

Scoring & Timing Solution for Artistic Swimming

This is a general solution for LED display in Artistic Swimming stadium. It has the functions of timing, scoring, arranging the match, displaying advertisement, notification, the information of players and teams. It is an ideal choice for most of stadiums.

1. System Chart



1.1 System Structure Description

- 1) One or two LED screens are equipped for one court, controlled by one computer to display scoreboard, live video and advertisement.
- 2) Ultra Score Software is installed on the computer for LED control to accomplish the functions of event arrangement, scoring and timing, players' and information and advertisement.
- 3) Wireless Host (KS-WH-G) is connected with the control computer via a USB cable.
- 4) 15 sets of Wireless Handheld are equipped for one court, working as scoring and timing terminal special for referees' operation.

1.2 Product Configuration

(For one court)

| Product | Type | Quantity |
|---------------------------------|--------------------------|----------|
| Match Scoring System | | |
| Ultra Score Software | Standard Network Edition | 1 |
| Wireless Host | KS-WH-G | 1 |
| Wireless Handheld | KS-GC17 | 15 |
| PC | / | 1 |
| Video Arbitration System | | |
| Video Arbitration Server | KS-PARROT-2C | 1 |
| Control Panel | KS-PARROT-CP | 1 |
| HD Camera | KS-PARROT-CAMERA | 2 |
| Tripod for camera | TRIPOD STANDARD | 2 |
| SDI Cable | CABLE-SDI-15 | 2 |
| Monitor | Dell | 1 |

2. Specification for products

2.1 Ultra Score Software

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

Scoring interface for Artistic Swimming

Welcome:

FINA World Championships

C Figure **1**


Russian

CHIGIREVA Vlada

Order:

| FINA World Championships | | |
|--------------------------|-------------------|--------------------|
| C Figure | | |
| | Team | Players |
| 2 | Russian | KOLESNICHENKO S. |
| 3 | Russian | PATSKEVICH A. |
| 4 | Russian | SHISHKINA Alla |
| 5 | Russian | TIMANINA Anzhelika |
| 6 | Russian | KALANCHA Mikhaela |
| 7 | Russian | NIZAMOVA Liliia |
| 8 | Russian | PROKOFYEVA Elena |
| 9 | Russian | SHUROCHKINA Maria |
| 10 | Russian | TOPILINA Gelena |
| 11 | People's Republic | GU Xiao |

Score:

| FINA World Championships | | | | | | | | |
|-------------------------------------------------------------------------------------|-----|-----|-----|-----|----|----|--------|----------|
| C Figure | | | | | | | | |
| Russian CHIGIREVA Vlada | | | | | | | | 1 |
|  | | | | | | | | |
| J1 | J2 | J3 | J4 | J5 | J6 | J7 | Score | Pen |
| 9.7 | 9.8 | 9.9 | 9.5 | 9.4 | | | 23.201 | 0 |

Result:

| FINA World Championships | | | | | | | |
|--------------------------|---------|------------------|--------|----|----|----|------------|
| C Figure | | | | | | | |
| | Team | Players | #1 | #2 | #3 | #4 | Total Rank |
| 3 | Russian | PATSKEVICH A. | 23.520 | | | | 98.000 1 |
| 1 | Russian | CHIGIREVA Vlada | 23.201 | | | | 96.671 2 |
| 2 | Russian | KOLESNICHENKO S. | 23.119 | | | | 96.329 3 |

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 Wireless Host

| Products | Detail |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wireless Host | <p>Type: KS-WH-G Size: 140x120x30 (mm) Communication: 433MHz Function:</p> <ul style="list-style-type: none">◆ System: Must be used together with Artistic Swimming Scoring Software.◆ Support: Artistic Swimming◆ 15 sets of wireless handhelds can be activated simultaneously for one court.◆ Communication Setting: allow to customize the communication frequency band.◆ Communication distance: 20m |



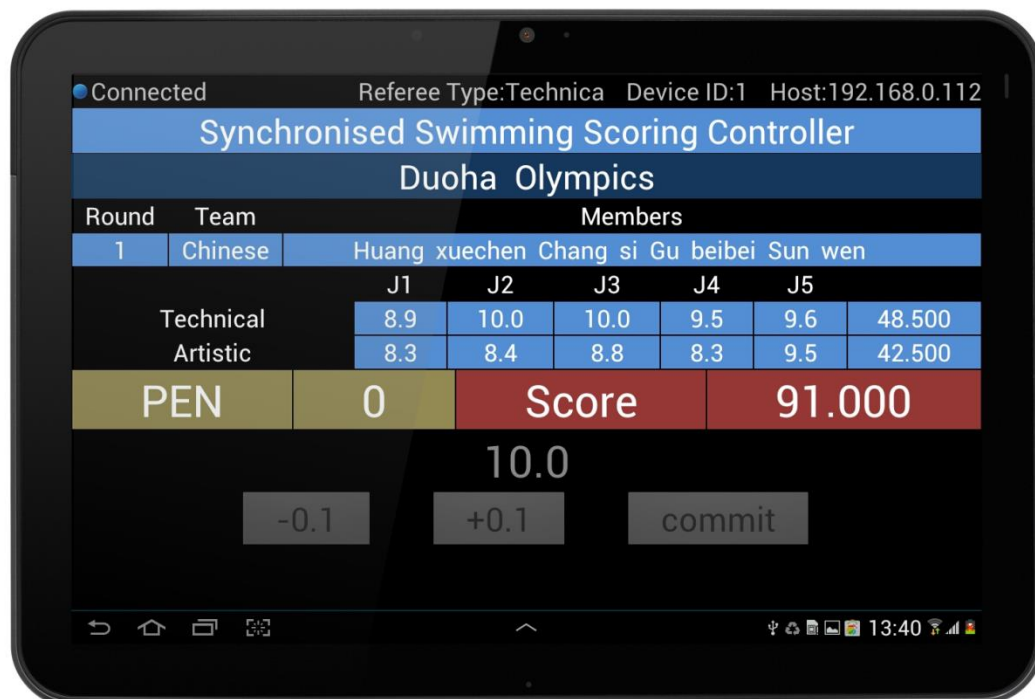
2.3 Wireless Handheld

| Item | Details |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wireless Handheld | Type: KS-GC17 Size: 120x220x70(mm) <ul style="list-style-type: none">◆ Used with the Ultra score software.◆ Communication: 433MHz◆ Modify the score of the player.◆ Support: Artistic Swimming.◆ Communication distance: 20m.◆ Standby time: 8 hours. |



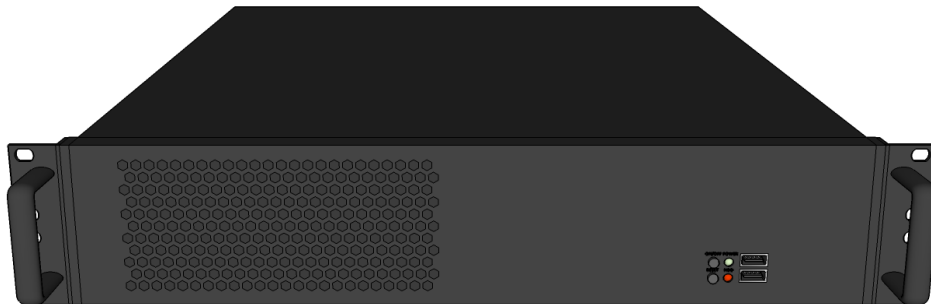
2.4 Wireless Score Tablet

| Products | Details |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wireless Score Tablet | <p>Type: KS-GC14</p> <ul style="list-style-type: none"> ◆ Including one license of Lightscore software ◆ Screen: 10"inch 2560*1600IPS ◆ Ram: 3GB ◆ Storage: 32GB ◆ Battery: 9300mAh ◆ System: Android 6.0 ◆ Supports: Artistic Swimming ◆ Communication: WIFI ◆ Full colored touch screen |



2.5 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. | |

2.6 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 |

2.7 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 |