

Electronic Class Information Board

Intelligent Electronic Capacitive Class Information Board

BD21.5-B08



Class information board system is a device mounted at the classroom entry, acting as digital display platform of class culture for the teachers and students. Movable and centralized management on displaying of cultural information of the intellectual class, it also equipped with an attendance system, by which teachers and students can sign in through mobile device or swiping card. Teachers can check the daily attendance record and obtain the information of students in classroom and their safety. Parents also know their children's information of arrival at school and leaving from school.

1- Product features

1)- Structure design:

- 1) Flat surface structure, ergonomic design, slim and beautiful, streamline modeling, sophisticated technology
- 2) Integrated ultra thin design of display, touch control and computer, thickness is only 43mm;

2)- Using effect:

- 1) Using the latest innovative touch control projected capacitive plate, perfect 10-point touch, support handwriting or multi-point gesture;
- 2) Touch speed is less than 3ms, high precision, simple use and easy maintenance;
- 3) Anti-light interference, make sure the precision of operation (normal use under direct glare);
- 3)- Wide extension: flexible configuration for various accessories of customer need.
- 4)- High safety: aluminum alloy + steel plate structure, blind edge, anti-wear and anti-corrosion paint process, integrated explosion protection design;
- 5)- Stable performance: advanced design philosophy, strict production process; stable and reliable product quality, low failure rate;
- 6)- Easy installation: on/off by one key with power on, free of site installation and debugging;
- 7)- Support timing switch function, realize unattended function.

2- Product size

- 1) Specification: 21.5 inch.
- 2) Display scale; 16:9
- 3) Display area: 478*270
- 4) Resolution: 1920*1080P
- 5) Overall dimensions: 527*426*28mm

3- System design:

- 1) HDMI output/input: inner computer HDMI output (Android only 3288 support output);
- 2) Touch function: latest projected capacitive plate, 10-point touch, support multi-point gesture.
- 3) Display: PC full HD HDMI signal 1080P;
- 4) PC video decoding: 1080P full HD MPEG, H.264, etc.
- 5) Structure design: Aluminum alloy frame, steel plate housing, good heat release;
- 6) System module: PC, display and touch are integrated, one key switch.

4- Parameters of LCD screen:

- 1) Type of screen: LED backlight LCD panel A gauge;
- 2) Optimum resolution: 1920*1080P , 1920*1200, 1280*1024;
- 3) Brightness: 250 cd/m²;
- 4) Contrast: $\geq 1000: 1$;
- 5) Response time: 1.3/3.7 ms;
- 6) Refresh rate: 60Hz;
- 7) Total number of colors: 16.7M (8-bit 2(LVDS) channel low pressure differential signal) ;
- 8) Visual angle: 89/89/89/89 (Typ.)(CR ≥ 10) (left/right/up/down);
- 9) Usage time: >30000 h.

5- Parameter of touch screen

- 1) Touch technology: projection capacitive technology (capacitive touch screen);
 - 2) Response time: <5ms/3, touch points: standard 10 points, zoom in and out multi-point function;
 - 3) Valid identification: >1.5mm;
 - 4) Scanning frequency: 200Hz;
 - 5) Scanning precision: 4096×4096;
 - 6) Communication mode: full speed USB 2.0, 3.0;
 - 7) Number of theoretical clicks: min. 50 mil.
 - 8) Working current/voltage: 180Ma/DC+5V $\pm 5\%$;
 - 9) Anti-light interference: normal use under the change of sunlight, incandescent light and daylight;
 - 10) Touch data output mode: coordinate output;
 - 11) Surface hardness: thermal tempering, Mohs grade 7 explosion-proof glass;
- Operating system compatibility: Windows 7/ Windows 8/CE/Mac/Android/Linux /XP

- 12) Software: upgradable;
- 13) Drive: no drive, plug and play.

6- Class board system BD21.5-B08

1)- Android system

- 1) System version: Android 5.1;
- 2) CPU type; 8-core RK3368, Quad core ARMCortex-A9 up to 1.8GHz;
- 3) CPU: ARM Mail 400 MP4;
- 4) System memory: 2G DDR3
- 5) Memory capacity: 8GB
- 6) USB2.0: 2 series
- 7) Audio earphone output: 1 series
- 8) LAN (RJ45) : 1 series
- 9) WiFi: available
- 10) TF CARD: 1 series
- 11) OTG: 1 series

7- Card reader

- 1. Support protocol: ISO14443TYPEA;
- 2. Distance of card reading: 0-50mm;
- 3. Support card type: readable MIFARE series cards which are conform to ISO14443TYPEA standard;
- 4. Port to computer: RS232/TTL;
- 5. ★Support to ready 3rd party One-Card, can be integrated with 3rd party card if provided by the physical card no.
- 6. Communication rate: 9600bps;
- 7. Operating system: Windows 98、Me、2K、XP、2003、Vista and Linux、Unix、Android
- 8. Antenna: integrated antenna;
- 9. Working frequency: 13.56MHz;
- 10. Working voltage DC5V—24V (custom made as needed)
- 11. Lower power module, voltage 3.3V;
- 12. Communication rate of card and card reader;
- 13. Working temperature: -20℃～60℃;
- 14. Relative humidity: 30%～95%;
- 15. Overall dimension (Length x width x height)(mm) 50*32*3;
- 16. Weight: 20/40g

8- HD 2 million camera

- 1. Aperture: 2.8;
- 2. Dimension: 60mm × 8mm × 5.2mm;
- 3. Port: USB2.0;
- 4. Focal distance: 2.9mm/;
- 5. Field angle: 50°
- 6. TV distortion: <-1%;
- 7. Sensitive area size: 1/5-inch;
- 8. Pixel size: 1.75μm×1.75μm
- 9. Image size: 1616(H)×1232(V) [pixel]
- 10. Max image: 15FPS UXGA 36MHZ/30FPS 720pMHZ

11. Pixel: HD 2 million;
12. Microphone: optional;
13. Max resolution: 1600*1200;
14. Object distance: 15CM-130CM

9- Software parameters:

1. The system has 6 intellectual auto-playing modes and 17 functional modules incl.: normal mode, class mode, interval mode, welcome mode, test mode. Through intellectual auto carousel, maximize every function, precisely push the information, management and diffusion with high efficiency.

- 1) Normal mode: applicable scene is for the period before the class begins, information modules incl.: introduction of the class, class album, campus info, videos of studying field, class homework, class honors, announcement and notice, class culture.
- 2) Class mode: applicable scene is for the period of class, displaying the info of the teacher in teaching. School leaders and parents can know the teacher in teaching, Functional module: name of teacher, course, title and features.
- 3) Interval mode: applicable scene is for the period of break, the purpose of efficient information dissemination and learning can be achieved through accurate content delivery. The main features are to let students predict the course arrangement in advance, understand the situation of classes today and edify students' moral education quality and education through fragmented time, so as to realize the integration of class culture and campus culture. Functional modules include today's students on duty, praise column, class honors, class dynamics and class schedule.
- 4) Class selection mode: The system realizes modern teaching affairs management through course management, teaching plan, classroom management, online course selection, intelligent class scheduling, automatic class allocation, class schedule inquiry, student and teacher attendance, class roll call and teacher evaluation. The display side shows the class and attendance record, the teacher information of the class and the class schedule.
- 5) Welcome mode: The application scenario of the welcome mode is mainly to display the welcome message. The manager can release welcome words through the set control system, selectively release for grades, classes and models, and set time and background for release demonstration.
- 6) Test mode: The application scenario mainly shows the basic information of the test in the test period. The main features of the examination mode are to let students know about the current role of the examination subjects, examination time and some matters needing attention. Functional modules include: classroom name, examination subjects, examination time, examination notes. The administrator can publish the name, number, examination time, notes in the examination room, etc. through the set control system, and the time and background can be set for release and display.
- 7) Student sign-in: the students check in by One-Card, the teachers and parents know

the information of their arrival at school and leaving from school and their safety situation. At the same time, the one-card and access control are linked in real time, which can be used for card swiping.

8) Backstage management system:

Basic data management: year/class/grade/teachers

Users' management: administrator + head teacher + subject teacher + parents

Class selection management system: teaching plan management, student selection of class, arrangement of course schedule, curriculum application, curriculum management, checking class attendance, teacher's evaluation, reduce the pressure and management burden for teachers.

Content release management (important): Edit the new module, update and publish the class content.

Student attendance management: Record attendance record and data statistics.

Class board device management: You can set the time switch, automatically start the system software, and record the status of equipment.

9) Release information on mobile phone: Content information release and content management can be carried out through the mobile phone, so that teachers can efficiently carry out teaching management.

Teaching module: Create courses, students select courses, attendance management, class schedule application, class members.

Management module (important): class image, class activities, class demeanor, class honors, class album, electronic bulletin board, lost and found, notice announcement, praise column, test mode, welcome mode, device management, duty student info.

My module: role switching and account management.

Auxiliary material for information:

In order to ensure the stability, security and durability of the whole system, all cables, including the connection wire between the wall-mounted all-in-one machine system and the LCD TV (power line HDMI), are all made of disposable mechanism, with no connection between them.

All auxiliary materials are national standard.

Normal mode; Class mode; Interval mode;



Class selection mode; Welcome mode; Test mode;



Sign-in:



Backstage management system; Connecting to mobile phone;



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