BZB**2**GEAR®

HD Conference Camera
User Manual
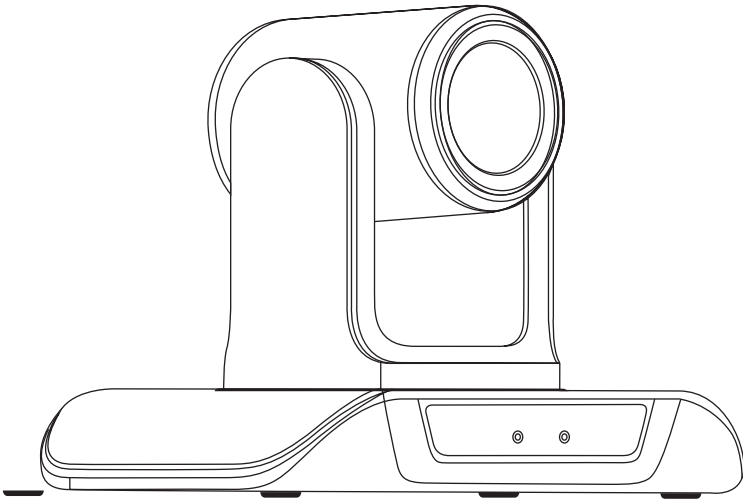
BG-CAM-USBHDMI10X
BG-CAM-USBHDMI20X
BG-CAM-USBHDMI30X

Contents

Attention

1. Foreword

Thanks for choosing BZBGEAR conference cameras.
Please read this manual carefully before using the product.

2. Notice

·To avoid damage from stress, violent vibration, soaking during transportation, storage and installation.
·Take care of each components of camera during installation, and install camera at where is affordable enough, to avoid drop or scratches of camera case.
·Handle the camera parts gently, do not squeeze the camera units hard. Please do not touch the camera lens by hand directly to avoid the lens scratched and image quality affected.
·Do not apply excessive voltage. (Use only the specified voltage) Otherwise, you may get an electric shock or a fire may occur.
·Do not aim the camera at the sun or the other high luminous obje-cts, otherwise it may cause image blurring or lens flare, even cause permanent damage to the camera.
·Do not clean camera with active chemical or corrosive detergents, and remove dust or dirt on the surface of the lens with a blower (Commercially available)
·Do not disassemble any camera components, in case of abnormal operation; contact your authorized dealer or the store where you purchased the product.

3. Supplied Accessories

(1) HD conference camera

(2) Manual

(3) DC12V-2A power
    supply

(4) Remote control

(5) USB cable

(6) RS232 Cable

Performance Characteristics

1. Camera technical parameters

Electric		Communication	
Input Voltage	DC12V	Baud	2400/4800/9600bps
Power	12W	Protocol	VISCA/PELCOD/P
Decoder	internal	Address Set	0~255
Operation		**Surroundings**	
Horizontal Rotation	±170°	Operating Environment	0°~+50°
Vertical Rotation	120°	Operating Temp	0~95%
Rotation Speed	100°/s		non-condensing
Physics		**Installation Method**	
Preset Point	9 remote controls Pelco Protocol 256	Support desktop,wall mount,ceiling mount and tripod installation	
Net-Weight	1.46kg		

2. Camera Parameters

Spec lens	10x Optical Zoom	20x Optical Zoom	30x Optical Zoom
Image Sensor	1/3"Exmor CMOS	1/3"HD CMOS	1/3"CMOS
Effective Pixel	2.38Mega pixel		3.28Mega pixel
FOV	51.3°~4.64°	55.5°~3.0°	69.5°~2.7°
Focal Length	F=5.0-50.0mm	F=4.7-94.0mm	F=4.7-140.0mm
HD Format	1080P(1920*1080) 720P(1280*720)		
HD Interface	USB3.0,HDMI		
Resolution	1080P/720P		
Signal System	NTSC/PAL		
Control parameters			
Preset	IR remote control supports 9 presets PELCO,Protocol supports 256 presets		
Translation/Pitching Angle	-170°~170° -30°~90°		
Translation/Pitching Speed	100°/s 80°/s		
Control Protocol	VISCA,PELCO-D,PELCO-P(RS-232, RS485)		
Common Parameters			
Size	Product：260*175*180mm packaging：296*225*218mm		
Color	black		

Quick Start

1. Interface definition
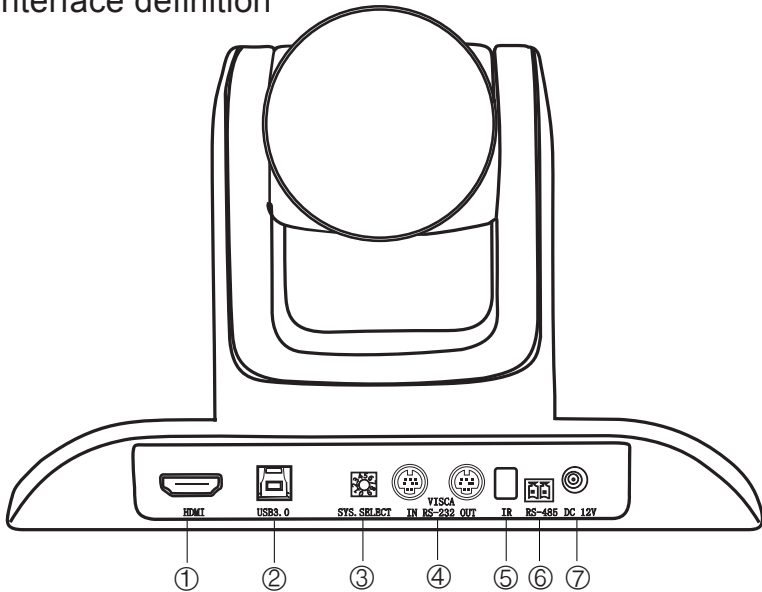
1.HDMI	2.USB3.0	3.Sys Select
4.RS232	5.IR Receiver	6.RS-485
7.DC12V		

2.Interface diagram
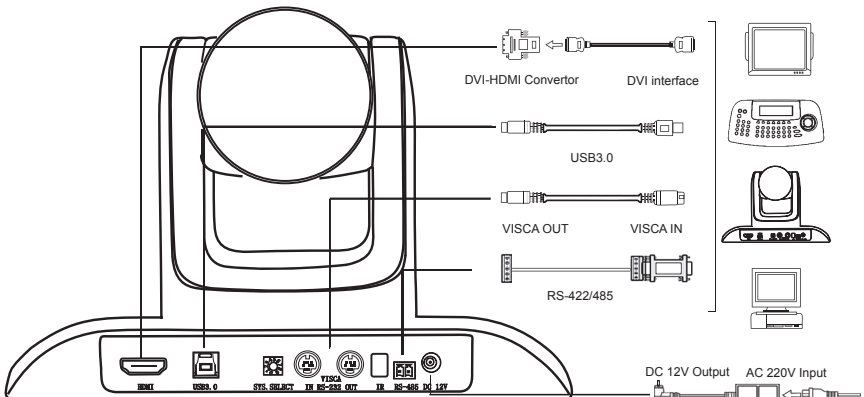
3.Installation instructions

(1)Surface Installation

Put the camera on the desk flat, and make sure the camera in level. If want to put the camera on oblique surface, please make sure the angle of inclination less than 15 degree for ensure camera pan and tilt working in normal operation.

(2) Tripod Mount Installation

Twist the tripod's screw on the camera tripod hole, then the tripod could be installed on the bottom of camera. The tripod screw must fit below.

Screw specification 1/4-20UNC

6mm
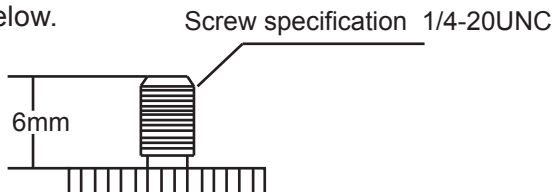
(3) Ceiling Mount Installation

1.Fix the upper bracket to the ceiling

Ceiling

Upper bracket

2.Fix the lower bracket to the ceiling

lower bracket

Ceiling

3 Close the upper and lower brackets

4.Lock the upper and lower brackets

Screw hole Screw hole

Screw hole
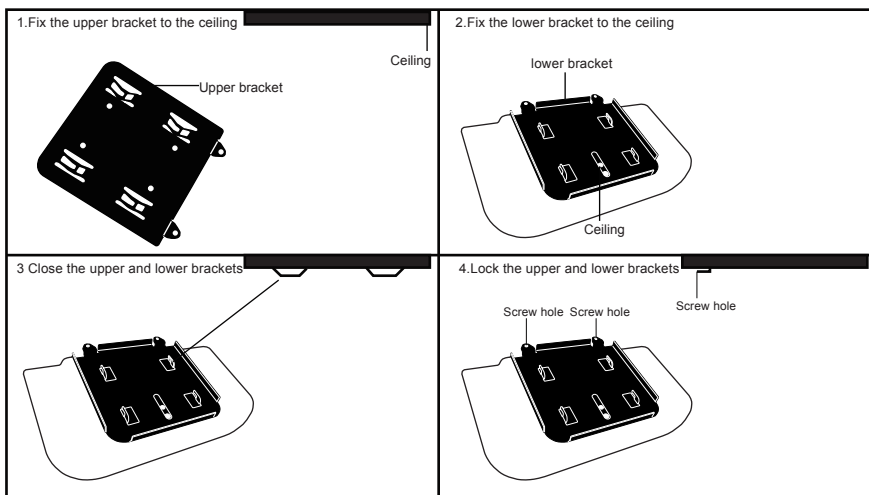
Remote control button description

Remote control instructions

(1) Remote Control Launch Window

(2)【POWER】: Standby Button, pressing it, camera goes into Standby Mode; pressing again, camera goes Power ON.

(3)【Camera Pan/Tilt Reset 】: Camera - Pan/Tilt reset Function same with⑧（P/T-RESET）

(4)【CAMERA SELECT】Choose the camera number that needed to control, to correspond the dial-up code on the back of camera;

(5)【POSITION】: Preset position setup keys, include【PRESET】and【RESET】. Press PRESET+NUMNER: to setup preset; Press RESET+NUMBER: to clear preset.
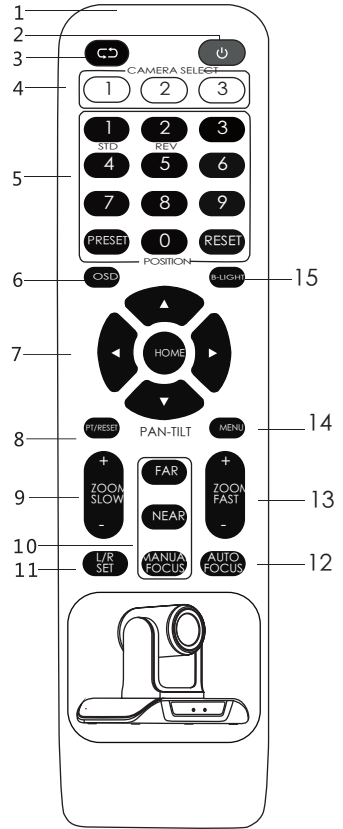
(6)【OSD】: Turn on/off the on-screen mode or enter the movement menu;

(7)【PAN-TILT】Camera rotation control - key:

Press this button and move by the arrow - direction, press

Press 【HOME】 to back to the center of - vertical and horizontal position.

(8)【P/T Reset 】: Camera Pan/Tilt reset；

(9)ZOOM SLOW

【Zoom SLOW+】T：Zoom out at low speed

【ZOOM SLOW-】W：Zoom in at low speed

(10) Manual Focus Mode

【MANUAL FOCUS】：Start manual focus function

【FAR】：Manually far focus button, clearer for the distant - objects, loose finger to stop.

【NEAR】：Manually near focus button, clearer for the nea-rby objects, loose finger to stop.

(11)【L/R DIRECTION/SET】：Press this function key, then:

press 1（STD）camera rotating horizontally in regular installed direction

press 2（REV）camera rotating horizontally inreversed - installed direction

(12)【AUTO FOCUS】：Auto Focusing Button

(13) Fast Zoom Key

【ZOOM FAST +】：Zoom out at fast speed

【ZOOM FAST -】：Zoom in at fast speed

(14)【MENU】Enter/Exit the menu

(15)【BACK LIGHT】Backlight compensation

★Attentions for Remote Control

1. If remote control doesn't work, please replace batteries.

2. If there is an object between remote control and specialized remote control sensor, the camera will not work.

Please make sure the remote control is aimed at the sensor which in front of the camera when controlling it.

Common Operations Introductions

1. Camera Select

CAMERA SELECT

| 1 | 2 | 3 |

Refer to the dial-up at the back of camera and choose camera address number that you want to control（1-3）。

2. Camera Direction Control

⬱ Turning up

⬲ Turning down

◁ Turning to left

▷ Turning to right

▲ ◀ HOME ▶ ▼
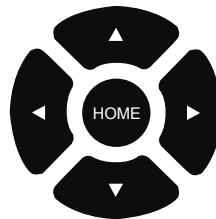
*Note: Press direction key to move the camera.Press the direction key when you need to change the angle. If you want to move the camera slowly, just click the direction key; If you want to move the camera fast at a large scale, just long-press the button.

3. Camera Focusing Mode Control

【AUTO】Switch the focus mode to AUTO
【MANUAL】Switch the focus mode to MANUAL
【FAR】Far focus manually
【NEAR】Near focus manually

FAR

NEAR

MANUAL FOCUS   AUTO FOCUS
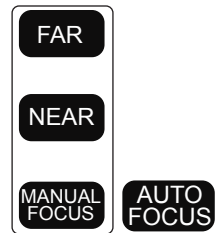
4. Camera Zoom Control
Press any one of the 4【ZOOM】
to make the zoom functioning.

5. Back Light
The subject will become dark when there is a
light source behind it, press【BACK LIGHT】
to use back light shooting function. To cancel,
press【BACK LIGHT】again.

6. Preset Setup,Call,Cancel

(1) Reserve Preset: Press【PRESET】
then press one of the number（1-9）to
reserve a preset that correspond to the
NUMBER.
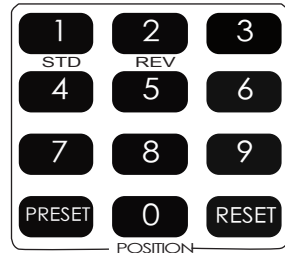
*Note: you can setup 9 presets at most by the remote control.

(2) Call Preset: Press the NUMBER（1-9）directly to call the-
reserved preset.

*Note: It won't work if there's no preset reserved in the
corresponded number.

(3) Remove Preset: Press【RESET】, then press one of the
number（1-9）to remove a preset that correspond to the
NUMBER.

Camera Menu Setup

Menu Destription

Operate remote control, press 【MENU】 to enter main menu of video camera;

(1) Level I Menu - MAIN MENU：

```
┌─────────────────────────────────────────┐
│              MAIN MENU                    │
│  ---------------------------------------- │
│  LANGUAGE ENGLISH                         │
│  (SYS SET)                                │
│  （CAM SET）                              │
│  (T/P SET)                                │
│  (VIDEO RE)    1080P  60                   │
│  (RESET)                                  │
│  (HELP)                                   │
│                                           │
│                                           │
│  EXIT                                     │
└─────────────────────────────────────────┘
```
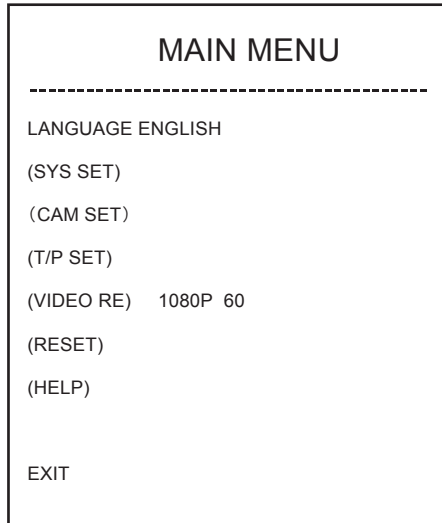
Video Format: Set up video format, 1080P60，1080P50，1080P30，1080P25，720P60，720P50 can be selected. (Dial-up prior)

Exit/MENU: Exit current menu, return to previous menu (same as this action for each MENU), select this action in first - level MENU then pop up preserving interface, it allow users-reserve all the settings in MENU to flash storage. Press 【MENU】 to exit.

(2) Level II Menu - SYS SET:

PROTOCOL: Three protocols: VISCA/ PELCO_D/ PELCO_P can be set.

ADDRESS: 0-255, total 256 addresses can be set.

BAUD: Three Bauds: 2400/4800/9600 can be set.

```
┌─────────────────────────────────────┐
│                SYSTEM                 │
│  ------------------------------------ │
│  PROTOCOL  VISCA/PELCO_D/PELCO_P      │
│  ADDRESS   0-255                      │
│  BAUD      2400/4800/9600             │
│  Con Pro   RS232/RS485                │
│  VERSION   1.0B                       │
│  MODEL     BG-CAM-USBHDMI_ _X         │
│                                       │
│  RETURN                               │
└─────────────────────────────────────┘
```

（3）Level II Menu - CAM SET

```
┌──────────────────────────────────┐
│             CAM SET               │
│  ------------------------------   │
│                                   │
│    EXPOSURE                       │
│    PIC ADJ                        │
│    LENS ADJ                       │
│                                   │
│    RETURN                         │
│                                   │
└──────────────────────────────────┘
```

EXPOSURE:Set up relevant exposure parameters
PIC ADJ:Adjust relevant picture characteristic parameters
LENS ADJ:Adjust lens working status

(4) Level II Menu - T/P SET

```
┌─────────────────────────────┐
│         T/P SETUP           │
│ ─────────────────────────── │
│  POSITION    OFF/1/2        │
│  SCE PRO     --             │
│  IMAGE       UP/DOWN        │
│  T/P SPE     1-15           │
│  SPEED       ON/OFF         │
│  CRU SPE     4-15           │
│  SER SPE     --             │
│  POS RES     OK             │
│                             │
│  RETURN                     │
└─────────────────────────────┘
```

POSITION:

OFF: Turn off this function;

1: After power on, T /P rotate to PRESET1 automatically;

2: After power on, T /P rotate to PRESET2 automatically.

Installation Method:

Set up the installation mode: regular installation or reversed installation; (Dial-up prior)

Adjust rotational speed of remote control T/P, minimum speed 1, maximum speed 10.

Speed adjustment switcher:

ON: T/P speed adjustment effects, users can adjust the T/P rotational speed manually;

OFF: Cannot adjust the T/P rotational speed, the speed will adjust itself automatically based on current focal length.

Cruising Speed:

Adjust automatic cruise speed of T/P when power on;

Remove PRESET:

Remove all the presets, when this function highlighted, user press【HOME】, it shows "OK" if presets are removed successfully.

(5) Level II Menu – RESET

```
                RESET
    ---------------------------------------
    SYSTEM      NO/YES
    CAMERA      NO/YES
    TITLE/PAN   NO/YES
    ALL         NO/YES

    RETURN
```

User control the left right key to adjust the status "YES" ,
then press【HOME】, setting takes effect.
SYSTEM RESET:
Reset system (parameters in Level II Menu SYSTEM SETTING
CAMERA RESET:
Reset movement (parameters in Level III Menu CAMERA -
SETTING)
T/P RESET:
Reset T/P (parameters in Level II Menu T/P SETTING)
ALL RESET:
Reset all parameters.

(6)Exit MENU

```
                EXIT
    -----------------------------------
     SAVE    YES/NO

     HOME/RETURN
```

Save all current settings, User control the left right key to
adjust the status "YES" , then press【HOME】, setting takes
effect, menu automatically exit.

(7) Level III Menu - EXPOSURE

```
                EXPOSURE
    -----------------------------------
    MODEL      Auto
    SHUTTER    1/25
    IRIS APE   12
    GAIN       1
    BRIGHT     0-100
    BAC LIG    ON/OFF
    COMP LEV   0-100
    WIDE DYN   ON/OFF
    WIDE LEV   0-31


    RETURN
```

EXPOSURE
Auto / Manual
SHUTTER:
Adjust shutter speeds.
IRIS APE:
Set up iris aperture sizes.

```
                Help
    -----------------------------------
     ∧ ∨  SELECT MENU

     <  >  CHA ITEM VAL

      HOME MEAN TRUT

      MENU MEAN RETURN
```

GAIN:
Adjust luminance gain.
BRIGHT:
Adjust image luminance.
COMP LEV:
ON/OFF, adjust backlight effect.
WIDE DYN:
ON/OFF, adjust overall luminance effect of image.

(8)Level III Menu – PICTURE ADJUST

```
          PICTURE ADJUST
   ------------------------------------
   W.BAL        AUTO
   R.GAIN       15
   B.GAIN       15
   GAMMA        0-13
   SARUAT       0-100
   ACUTENES     0-31
   FLICKE       ON/OFF
   OISE RE      0-31
   CONTRAST     0-100
   LR REVER

   RETURN
```

SATURATION:

Adjust image color effects.

CONTRAST:

Adjust image resolution.

(9)Level III Menu - LENS ADJUST

```
┌─────────────────────────────┐
│         Lens ADJUST         │
│ ----------------------------- │
│  FOCUS   AUTO/MANUAL        │
│                             │
│                             │
│  RETURN                     │
│                             │
└─────────────────────────────┘
```
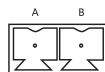
FOCUS:
AUTO/MANUAL MODE

PS: RS-422/485 and RS232 Pins distribution

1、Control Interface

(1)RS485 Interface Distribution

PIN NUM	FUNCTION
A	DTR IN+(connect to RS-485)
B	DSR IN+(connect to RS-485)

(2) RS-232 Interface Distribution

VISCA RS-232C IN

```
        7
  8           6
  5           3
  2           1
```

```
1.DTR          1.CD
2.DSR          2.RXD
3.TXD          3.TXD
4.GND          4.DTR
5.RXD          5.GND
6.GND          6.DSR
7.N.C.         7.RTS
8.N.C          8.CTS
               9.RI
```
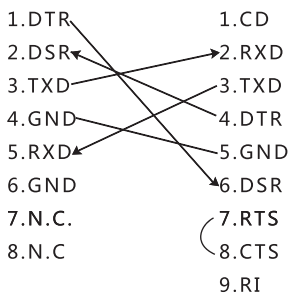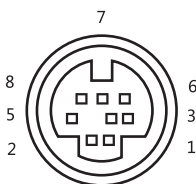
2、Remote Control Match

CAMERA SELECT

| 1 | 2 | 3 |

Set camera's remote control address.

Point the arrow to 1, Short press 1 on camera select to select the camera 1.

Point the arrow to 2, Short press 2 on camera select to select the camera 2.

Point the arrow to 3, Short press 3 on camera select to select the camera 3.

Troubleshooting

Before request service to serviceman, it can according to below methods to remove failures, if still can't be solved, please contact us for help.

Q:The video of camera cannot be displayed on the screen.

A:Please check the connection between power cable,video cable, camera and monitor, fix the connector on each end.

Q: It's unable to Pan, Tilt and zoom camera.

A:Because menu was displayed on monitor. Please re-operate after exit menu.

Q: Why the camera rotates for about 10 seconds after power on.

A:This is the normal self-test of the camera.

Q: Poor Image quality while using in church or other low-light conditions.

A:1 Press【BACK LIGHT】on remote control or menu (ON/OFF) to adjust backlight effect.

2 Arrange the church lighting properly

Q:Remote control is not working or insensitive

A: 1 Not work, please replace batteries.

2: Not sensitive: 1Choose the correct "IR select" number to meets camera. 2 Control the camera within 15m 3 Remove the obstacles 4 Aim at the sensor which is in front of the camera when controlling it.

Q: USB interface is not identifiable.

A: Please check USB cable and extension cable are well connected or not. If yes, change to another USB interface and try to connect again.

Q No image after HDMI interface connects.

A: 1 check the HDMI cable and connected device are normal.

2 check the video format that is supported by the connected device or not. If not, adjust the video format according to the connected device.

3 Recommended cable is no longer than 30m.

Q:It was not been controlled via RS232/RS485 when camera connect to PC.

A:Make sure it is a correct connection between camera and PC. (Reference to RS-422/485 and RS232 Pins distribution in page 16.)

Q:Why no wall mount brackets?

A: Camera comes with ceiling mount, wall mount or tripod brackets needs to buy separately.

Q: Does this camera has built-in mic?

A: No, our cameras comes with no built-in mic.

Q:Can we control the camera only by the remote control?

A: We can control the camera by remote control. Keyboard controller (joystick), and software.

Maintenance Services

All products purchased from our company are guaranteed to keep in good repair for 18 months. If there are any quality problems during the guarantee period, we will maintain for free.

Under any of the following warranty, elated maintenance costs will be collected:

1. Product was not normal used.

2. Fire, electric shock, outside object collapse or other natural disasters causes make the equipment damage.

3. Unauthorized repair, misuse, abuse and change.

Mission Statement

BZBGEAR manifests from the competitive nature of the audiovisual industry to innovate while keeping the customer in mind. AV solutions can cost a pretty penny, and new technology only adds to it. We believe everyone deserves to see, hear, and feel the advancements made in today' s AV world without having to break the bank. BZBGEAR is the solution for small to medium-sized applications requiring the latest professional products in AV.

We live in a DIY era where resources are abundant on the internet. With that in mind, our team offers system design consultation and expert tech support seven days a week for the products in our BZBGEAR catalog. You' ll notice comparably lower prices with BZBGEAR solutions, but the quality of the products is on par with the top brands in the industry. The unparalleled support from our team is our way of showing we care for every one of our customers. Whether you' re an integrator, home theater enthusiast, or a do-it-yourselfer, BZBGEAR offers the solutions to allow you to focus on your project and not your budget.

Warranty

BZBGEAR wants to assure you peace of mind. We're so confident in the quality of our products we are offering a three-year warranty.

For complete warranty information, please visit BZBGEAR.com/warranty.

For questions, please call 1.888.499 9906 or email support@bzbgear.com.

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