

Product Specification

product name : intelligent instrument

product model : **X2301-v02**

Design drawing number : **DY-79001**

version number : **v02**

Release date : **2022.12.31.**

| | |
|------------|----------|
| Production | Chen Kai |
| Audit | Du Haiqi |
| Approved | Luo Jie |

| number | Change the reason | Change the content | Date | Change the person |
|--------|-----------------------------------|-----------------------------------|-------------|-------------------|
| 1 | Meet new energy vehicle standards | CAN Execute the order | 2022.8.20. | Chen Kai |
| 2 | | Power amplifier 15W to 25W * 2 | 2022.11.20. | Chen Kai |
| 3 | | Radio FM | 2022.8.20. | Chen Kai |
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1. Scope of application

This specification is applicable to X2301-v02 series on-board multi-media player integrated instrument produced by "New energy vehicle". Zhongsheng electronic technology (Shenzhen) Co., Ltd. has the final right of interpretation.

2. Reference standards

GB/T 26775-2011 General specification for on-board audio and video systems

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|-----------------|--|
| GB/T 9384-2011 | Environmental test requirements and test methods for broadcast radios, broadcast television set, Tape recorder, audio power amplifiers (amplifiers) |
| GB/T 13837-2012 | Permissible values and methods of measurement of interference characteristics of sound and television broadcasting receivers and related equipment |
| GB/T 413-2015 | Basic technical requirements for automotive electrical equipment |
| TB/T 3058-2016 | Railway applications, electromechanical vehicle equipment, impact and vibration tests |
| GB18655-2018 | Radio disturbance characteristics of vehicles, ships and internal combustion engines |
| GB/T17619-1998 | Limit values and measuring methods for protecting vehicle-mounted receivers |
| GB 4094-2016 | Limits and methods of measurement of electromagnetic radiation immunity of automotive electronic and electrical components" Automobile controls, indicators and signal device signs" |

3. Product Overview

7-inch/8-inch/9-inch/10-inch 12-inch center control screen is a kind of multi-media center control screen which is specially used for the instrument multimedia playing and the vehicle information display of the golf electric vehicle, the product adopts the high-resolution LCD module, uses the rule-level chip as the main control unit, integrates the FM radio, Bluetooth, USB, reversing image modules, etc., it can be used to control the warning switch, light signal, brake signal, etc. of the vehicle, and can also display the status of the vehicle, fault and other information.

4. Product appearance



5. Functional characteristics

1. Basic functions:

- 1 Instrument basic functions: speed, mileage, charging display, power display, headlights, lights, left and right steering, brake display, fault code display.
- 2 USB MP3/MP4 player. Supports formats such as MP3/WMA/JPEG/WMV/AVI/MPG/MPEG/3GP.
- 3 Support for standard video output playback function/support for two-way video playback.
- 4 FM radio function, the vehicle Operation FM radio can continue to keep the radio state, can also be directly out and disconnected.
- 5 GPS Beidou navigation function, support mobile phone interconnection function, can map to the player with the help of mobile phone navigation (V2.1 is not supported).
- 6 Bluetooth function (support hands-free calls, phone book download, Bluetooth music) , Bluetooth connection can be automatically connected the next time.
- 7 Reverse image output.
- 8 Wi-fi connection to the Internet is supported (V02 version is not supported yet) .
- 9 Support vehicle information display function.
- 10 Extensible voice control function (reserved) .
- 11 Support brake control function, when the driver is in motion, video playback does not show.

2. System features:

2. 1, the use of car regulation chip design, full-screen support touch function.
2. 2, support MP3, MP4 playback.
2. 3, built-in Bluetooth phone, Bluetooth music connection play function.
2. 4, support CAN bus control and so on.
2. 5. Reverse quickly.
2. 6, support custom CAN protocol control, vehicle data display, fault alarm and other functions.

6.Specification parameters

FM frequency range: 875–1080 kHz

- 1) . Step length: 50 kHz
- 2) . The sensitivity of the lock table is 23 ± 8 dB μ V
- 3) . Distortion (1 mV input) ; 2%
- 4) . Signal-to-noise ratio (1 mV input) ; 48 db

AM frequency range: 522–1620 kHz (V02 version not yet supported)

- 1) step size: 9 kHz
- 2) the sensitivity of the lock table was 36 ± 10 dB μ V
- 3) distortion (5 mV input) ; $\leq 2\%$
- 4) signal-to-noise ratio (5 mV input) ; ≥ 43

3.Audioamplifierparameters

- 1) Standard output distortion: ≤ 0.3 %
- 2) Signal-to-noise ratio: ≥ 45 dB
- 3) Frequency response: 40HZ–12000HZ

4. Bluetooth

1) Hands-free

Hands-free distance: 80~120CM

Output Power: 50W Max

Sound track: dual-zone horn

2) Bluetooth music

Noise ratio: ≥ 50 dB

Deviation: ≥ 45 dB

Frequency response: 20Hz~20KHz ± 3 dB

Sound track: dual-zone horn

3) Host

01) power supply: DC12V (DC9~16V)

02) humidity: 5% ~ 95%

03) working current: < 0.2a (when power amplifier is silent) , max < 10a

04) standby current: 8MA

05) maximum useful output power: output power 20W

06) maximum output power: input voltage 12V, volume knob adjusted to the maximum output power not more than 50W 2*25W

07) system settings memory function: memory customer personalized settings, do not lose memory after power off

08) RRB screen resolution: 1024 * 600

09) screen brightne : 800cd/m²

10) touch screen: support multi-point Capacitive Touch

11) video output: backup cam CVBS video signal output

12) working environment temperature: -20~+50 ° C

13) storage environment temperature: -20~+50 ° C

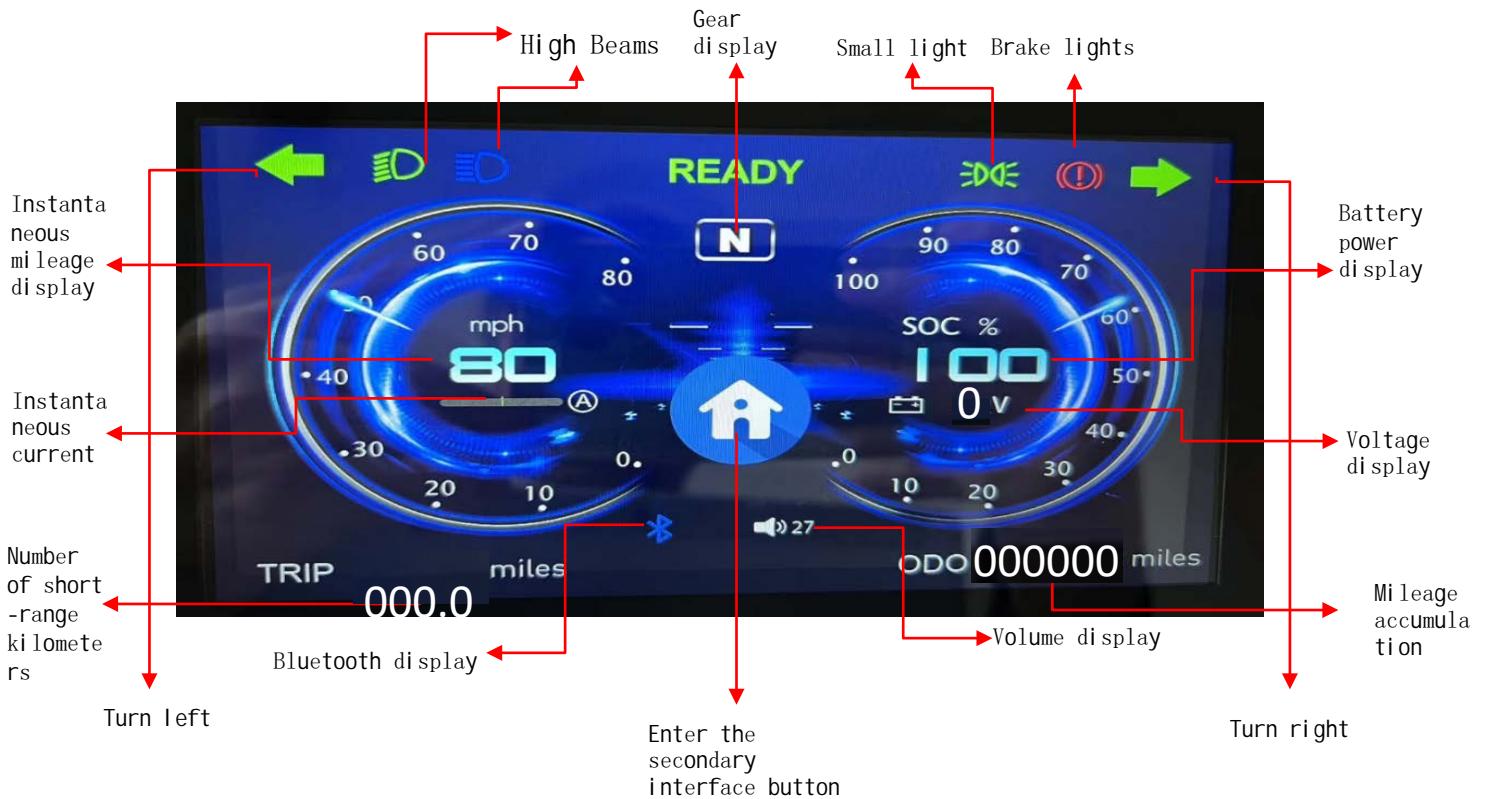
14) power: less than 120W

4. Interface Operation Instructions

4.1 The main screen is displayed at boot time

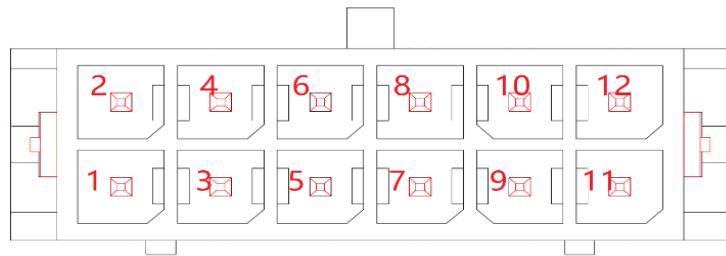


4.2 Interface icon description:



4.2.1 Interface description

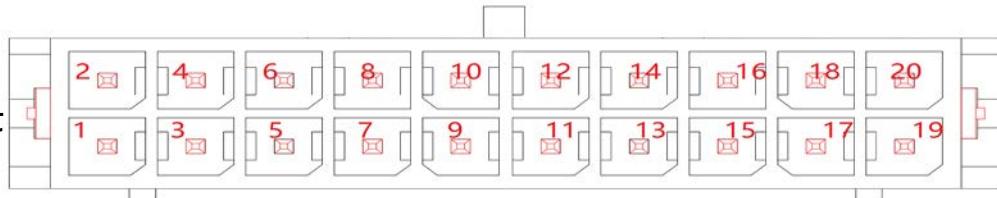
12P Port seat



12P Interface Definition

| | |
|---|-----------------|
| 1Right speaker positive output right channel + | 0-16V/≤3A |
| 2Right speaker negative output right channel | 0-16V/≤3A |
| 3The left speaker is sending out the left track | 0-16V/≤3A |
| 4Left speaker negative output left channel | 0-16V/≤3A |
| 5Empty feet | |
| 6Empty feet | |
| 7CVBS image input | 1-2 Vpp/ 0-30mA |
| 8Reverse image detection input | L:0-3V H:12V±1V |
| 9Ground (Black: reverse image ground wire) | |
| 10Main power ground wire | |
| 11Connect the main power supply input of the electric door lock | 8-16V/≤5A |
| 12Long power supply input (for RTC time hold) | 8-16V/≥5mA |

20P Port seat

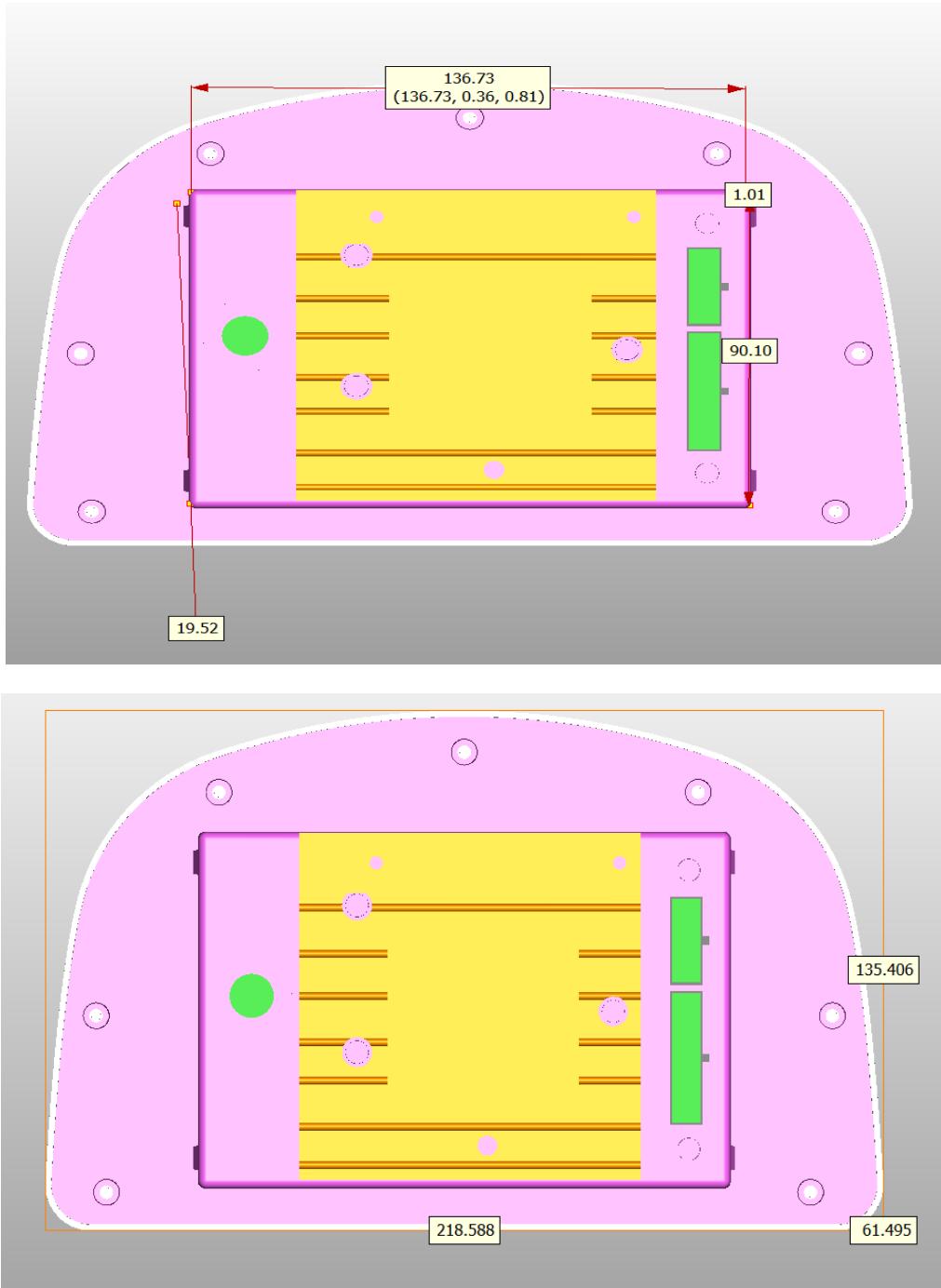


20P Interface Definition

| | | |
|---|------------------|-----------------------|
| 1485B/RX Communication 485 interface | | 0-6V/≤50mA |
| 2Canh Comms Canh signal | CANH | 0-6V/≤50mA |
| 3485A/TX Communication 485 interface | | 0-6V/≤50mA |
| 4CANL communication CANL signal | CANL | 0-6V/≤50mA |
| 5Instrument Ground (battery ground) | | 8-16V/1A |
| 6Analog detect ADC input | | 0-5V/≤3mA |
| 7Far-beam input | Positive control | L:0-3V H:12V±1V/≤5mA |
| 8Analog detect ADC input | | 0-5V/≤3mA |
| 9Left turn input | Positive control | L:0-3V H:12V±1V/≤5mA |
| 10Positive and negative control 1 input | | L:0-3V H:12V±1V/≤5mA |
| 11Right turn input | Positive control | L:0-3V H:12V±1V/≤5mA |
| 12Profile light input | | L:0-3V H:12V±1V/≤5mA |
| 13P File-enter | | L:0-3V H:12V±1V/≤5mA |
| 14Positive and negative control 2 input brake positive control input | Brake+ | L:0-3V H:12V±1V/≤5mA |
| 15N File-enter | | L:0-3V H:12V±1V/≤5mA |
| 16Positive and negative control 3 input (d-positive control input) | Positive control | L:0-3V H:12V±1V/≤5mA |
| 17D-input (available for voltage selection, grounded at 60V, suspended at 48/72V) | | L:0-3V H:12V±1V/≤5mA |
| 18Line speed input (DC motor line speed input) | | 0-90V/0-5mA |
| 19Houle input | | 0-16V/≤5mA |
| 20Battery voltage (battery voltage acquisition) | | ADC input 0-90V/0-5mA |

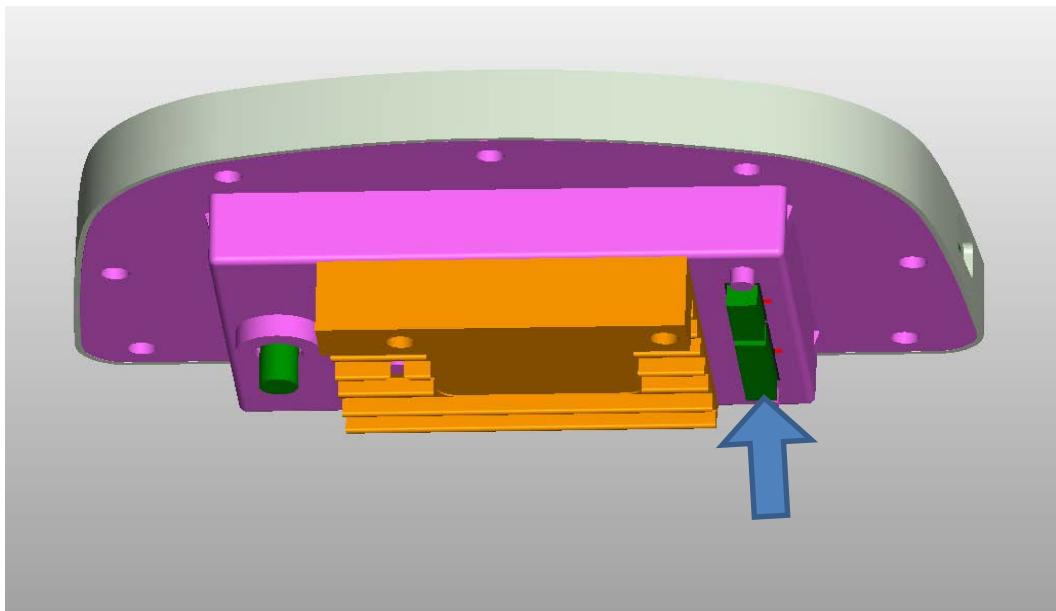
5. Installation structure dimensions and interfaces

5.1 Dimensions of mounting structure

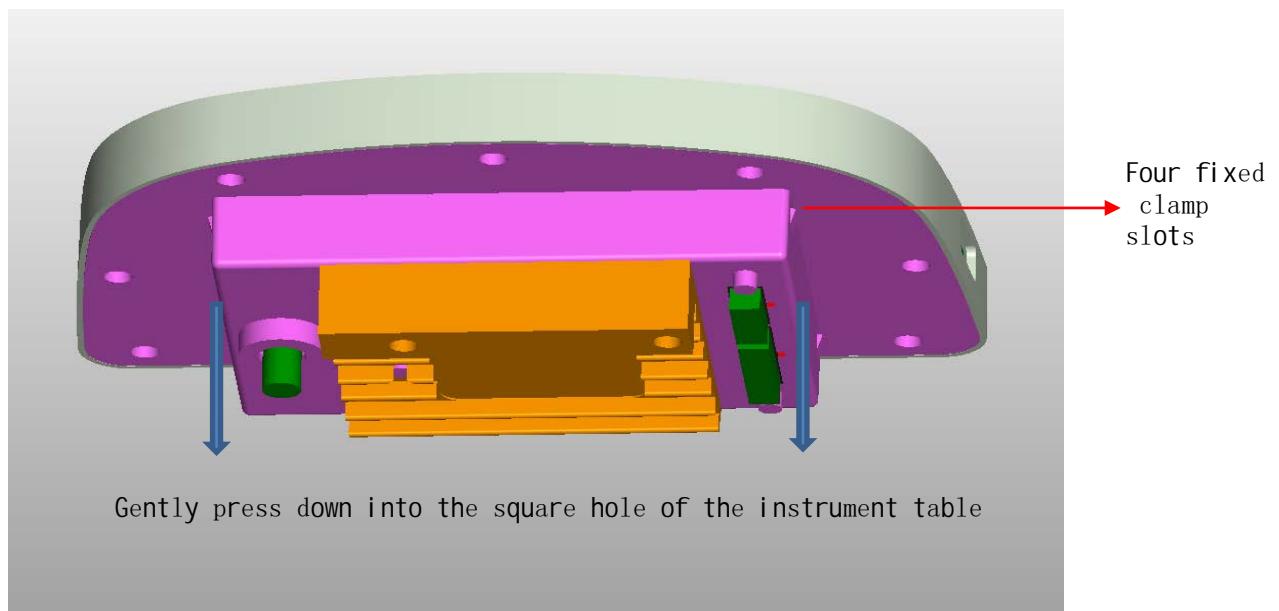


6. Installation Instructions

1. The multimedia instrument assembly taken out from the packing box defines the direction according to the corresponding interface of the whole car wiring harness, plugs into place, and confirms that the inverted hook has been completely fixed without falling off.



2. Press the back base of the multimedia instrument to the direction shown in the drawing, embed the body into the square hole of the instrument table, as shown in the drawing below.



7. FCC warnings

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.