



## Scoring & Timing Solution for Flag-Football



## 1. Introduction

This is a professional solution for LED scoreboard display in Flag-Football stadiums. Mainly for large-scale Flag-Football matches which held in professional sports venues. The system functions conform to "FlagRules2023". Match arrangement, real-time scoring & timing display, players' & referees' info display, rank statistics export & print, and advertising display can be realized through the coordination of Match Scoring System, Meet Management System, etc. It is an ideal choice for most of smart and professional stadiums.

### 1.1 System Architecture

The whole system is composed of several subsystems, including: Match Scoring System and Meet Management System. Each subsystem can not only work independently, but also work together to share the data. It is flexible for customers to configure according to the actual application.

#### ● Match Scoring System

Match Scoring System named ULTRA SCORE is composed of Ultra Score Software, Scoring & Timing Host, Referee Score Terminal, etc. It is mainly operated by the referees to realize the scoring and timing work and real-time scoreboard display. The system functions conform to NFC rules.

#### ● Meet Management System

It is composed of Meet Management Server, On-Venue Results Workstation, Printer, etc. Linking with Online Registration System and Match Scoring System, it can realize: participants management, match schedule, result management, technical statistics, court arrangement, rank statistics, etc.

## 1.2 System Chart



### System Structure Description

- 1) **LAN:** A LAN is set up in the stadium. Connect the LED control PC, Ultra Score Terminal PC, Match Scoring & Timing Host, Referee Scoring & Timing Terminal, Football Stats Workstation, 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. Use the special cables to connect the Play Clock.
- 4) **Referee Scoring & Timing Terminal:** Installed in the Officials Table for referee's operation of score and penalty. It can be connected to the LAN through network cable or WIFI.
- 5) **Flag Football Play Clock:** Installed on the side of the field, used to display the game clock and connected to the timing and scoring host through the communication cable.
- 6) **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.

## 2. Specification for products

### 2.1 Ultra Score Software

Products	Details
Ultra Score software	<ul style="list-style-type: none"> <li>◆ Standalone edition</li> <li>◆ Supports: Flag-Football</li> <li>◆ Including 1 dongle</li> </ul>
Ultra Score software	<ul style="list-style-type: none"> <li>◆ Standard network edition (Terminal + 1 Display)</li> <li>◆ Supports: Flag-Football</li> <li>◆ Including 1 dongle</li> </ul>
Ultra Score software	<ul style="list-style-type: none"> <li>◆ Professional network edition (Terminal + Referee + 2 Display)</li> <li>◆ Supports: Flag-Football</li> <li>◆ Including 1 dongle</li> </ul>

Scoring interface for Flag football

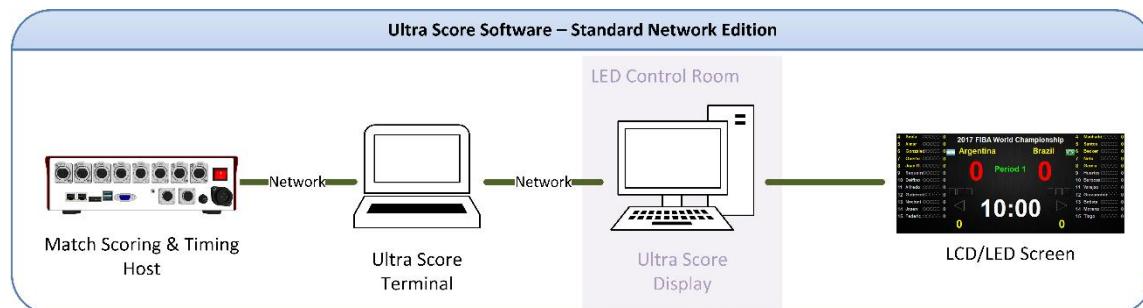


#### Difference:

##### Standard Network Edition:

Score terminal and media player functions can be installed on 2 PCs respectively so that PC with score terminal can be set on the courtside special for referee's operation, the other PC running media player to manage the LED display.

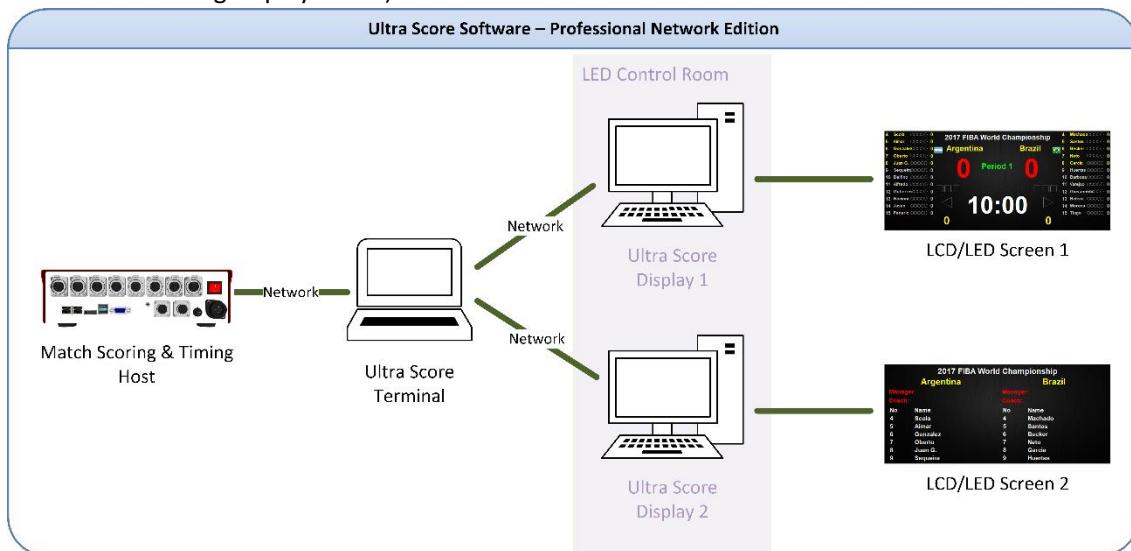
- It is suitable for the stadium which has one screen, needs to do the scoring and timing on the courtside.



### Professional Network Edition:

One PC with score terminal is set on the courtside for referee's operation and more than 2 media players can be installed on PCs separately to display different contents on different LED screens.

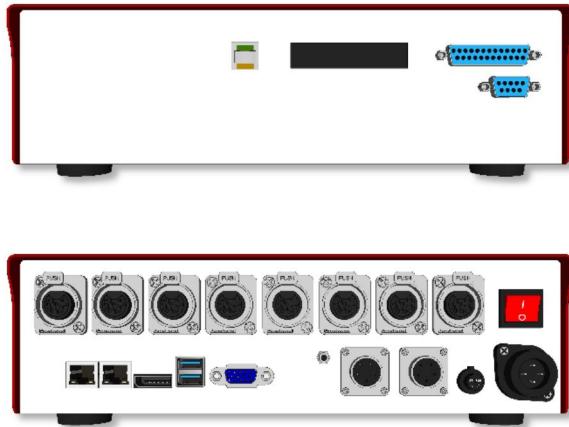
- It is suitable for the stadium where has more than 2 screens which need to display different contents separately. (For example, one LED screen is for scoreboard display, and another is for advertising or player info).



### Features:

- (1) Professional scoreboard display: Scoring and timing operation, layout of scoreboard can meet international game rules.
- (2) Match management: Information of match, team, team members and coaches can be saved in advance. And referee's scoring operation during the match can be recorded and output.
- (3) Scoring functions: Include operation and display of teams' and players' points, fouls and substitutions.
- (4) Timing functions: Include operation and display of game time, pause, break time, count down time and system time.
- (5) Convenient operation feeling: Referees can do operation on a special score console as well as by using shortcuts on the keyboard.
- (6) Powerful media player: Kinds of media formats are supported. It is easy to switch between scoreboard and video.
- (7) Notification: Rolling to display short notice on the screen which allows to set the speed, colors, fonts freely.
- (8) Customization: All contents on the scoreboard including fonts, color and layout can be modified to meet clients' needs.
- (9) Self-adaptation: With easy configuration, score information can be displayed on kinds of LED and LCD screen by using this system which can adjust the layout to meet any dimensions of screen.
- (10) Security: Auto backup function will help you recover the match immediately from the computer fault.

## 2.2 Match Scoring & Timing Host



### Match Scoring & Timing Host

Model	KS-MONSTER
Size	260 x 280 x 80 (mm)
Support	Flag-Football
Other	Supports hot switching between the main and backup system.



### Match Timer Handheld

Model	KS-G-MT
Size	120x80x25(mm)
Communication	Wired
Function	Match timer start, pause, adjustment and buzzer control.



### Shot Clock Handheld

Model	KS-G-ST
Size	120x80x25(mm)
Communication	Wired
Function	Shot Clock Timer start, pause, adjustment, close and reset.

Item	Details	Item	Details
Product	Match Scoring & Timing Host	Model	KS-MONSTER
Size	260 x 280 x 80 (mm)	Net Weight	3 KG
Material	Iron	Power	60W
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°C	Relative Humidity	5%-95%, non-condensing
Language	English	Timing Accuracy	<=10ms
Port	G-Port×8, Shot Clock port×2, Audio×1, USB×2, Serial port×1		
Accessories	Match Timer Handheld *1, Shot Clock Handheld *1		
Supporting Games	Flag-Football		
Functions	<ol style="list-style-type: none"> <li>1. Timer functions: Timing in minute, second, tenth of a second, 14S &amp; 24S and timing in count up and count down, start, pause, reset, correct are available.</li> <li>2. Scoring functions: Modify the score of the team and player.</li> <li>3. Penalty functions: Team foul control, Player foul control, Player penalty time control, Substitution control, yellow/red card control, etc.</li> <li>4. Supports match rule setup.</li> <li>5. Synchronous control of PlayClock.</li> <li>6. Provides buzzer sound output, which can be connected to the venue's public address system or speakers.</li> <li>7. 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.</li> <li>8. Supports the post-match celebration mode.</li> <li>9. Supports real-time data output, which can be used for live broadcast.</li> <li>10. Monitoring the status of scoring devices, providing convenient fault diagnosis (with a separate monitor).</li> <li>11. Anti-loose port ensures the safety of match data.</li> </ol>		

### 2.3 Referee Timing & Scoring Terminal



#### Detailed parameters

Item	Details	Item	Details
Product	Referee Timing & Scoring Terminal	Model	KS-GC18
Size	281 x 173 x 39 (mm)	Material	PVC+Metal
Touch LCD	11.6 inch	Resolution	1920*1080
OS	WIN 10	Battery	No Built-in Battery
Communication	LAN / WLAN	Hard Disk	SSD 180GB
Video Output	HDMI*1	RAM	8GB
Functions	<ol style="list-style-type: none"> <li>1. Timer: Includes minute, second, deci-second, 14S and 24S timing function. And also have count up, count down, start/pause/reset/correct timing functions.</li> <li>2. Scoring function: Modify the score of the team and player.</li> <li>3. Penalty function: Team foul control, Player individual foul control, Player Penalty control, Substitution control, Player yellow/red card control, etc.</li> </ol>		

## 2.4 Score Console



Model	KS-GC19
Dimension	365x285x82 (mm)
Network	LAN
Audio	6.5mm Audio Output
Power	AC 100V-240V
Display	Full color touch LCD 7"
Material	Aluminum alloy

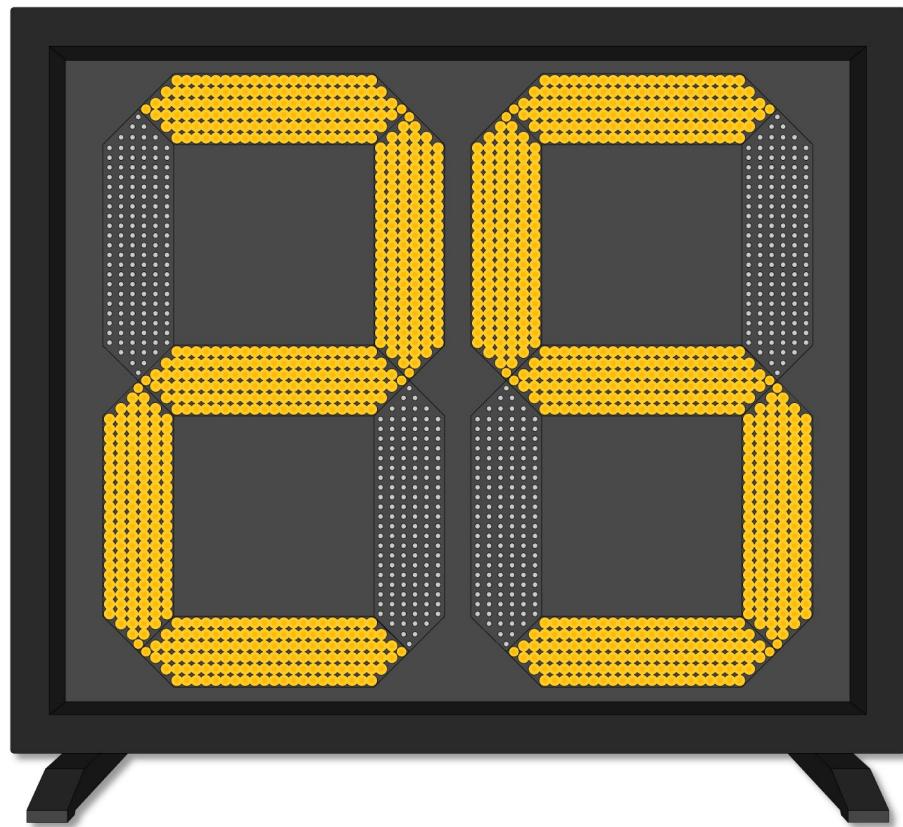


Dimension	120x80x25(mm)
Net weight	0.2KG
Communication	Wired
Material	PVC

Item	Details	Item	Details
Product	Score Console	Model	KS-GC19
Dimension	365x285x82 (mm)	Net Weight	2.8 kg
Port	LAN*1, G-port*2, USB*2, AUDIO*1, Aviation interface*2	Communication	Wired
Functions	<ol style="list-style-type: none"> <li>1. Modify score, foul, control the competition clock and shot clock, etc.</li> <li>2. The console should be worked together with Ultra Score software</li> <li>3. It supports multiple scoring functions in ball games, such as: the team score, team foul, players' score, players' foul, match timer, shot clock and cancellation. There are external match timer controller, which can be operated by timekeeper.</li> <li>4. It can be connected to external match timer and shot clock controllers, operated by dedicated personnel.</li> <li>5. In basketball game mode, a 24 second shot clock timer can be directly connected to synchronize the display of game timing and shot clock timing.</li> <li>6. Advertising switching function during the competition.</li> </ol>		

## 2.5 Flag Football Play Clock

Item	Details
Flag Football Play Clock	<p>Model: KS-AF10 Size: 1200x1000x100(mm) Cabinet: Aluminum Display: Yellow Net weight: 30KG Support: American Football Function:</p> <ul style="list-style-type: none"><li>◆ Single side display.</li><li>◆ Be connected by the referee console.</li><li>◆ Offensive timing of American Football match.</li></ul>



## 2.6 Meet Management Server

Products	Details
Meet Management Server	<p>Model: KS-MMS-MINI  Size: 260x135x35 (mm)  Weight: 1.0 KG  Input Voltage: 12V DC  RAM: 4GB  CPU: Intel J3160  Hard Disk: 64G  Communication: LAN*1  Port: VGA*1, DP*1, USB*2  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>

