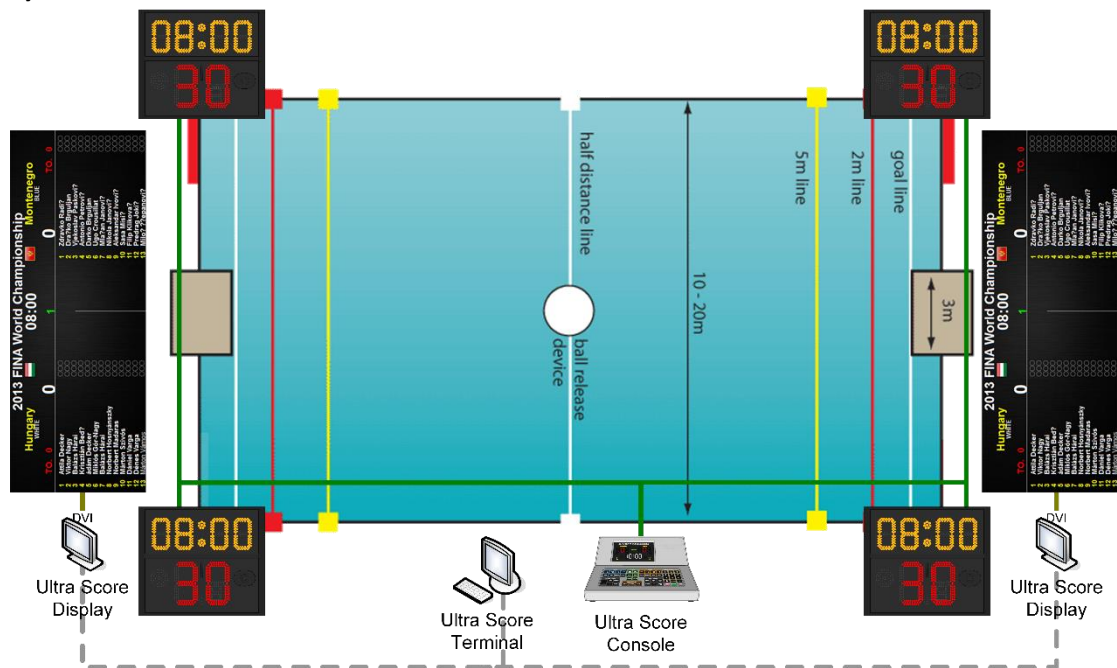


Scoring & Timing Solution

For Water polo

This is a general solution of LED display special for water polo match, which has the functions of timing, scoring, shot clock, displaying advertisement, notification, the information of referees and teams. It is an ideal choice for most of stadiums.

1. System Chart



1.2 System Structure Description

- 1) LED screens are controlled by one or two PC which connects with LED sending card.
- 2) The PC is installed Ultra score software for the scoreboard display.
- 3) Score console special for referees' operation is connected with the PC by Network cable or wirelessly.
- 4) Shot clock controlled by score console will display the offense time simultaneous with the scoreboard.

2. Specification for products

2.1 Ultra Score Software

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

Standard Network 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.

Professional Network 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.

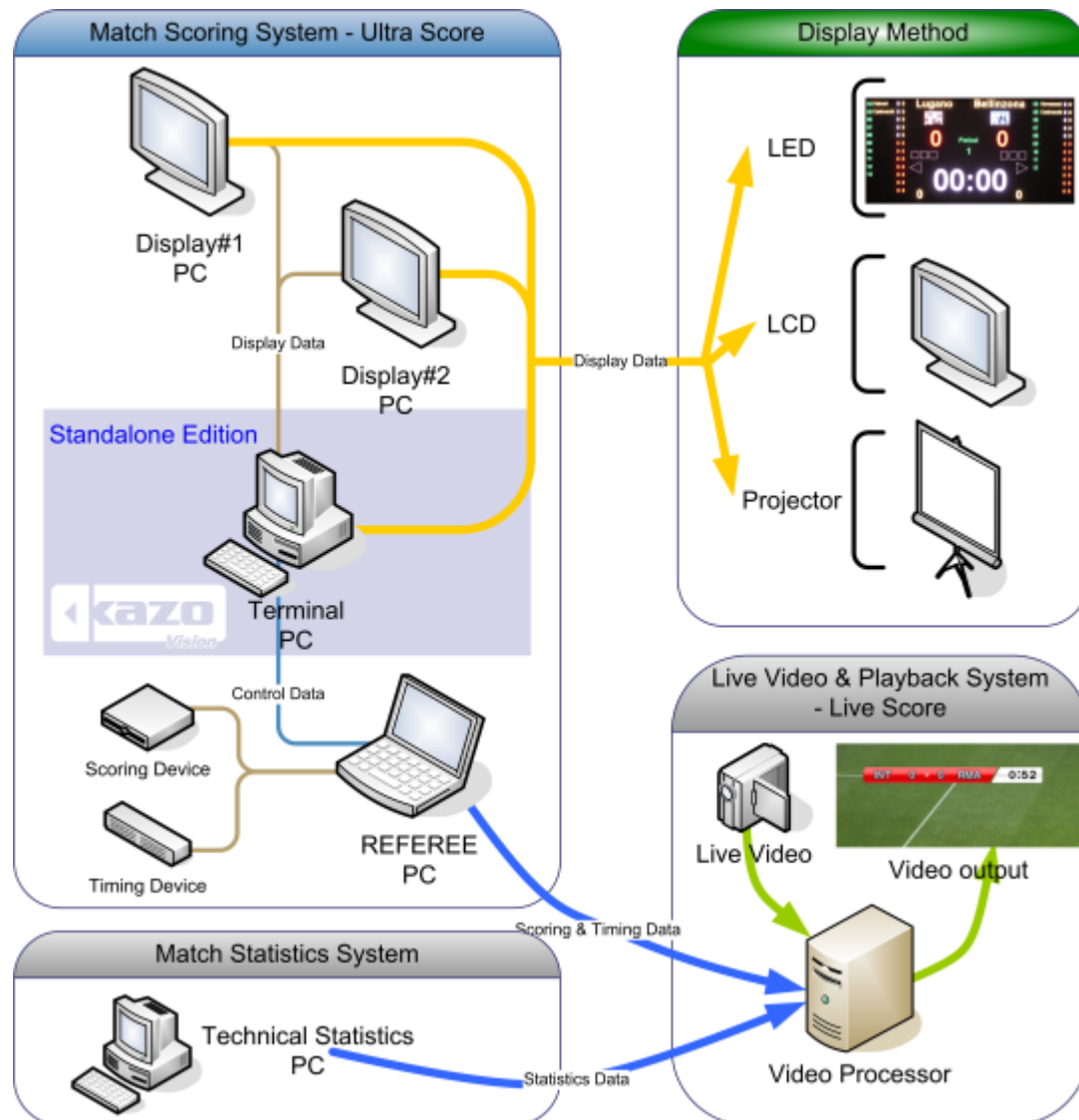
It is suitable for the stadium where has more than 2 screens where referee need to do scoring on the court side and LED screens need to display different contents separately. (For example, one LED screen is for scoreboard and another is for advertising or player info).

Score:

Player:**Referee:**

2013 FINA World Championship	
Name	Region

System Diagram:



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' point, foul 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 the 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 sizes of screen.
- (10) Security: Auto backup function will help you recover the match immediately from the computer fault.

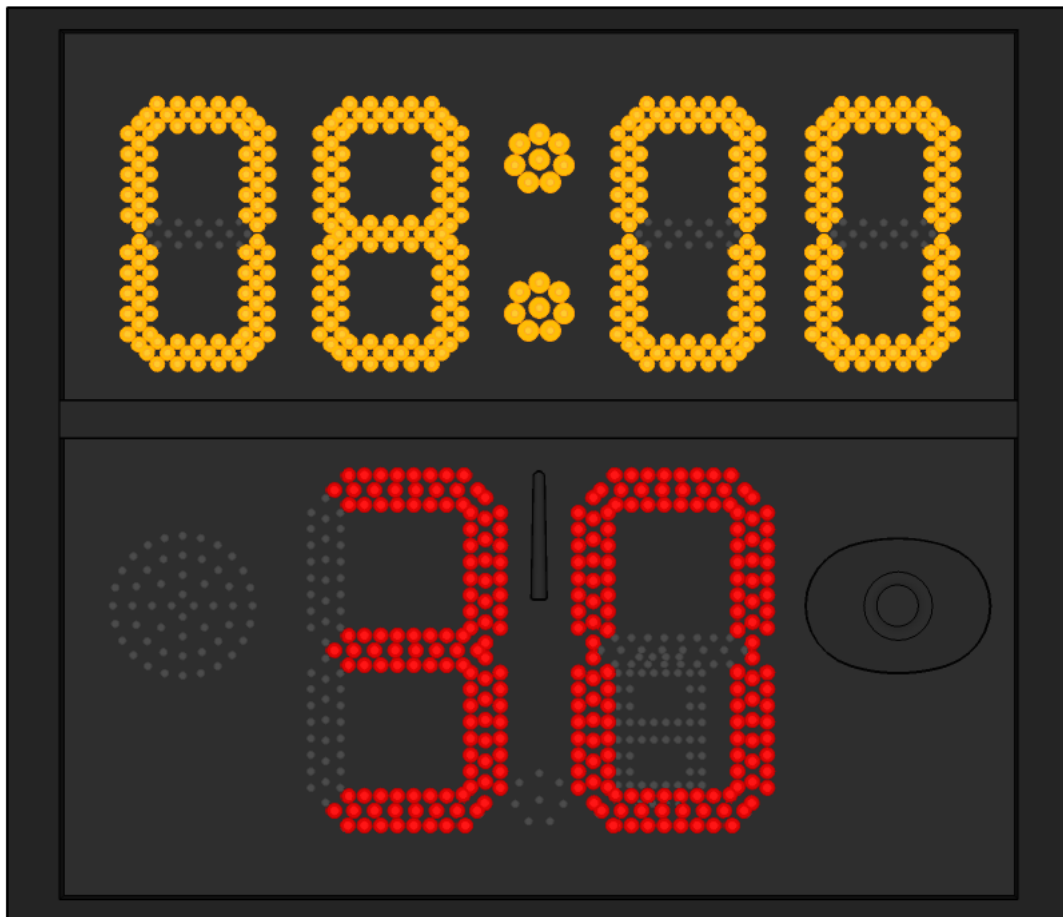
2.2 Wired / Wireless Score Console

Item	Details
Wired / Wireless score console	<p>Type: KS-GC16 Size: 330x290x140(mm)</p> <ul style="list-style-type: none"> ◆ Used with the Ultra score software ◆ Communication: 1*Ethernet, 1*WIFI ◆ With 7" full color LCD screen ◆ Material: Plastic ◆ Support: Waterpolo ◆ Functions: Modify score, foul, control the competition time and shot clock, etc.



2.3 Shot Clock

Item	Details
Shot Clock	<p>Type: KS-BASH-C/S Size: 710x610x60 (mm)</p> <ul style="list-style-type: none">◆ Single side◆ Weight: 10KG*4◆ Power: 60W*w4◆ Material: Aluminium◆ Communication: Wired + Wireless(433MHz)◆ Match Timer: Decisecond display in last 1 minute◆ Shot Clock: Decisecond display in last 5 second; Switch 20s/30s display◆ Buzzer: Two different buzzer sound for match timer and shot clock◆ Synchronous controlled by score console



2.4 Communication Spool

Item	Details
Communication Spool	Type: KS-WPSH-W ◆ Size: 365x240x415 (mm) ◆ Material: Iron



2.5 Electronic Buzzer

Item	Details
Electronic Buzzer	Type: KS-BUZR Buzzer for tips as the competition required.

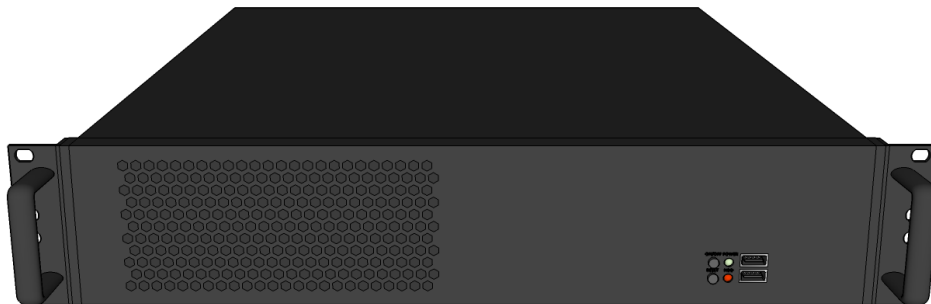


Parameters

Buzzer	KS-BUZR
Basic parameters	
Input Voltage	AC~220V±5%
Total Power	35W
Color	Black
Weight	1KG
Product Configuration	
Packing List	Host *1 Handy Controller*1 Power Cable*1 Power Adapter *1
Refresh frequency	80HZ--90HZ

2.6 Video Arbitration Server

Products	Details
Video Arbitration Server	Type: KS-PARROT-2C/4C/6C/8C Video Input: 2/4/6/8 channels input synchronously; Input port: SDI; Output port: DP*2; Video Format: 1080P; Recording capacity: ≥ 10 hours; Multi-screen monitoring: supported; Weight: 8kg.



Software interface



Device Specification

Type	KS-PARROT-2C/4C/6C/8C
Size	485x480x90(mm)
Net Weight	8 KG
Color	Black
Cabinet	Iron
Interface	
Input	SDI*2/4/6/8
Output	DP*2
Environmental	
Operating Temp	-5°C~45°C
Storage Temp	-40°C~80°C
Relative Humidity	5%~95%, non-condensing
Input Voltage	AC 100V~240V
Functions	
<ul style="list-style-type: none">● Nonstop video recording in the background: 2/4/6/8 channels of HD video are recorded simultaneously in the background, nonstop for 10 hours. Video retrieval and playback is unaffected.● Synch-playback of multi-channel video: Supports playback mode of single channel video in full screen and multi-angle video in 2/4/6/8 windows.● Speed change in slow motion: support 50 frame/s video playback and capture motion in a grid of 0.02s.● Video event query: video stream can be divided into several video events, storing in the event list, which can be renamed for retrieve easily.● Video segment marker: Important or controversial moments can be marked in video stream which will be replayed quickly when clicking the marked records.● Video signal output: provides 2 video output signals, one of which is for preview, the other of which can be connected to LED/LCD display for live slow motion replay.	

2.7 Control Panel

Products	Details
Control Panel	<p>Type: KS-PARROT-CP</p> <p>Function:</p> <ul style="list-style-type: none"> ◆ Support one touch replay, deferred replay, in/out replay. ◆ Preset speed button. ◆ T-Bar for dynamic slow motion. ◆ Professional dynamic jog wheel. ◆ Key to mark the last 10s/20s of the video content. ◆ Flexible select the marked video and playback.



Device Specification

Type	KS-PARROT-CP
Size	365 x 200 x 98 (mm)
Net Weight	1 KG
Cabinet	Iron
Display	Color LCD(4.3Inch)
Sound	None
Communication	
USB	≤5m
RS232	≤10m
Environmental	
Operating Temp	-5~45°C
Relative Humidity	5~95 %, non-condensing
Storage Temp	-40~80°C
Input Voltage	AC 100V-240V
Total Power	15W

2.8 HD Camera

Products	Details
HD Camera	Type: KS-PARROT-CAMERA



Device Specification

Product Type	KS-PARROT-CAMERA
Image sensor	SONY 1/2.8 inch Progressive CMOS
Effective pixels	3.1 million pixels
Signal System HD	1080p60/50, 1080p30/25, 1080i60/50, 720p60/50
Signal system	PAL/NTSC
Lens	12x optical zoom, f=3.9mm (wide angle) ~46.8mm (distal)
Horizontal view angle	72.5° (wide angle) ~7.4° (distal)
Aggregation mode	Auto / Manual
Minimum illumination	0.1Lux

Shutter speed	1/1~1/10000S
Gain	Auto / Manual
White balance	Auto / Manual / Indoor / Outdoor
Image effect	Color / Black & White / Electron flip
S/N ratio	≥50dB
Horizontal shaking	355° (Maximum velocity 80°/s)
Pitching shaking	-30°~30° (Maximum velocity 60°/s)
Presetting bit	9 remote control and keyboard can set up to 200
Video output HD	HDMI、 3G-SDI、 USB2.0、 USB3.0、 RJ-45
Audio input	3.5mm LINE-IN
Power	12V DC (10.8~13.0V DC)
Operating temp	0°C~40°C
Storage temp	-20°C~60°C
Size	164x148x173mm
Power consumption	12W (DC 12V)
Weight	1050g
Color	Silver

3. Scene photos

