Scoring & Timing Solution
For Basketball

This is a general solution for LED display in stadium which has the functions of timing, scoring, 24S shot clock, displaying advertisement, notification, the information of referees and teams. It is an ideal choice for most of stadiums.

1. System Chart

1.1 System Structure Description
1) Two LED screens are controlled by separate computer which connects with LED sending card.
2) One laptop is equipped on the court working as Ultra score terminal special for referees’ operation.
3) All computers are connected into LAN in stadium.
4) Both of the LED screens can show the same contents or different contents as required.
5) 24s shot clock installed on the basketball backboards for attach timing can be controlled simultaneously.
2. Specification for products

2.1 Ultra Score Software

<table>
<thead>
<tr>
<th>Products</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standalone edition</td>
<td>◆ Installed on one PC.</td>
</tr>
<tr>
<td></td>
<td>◆ Supports: Basketball, Soccer, Volleyball, Tennis, Table tennis,</td>
</tr>
<tr>
<td></td>
<td>Badminton</td>
</tr>
<tr>
<td></td>
<td>◆ English version</td>
</tr>
<tr>
<td></td>
<td>◆ Including 1 dongle</td>
</tr>
<tr>
<td>Network standard edition</td>
<td>◆ Terminal + 1 Display</td>
</tr>
<tr>
<td></td>
<td>◆ Supports: Basketball, Soccer, Volleyball, Tennis, Table tennis,</td>
</tr>
<tr>
<td></td>
<td>Badminton</td>
</tr>
<tr>
<td></td>
<td>◆ English version</td>
</tr>
<tr>
<td></td>
<td>◆ Including 1 dongle</td>
</tr>
<tr>
<td>Network professional edition</td>
<td>◆ Terminal + Referee + 2 Display</td>
</tr>
<tr>
<td></td>
<td>◆ Supports: Basketball, Soccer, Volleyball, Tennis, Table tennis,</td>
</tr>
<tr>
<td></td>
<td>Badminton</td>
</tr>
<tr>
<td></td>
<td>◆ English version</td>
</tr>
<tr>
<td></td>
<td>◆ Including 1 dongle</td>
</tr>
</tbody>
</table>

**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 courtside 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 courtside.
**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 courtside 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 basketball
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, countdown 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 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

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Wired / Wireless Score Console** | Type: KS-GC16  
◆ The console should be worked together with Ultra Score software, which is applied to kinds of sports.  
◆ It should be connected to LAN in wire or wireless way.  
◆ 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 for variants of operations.  
◆ There are external match timer controller and shot clock controller, which can be operated by timekeeper.  
◆ It will display the match timer and shot clock synchronous with the 24S shot clock screen in basketball match.  
◆ Functions: Modify score, foul, control the competition clock and shot clock, etc. |

### Ultra Score Console

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>330 x 290 x 140 (mm)</td>
</tr>
<tr>
<td>Net weight</td>
<td>3 KG</td>
</tr>
<tr>
<td>Box material</td>
<td>Plastic</td>
</tr>
<tr>
<td>Screen</td>
<td>Full-colored 7” LED</td>
</tr>
<tr>
<td>Audio</td>
<td>6.5mm Audio Output</td>
</tr>
<tr>
<td>Power</td>
<td>AC 100V-240V</td>
</tr>
<tr>
<td>Network</td>
<td>LAN, WLAN</td>
</tr>
<tr>
<td>Language</td>
<td>Chinese, English</td>
</tr>
</tbody>
</table>

### Handy Match timer

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>120 x 80 x 25 (mm)</td>
</tr>
<tr>
<td>Net weight</td>
<td>0.2 KG</td>
</tr>
<tr>
<td>Box material</td>
<td>Plastic</td>
</tr>
</tbody>
</table>
2.3 Lite Console

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lite Console</strong></td>
<td>Type: KS-GC15   Size: 265x220x100(mm)</td>
</tr>
<tr>
<td></td>
<td>◆ Used with the Ultra score software</td>
</tr>
<tr>
<td></td>
<td>◆ Communication: USB, RS485</td>
</tr>
<tr>
<td></td>
<td>◆ With 4.3” color LCD screen</td>
</tr>
<tr>
<td></td>
<td>◆ Material: Iron + Plastic</td>
</tr>
<tr>
<td></td>
<td>◆ Support: basketball, volleyball, soccer</td>
</tr>
<tr>
<td></td>
<td>◆ Functions: Modify team score, team foul, control the match timer</td>
</tr>
<tr>
<td></td>
<td>and shot clock, etc.</td>
</tr>
</tbody>
</table>

![Lite Console Image](image)
2.4 Basketball Shot clock

<table>
<thead>
<tr>
<th><strong>Single-sided Shot Clock</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type: KS-BASH-C/S</td>
<td></td>
</tr>
<tr>
<td>Size: 710x610x60(mm)</td>
<td></td>
</tr>
<tr>
<td>Display: Single side</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Four-sided Shot Clock</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type: KS-BASH-C/Q</td>
<td></td>
</tr>
<tr>
<td>Size: 780x780x610(mm)</td>
<td></td>
</tr>
<tr>
<td>Display: Cube</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>See Through (Double Side) Shot Clock</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type: KS-BASH-C/D</td>
<td></td>
</tr>
<tr>
<td>Size: 650x630x60(mm)</td>
<td></td>
</tr>
<tr>
<td>Display: Two sides (see through Shot Clock)</td>
<td></td>
</tr>
</tbody>
</table>
### Single-sided Shot clock

<table>
<thead>
<tr>
<th>Type</th>
<th>KS-BASH-K/S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>600x520x110(mm)</td>
</tr>
<tr>
<td>Display</td>
<td>Single side</td>
</tr>
</tbody>
</table>

### Four-sided Shot clock

<table>
<thead>
<tr>
<th>Type</th>
<th>KS-BASH-K/Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>650x650x510(mm)</td>
</tr>
<tr>
<td>Display</td>
<td>Cube</td>
</tr>
</tbody>
</table>
## Detailed parameters

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>710x610x60(mm)</td>
<td>600x520x110(mm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>10KG*2</td>
<td>9KG*2</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>60W*2</td>
<td>52W*2</td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td>Aluminum</td>
<td>Iron</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Wired + Wireless (433MHz)</td>
<td>Wired</td>
</tr>
<tr>
<td><strong>Match Timer</strong></td>
<td>Decisecond display in last 1 minute</td>
<td>Decisecond</td>
</tr>
<tr>
<td><strong>Shot Clock</strong></td>
<td>Decisecond display in last 5 second</td>
<td>Second</td>
</tr>
<tr>
<td><strong>Buzzer</strong></td>
<td>Two different buzzer sound for match timer and shot clock</td>
<td>Single buzzer sound</td>
</tr>
<tr>
<td><strong>Mounting Hole</strong></td>
<td>Bottom + Top (For hanging installation)</td>
<td>Bottom</td>
</tr>
<tr>
<td>Four-sided Shot Clock</td>
<td>KS-BASH-C/Q</td>
<td>KS-BASH-K/Q</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>Product</strong></td>
<td><img src="image1" alt="Product Image" /></td>
<td><img src="image2" alt="Product Image" /></td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>780x780x610(mm)</td>
<td>650x650x510(mm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>45KG*2</td>
<td>30KG*2</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>240W*2</td>
<td>110W*2</td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td>Aluminum</td>
<td>Iron</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Wired + Wireless (433MHz)</td>
<td>Wired</td>
</tr>
<tr>
<td><strong>Match Timer</strong></td>
<td>Decisecond display in last 1 minute</td>
<td>Decisecond</td>
</tr>
<tr>
<td><strong>Shot Clock</strong></td>
<td>Decisecond display in last 5 second</td>
<td>Second</td>
</tr>
<tr>
<td><strong>Buzzer</strong></td>
<td>Two different buzzer sound for match timer and shot clock</td>
<td>Single buzzer sound</td>
</tr>
<tr>
<td><strong>Mounting Hole</strong></td>
<td>Bottom</td>
<td>Bottom</td>
</tr>
<tr>
<td><strong>See Through (Double Side) Shot Clock</strong></td>
<td><strong>KS-BASH-C/D</strong></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td><strong>Product</strong></td>
<td>![Product Image]</td>
<td></td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>650x630x60(mm)</td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>8KG*2</td>
<td></td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>60W*2</td>
<td></td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td>Aluminum+Plastic</td>
<td></td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Wired + Wireless (433MHz)</td>
<td></td>
</tr>
<tr>
<td><strong>Match Timer</strong></td>
<td>Decisecond display in last 1 minute</td>
<td></td>
</tr>
<tr>
<td><strong>Shot Clock</strong></td>
<td>Second</td>
<td></td>
</tr>
<tr>
<td><strong>Buzzer</strong></td>
<td>Two different buzzer sound for match timer and shot clock</td>
<td></td>
</tr>
<tr>
<td><strong>Mounting Hole</strong></td>
<td>Bottom</td>
<td></td>
</tr>
</tbody>
</table>
### 2.5 Basketball Backboard Light

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball Backboard Light</td>
<td>Type: KS-BALT-C  Size: 1700x950x25(mm)</td>
</tr>
<tr>
<td></td>
<td>◆ Working with basketball shot clock synchronously.</td>
</tr>
<tr>
<td></td>
<td>◆ Connecting with 24s shot clock, Lighting up in red when the game clock signal sounds for the end of a period.</td>
</tr>
<tr>
<td></td>
<td>◆ Lighting up in yellow when shot clock signal sounds.</td>
</tr>
</tbody>
</table>

**Parameters**

<table>
<thead>
<tr>
<th>Basketball Backboard Light</th>
<th>Type: KS-BALT-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1700x950x25(mm)</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>DC — 12V</td>
</tr>
<tr>
<td>Total Power</td>
<td>25W</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum, fiberglass PCB</td>
</tr>
<tr>
<td>Color</td>
<td>Silvery White</td>
</tr>
<tr>
<td>Weight</td>
<td>3kg</td>
</tr>
<tr>
<td>Implementation of standards</td>
<td>International Sports Competition Rules</td>
</tr>
</tbody>
</table>
### 2.6 Foul Display

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foul Display</td>
<td>Type: KS-BAFL-C</td>
</tr>
<tr>
<td></td>
<td>◆ Trihedral displaying</td>
</tr>
<tr>
<td></td>
<td>◆ Fouls display of the match</td>
</tr>
</tbody>
</table>
### Parameters

<table>
<thead>
<tr>
<th>Foul Display</th>
<th>KS-BAFL-C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Three sides display</td>
</tr>
</tbody>
</table>

#### Basic parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controller Size</td>
<td>200x145x63(mm)</td>
</tr>
<tr>
<td>Display Size</td>
<td>370x210x200(mm)</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>12V DC</td>
</tr>
<tr>
<td>Communication Port</td>
<td>G-Port*2</td>
</tr>
<tr>
<td>Frame material</td>
<td>PVC</td>
</tr>
<tr>
<td>Weight</td>
<td>5KG</td>
</tr>
<tr>
<td>Implementation of standards</td>
<td>International Sports Competition Rules</td>
</tr>
</tbody>
</table>

#### Screen Performance

- **Best sight**
  - Best Visual Distance: 3M—100M
  - Best viewing angle: 0°—90°

- **Refresh frequency**
  - 80HZ—90HZ

#### Main Functions

- Display functions conform to international match rules.
- Team fouls 0-9 times can be set freely.
- The last set of data can be preserved.
- Not only can be used independently, but also can be connected to the Match Scoring & Timing Host for linkage use.
- Brightness adjustment is available in linkage mode.
- Controlled by Match Scoring & Timing Host without separate power supply in linkage mode.
- Anti-loose port ensures the safety of match data.
- Supports post-match celebration mode.
### 2.7 Possession (arrow) screen

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possession (arrow) screen</td>
<td>Type: KS-BAPO-C  Size: 410x177x80(mm)</td>
</tr>
<tr>
<td></td>
<td>◆ 1 Single side LED screen</td>
</tr>
<tr>
<td></td>
<td>◆ Show offensive direction of home team or guest team.</td>
</tr>
</tbody>
</table>

#### Parameters

| Possession (arrow) screen | KS-BAPO-C (Single display)                                               |

#### Basic parameters

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>410x177x80(mm)</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>AC90<del>264V  50</del>60Hz</td>
</tr>
<tr>
<td>Total Power</td>
<td>15W</td>
</tr>
<tr>
<td>Frame material</td>
<td>Iron</td>
</tr>
<tr>
<td>Weight</td>
<td>1KG</td>
</tr>
<tr>
<td>Implementation of standards</td>
<td>International Sports Competition Rules</td>
</tr>
</tbody>
</table>

#### Product Configuration

<table>
<thead>
<tr>
<th>Packing List</th>
<th>Host *1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Power Adapter *1</td>
</tr>
<tr>
<td></td>
<td>Instructions *1</td>
</tr>
</tbody>
</table>

#### Screen Performance

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best sight</td>
<td>Best Visual Distance: 3M---100M</td>
</tr>
<tr>
<td></td>
<td>Best viewing angle: 0°---90°</td>
</tr>
<tr>
<td>Refresh frequency</td>
<td>80HZ--90HZ</td>
</tr>
</tbody>
</table>
## 2.8 Electronic Buzzer

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Buzzer</td>
<td>Type: KS-BUZR</td>
</tr>
<tr>
<td></td>
<td>Buzzer for tips as the competition required.</td>
</tr>
</tbody>
</table>

### Parameters

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buzzer</td>
<td>KS-BUZR</td>
</tr>
</tbody>
</table>

#### Basic parameters

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>AC 100-240V</td>
</tr>
<tr>
<td>Total Power</td>
<td>35W</td>
</tr>
<tr>
<td>Color</td>
<td>Dark grey</td>
</tr>
<tr>
<td>Weight</td>
<td>1KG</td>
</tr>
</tbody>
</table>

#### Product Configuration

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing List</td>
<td>Host *1</td>
</tr>
<tr>
<td></td>
<td>Handle*1</td>
</tr>
<tr>
<td></td>
<td>Power Cable*1</td>
</tr>
<tr>
<td></td>
<td>Power Adapter *1</td>
</tr>
<tr>
<td>Refresh frequency</td>
<td>80HZ--90HZ</td>
</tr>
</tbody>
</table>
## 2.9 Meet Management Server

<table>
<thead>
<tr>
<th>Products</th>
<th>Details</th>
</tr>
</thead>
</table>
| Meet Management Server | Type: KS-MMS-MINI  
Size: 182x178x36(mm)  
Weight: 1.2 KG  
Features:  
- Multi-court arrangement, auto generate the order form.  
- Multi-project arrangement, make the schedule more smoothly.  
- Monitor the status of each court in real time, including the current field, rotation and player info.  
- Court adjustment, can manually modify the match court and session info.  
- Summary and print integrated report. |
2.10 Video Arbitration Server

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

Software interface
Device Specification

<table>
<thead>
<tr>
<th>Type</th>
<th>KS-PARROT-2C/4C/6C/8C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>485x480x90(mm)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>8 KG</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Cabinet</td>
<td>Iron</td>
</tr>
</tbody>
</table>

**Interface**

<table>
<thead>
<tr>
<th>Input</th>
<th>SDI*2/4/6/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>DP*2</td>
</tr>
</tbody>
</table>

**Environmental**

<table>
<thead>
<tr>
<th>Operating Temp</th>
<th>-5°C～45°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temp</td>
<td>-40°C～80°C</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>5%～95%, non-condensing</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>AC 100V~240V</td>
</tr>
</tbody>
</table>

**Functions**

- **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.
### 2.11 Control Panel

<table>
<thead>
<tr>
<th>Products</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Panel</td>
<td>Type: KS-PARROT-CP</td>
</tr>
<tr>
<td></td>
<td>Function:</td>
</tr>
<tr>
<td></td>
<td>◆ Support one touch replay, deferred replay, in/out replay.</td>
</tr>
<tr>
<td></td>
<td>◆ Preset speed button.</td>
</tr>
<tr>
<td></td>
<td>◆ T-Bar for dynamic slow motion.</td>
</tr>
<tr>
<td></td>
<td>◆ Professional dynamic jog wheel.</td>
</tr>
<tr>
<td></td>
<td>◆ Key to mark the last 10s/20s of the video content.</td>
</tr>
<tr>
<td></td>
<td>◆ Flexible select the marked video and playback.</td>
</tr>
</tbody>
</table>

![Control Panel Image](image-url)
## Device Specification

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

<table>
<thead>
<tr>
<th>Products</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD Camera</td>
<td>Type: KS-PARROT-CAMERA</td>
</tr>
</tbody>
</table>

Device Specification

<table>
<thead>
<tr>
<th>Product Type</th>
<th>KS-PARROT-CAMERA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image sensor</td>
<td>SONY 1/2.8 inch Progressive CMOS</td>
</tr>
<tr>
<td>Effective pixels</td>
<td>3.1 million pixels</td>
</tr>
<tr>
<td>Signal System HD</td>
<td>1080p60/50, 1080p30/25, 1080i60/50, 720p60/50</td>
</tr>
<tr>
<td>Signal system</td>
<td>PAL/NTSC</td>
</tr>
<tr>
<td>Lens</td>
<td>12x optical zoom, f=3.9mm (wide angle) ~46.8mm (distal)</td>
</tr>
<tr>
<td>Horizontal view angle</td>
<td>72.5° (wide angle) ~7.4° (distal)</td>
</tr>
<tr>
<td>Aggregation mode</td>
<td>Auto / Manual</td>
</tr>
<tr>
<td>Minimum illumination</td>
<td>0.1Lux</td>
</tr>
<tr>
<td>Specification</td>
<td>Details</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Shutter speed</td>
<td>1/1~1/10000S</td>
</tr>
<tr>
<td>Gain</td>
<td>Auto / Manual</td>
</tr>
<tr>
<td>White balance</td>
<td>Auto / Manual / Indoor / Outdoor</td>
</tr>
<tr>
<td>Image effect</td>
<td>Color / Black &amp; White / Electron flip</td>
</tr>
<tr>
<td>S/N ratio</td>
<td>≥50dB</td>
</tr>
<tr>
<td>Horizontal shaking</td>
<td>355° (Maximum velocity 80°/s)</td>
</tr>
<tr>
<td>Pitching shaking</td>
<td>-30°~30° (Maximum velocity 60°/s)</td>
</tr>
<tr>
<td>Presetting bit</td>
<td>9 remote control and keyboard can set up to 200</td>
</tr>
<tr>
<td>Video output HD</td>
<td>HDMI、3G-SDI、USB2.0、USB3.0、RJ-45</td>
</tr>
<tr>
<td>Audio input</td>
<td>3.5mm LINE-IN</td>
</tr>
<tr>
<td>Power</td>
<td>12V DC (10.8~13.0V DC)</td>
</tr>
<tr>
<td>Operating temp</td>
<td>0°C~40°C</td>
</tr>
<tr>
<td>Storage temp</td>
<td>-20°C~60°C</td>
</tr>
<tr>
<td>Size</td>
<td>164x148x173mm</td>
</tr>
<tr>
<td>Power consumption</td>
<td>12W (DC 12V)</td>
</tr>
<tr>
<td>Weight</td>
<td>1050g</td>
</tr>
<tr>
<td>Color</td>
<td>Silver</td>
</tr>
</tbody>
</table>