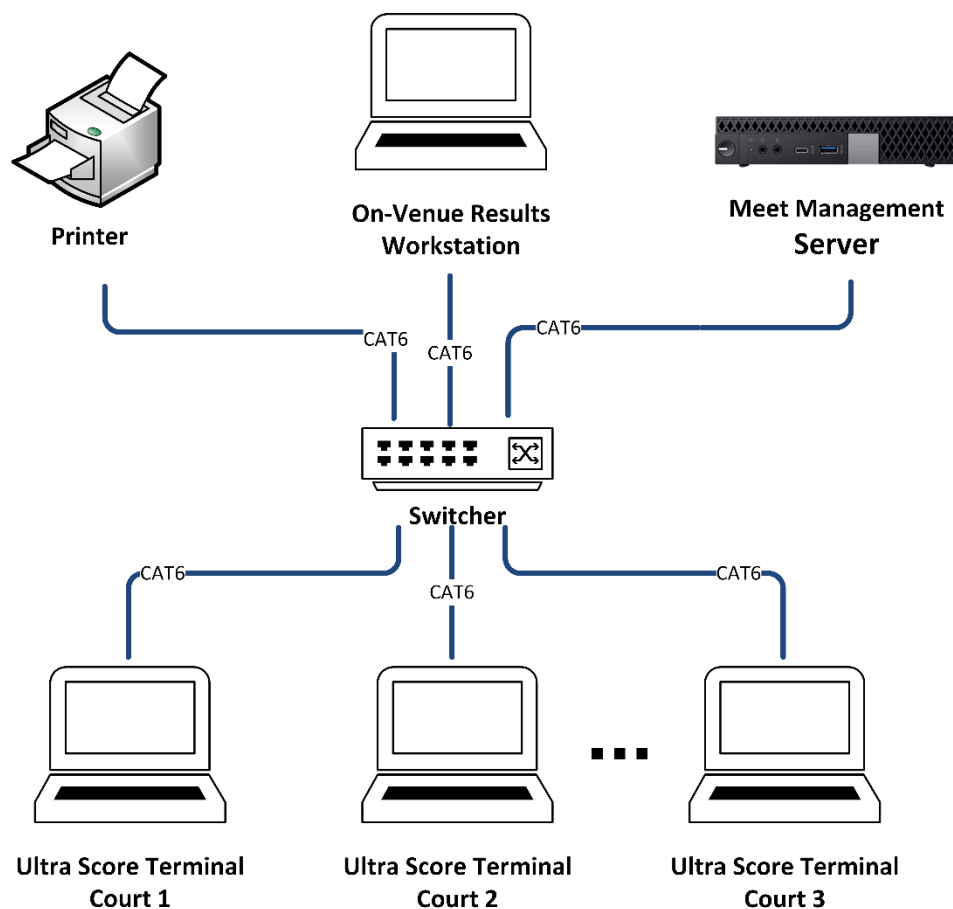
3. Meet Management System

It is composed of Meet Management Server, On-Venue Results Workstation, Printer, etc.

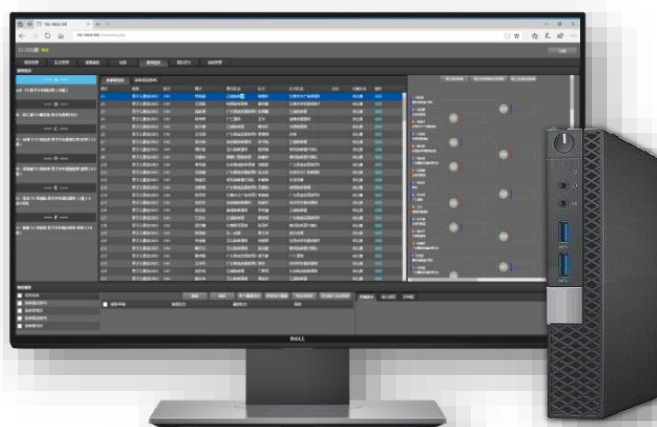
Linking with Match Scoring System, it can realize:

- 1) **Participants Management:** Information management of players, teams and referees. Both import and input registration form are available. And auto generate the order form.
- 2) **Match Schedule:** Auto draw the players' lots. Multi-project arrangement make the schedule more smoothly. Auto generate the bracket, order form and round form.
- 3) **Result Management:** Receive or record the results. Determine the players' rank, admission or elimination at each stage. Print the results announcement and send to the LED display system, TV broadcasting system and comprehensive meet manage system.

3.1 System Diagram



3.2 Meet Management Server



Detailed parameters

Item	Details	Item	Details
Product	Meet Management Server	Type	KS-MMS-MINI
Input Voltage	AC 100~240V	Power	35W
Size	182x178x36mm	Weight	1.2KG
Implementation of standards	International Sports Competition Rules		
Packing list	Host*1, Power cable*1, User manual*1		
Functions	<ol style="list-style-type: none"> 3. Support screen pro-monitoring. (with a separate monitor). 4. Support items: Archery, Basketball, Soccer, Volleyball, Badminton, Table Tennis, Tennis, Handball, Futsal, etc. 5. Both import and input the players' information are available. 6. Auto draw the players' lots. 7. Auto generate, export and print the bracket. 8. Auto generate, export and print the order form. 9. Quickly export the result form (PDF & Excel). 10. Rank statistics quickly export and print. 11. Quickly export and print the event form of referee operation. 12. Multi-court arrangement, auto generate the order form. 13. Multi-project arrangement, make the schedule more smoothly. 14. Monitor the status of each court in real time, including the current field, rotation and player info. 15. Court adjustment, can manually modify the match court and session info. 16. Summary and print integrated report. 		

4. Success Stories

2017 “ACAC” BELWOOD Archery Invitational Tournament

