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**Product Specification**

**ZH-Z4E**

**I. Product Introduction:**

ZH-Z4E is one three-in-one product developed for LED large-screen display systems, integrating asynchronous, high-definition video processors and sending cards. It adopts industry-leading lossless zoom technology, supports high-definition HDMI/DVI input and standard Gigabit Ethernet port output, and provides customers with a synchronous LED large-screen high-definition display solution; new asynchronous expansion card is added to meet various needs of customers in different scenarios; The integrated software simplifies the customer's operation process; the standard 1U chassis makes engineering installation more convenient and quicker, and truly achieves the purpose of multi-scenario and minimal operation. ZH-Z4E supports one-key switching between partial and full-screen modes, and one-key switching between synchronous and asynchronous modes. The screen transition is smooth and stable. ZH-Z4E supports online upgrades to ensure that customers upgrade new functions from time to time.

**II. Functional Features**

**ZH-Z4E is a full-color series player control system, its functions are as follows:**

1. Use the same refresh technology as the synchronization system;
2. Support cascaded receiving card, realize the support of any size screen;
3. SDK development kits are provided for all series;
4. Support HD video hard decoding;
5. Support audio sync audio input and output, 3.5mm standard audio output interface;
6. Support U disk to play videos and pictures directly;
7. Support 2 HDMI inputs, 1 VGA input, 1 HDMI output;
8. Support synchronous, asynchronous local and remote one-key switching;
9. Support one-key switching between partial and full screens in synchronous mode;
10. Support picture zoom function;
11. Support manual switch, timing switch;
12. Support extended sensor and other functional interfaces;
13. Support U disk, network cable to enable wireless WiFi hotspot (AP mode) and access to LAN (STA mode) to achieve cluster management;
14. Support UDP network communication protocol;
15. Support DHCP to automatically obtain IP address;
16. Support one-key whole screen test;
17. Support simultaneous playback of multiple video windows;
18. Support EDID setting;
19. Support brightness timing adjustment;
20. Support Mobile (Android + Apple) software sending;
21. Support local server and remote server to publish content;
22. Support program sequence, timing and other playback methods;
23. Support emergency information insertion;
24. Support weather forecast, web pages, streaming media, etc.;
25. Support standard databases such as json and mysyq;
26. Support docking of data acquisition instrument, PLC, etc.;
27. Support log, screen status query;
28. Supports simultaneous playback of multiple devices;
29. Support cloud login dynamic verification, support grouping, classification, monitoring, audit and other authority management.

**III. Function Parameters**

**System Parameter**

|  |  |
| --- | --- |
| CPU | Eight-core A53，1.5GHz |
| Control system | Android 5.1 |
| Storage | 8G（system about 2.5G） |
| Loading area | 2.6 million  Max W: 8192, Max H: 2160 |

**Communication and Interface**

Support WIFI;

Support USB;

Support 100 m / 1000 m network adaptive;

Support server cluster;

**Load Parameters**

Support Gigabit to cascade receiving card, maximum support 2.6 million points;

**IV. Hardware Introduction:**

**The Front Panel**



LCD

Switch

Button

Knob

|  |  |
| --- | --- |
| **Switch** | The power switch |
| **LCD** | Displays detailed prompts for user |
| **Knob** | Adjust the LED screen resolution and confirm |

|  |  |  |  |
| --- | --- | --- | --- |
| **Button Part Manual** | | | |
| **INPUT** | | **FUNCTION** | |
| **HDMI 1** | HDMI 1 signal input button | **PART/局部** | Partial/full screen switching |
| **HDMI 2** | HDMI 2 signal input button | **MENU/菜单** | Enter advanced settings mode |
| **VGA** | VGA signal input button | **OK/确认** | Select conform button |
| **BOX** | Async play selection key | **Fn** | Compound key |
| **R** | Reserved button | **SCENE/场景** | The call button for default scenes |
|  |  | **BACK/back** | Back to the previous menu/lock function |

**The Back Panel**



Output Port

Control Port

Power Port

Input Port

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CONFIG/Control Port** | | **INPUT/Signal Input Port** | | **OUTPUT/Signal Output Port** | |
| **SENSOR1** | Extended sensor interface 1 | **USB** | Update content, expand memory | **AUDIO** | Audio output port |
| **SENSOR2** | Extended sensor interface 2 | **HDMI 1\_IN** | HDMI input port | **MONITOR** | HDMI output port |
| **ANTENNA** | Remote controller antenna port | **HDMI 2\_IN** | HDMI input port | **LED1/LED2/**  **LED3/LED4** | Output network port |
| **USB\_CTR** | System test port | **VGA\_IN** | VGA input port |  |  |
|  |  | **VGA AUDIO** | VGA audio input port |  |  |

|  |  |
| --- | --- |
| **EXTEND** | |
| **Test button** | Check version, multiple test modes |
| **LAN port** | Update the content |
| **USB port** | System firmware update  (non-professionals should not operate it) |
| **USB port** | Update content, enlarge storage |
| **WiFi antenna port** | Link with WIFI, enhance WIFI signal |
| **Audio input port** | Asynchronous audio output, connect to power amplifier |
| **Indicator light** | Operation indicator light  (normal state: red light is on, green light is flashing) |
| **SIM card port** | 4G data card port |
| **4G antenna port** | Link with 4G antenna, enhance 4G signal |

**Working conditions**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Rated voltage (V)** | 220 | **Max** | 100 | **Min** | 240 |
| **Rated current (A)** | 0.1 | **Max** | 0.15 | **Min** | 0.07 |
| **Rated power consumption (W)** | 20 | **Max** | 25 | **Min** | 15 |
| **Limit temperature (℃)** |  | **Max** | 80 | **Min** | -40 |
| **Working environment temperature (℃)** |  | **Max** | 80 | **Min** | -40 |
| **Working environment humidity (%)** |  | **Max** | 95 | **Min** | 0 |

**VI. Hardware Diagram:**

**Unit: mm**

