

# BOLIN

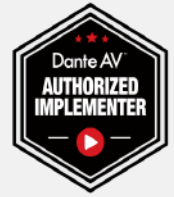
## Dante AV-H™ PTZ Camera



**Once Again  
Dante AV-H™ PTZ Camera  
Joins Bolin's Dante AV™ Solution Family**

# Dante AV™ -H PTZ Camera

Bolin was in a unique position to be among the very first to create Dante AV-H™ PTZ cameras. Dante AV-H™ is a software-based solution, it offers lower cost and network bandwidth requirements, with many of the core features of Dante AV™. These include compatibility with Dante Controller, up to eight channels of Dante audio, and Interoperability with AV-over-IP products from multiple vendors.



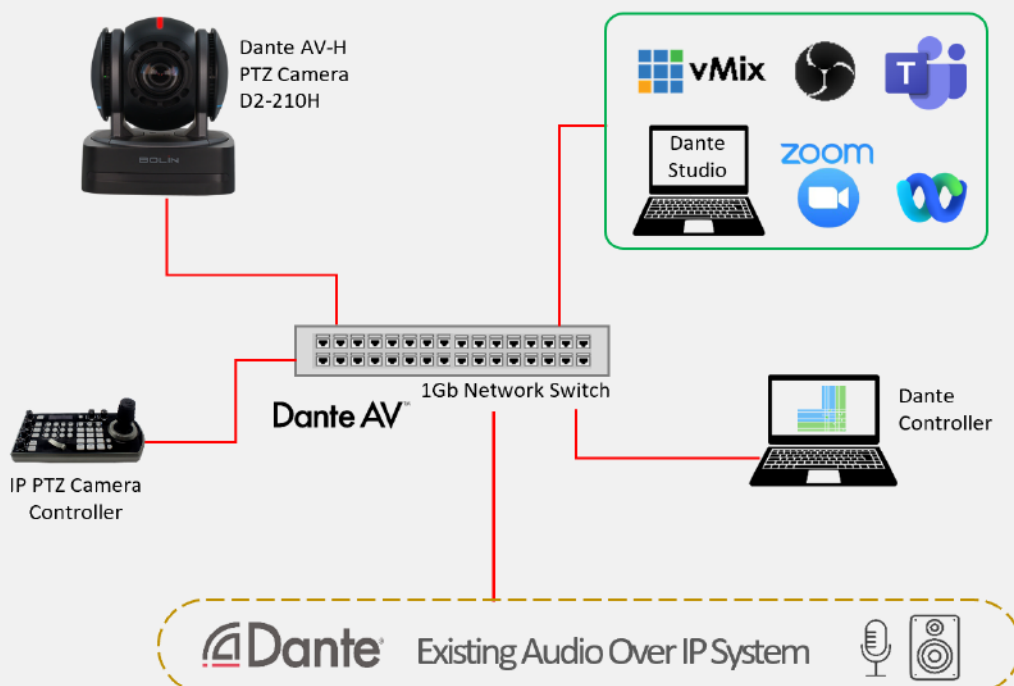
**Just like Bolin's Dante AV Ultra™ line of products**, these cameras are designed to seamlessly integrate into an existing Dante audio ecosystem. The D2-210H/ D2-220H PTZ camera is managed using Dante Controller Software, providing flexible, independent audio and Dante AV™ video routing across your network. Dante AV-H™ video can be sent to Dante Studio™ (Dante Video RX/TX and Viewer) for applications like live studio, video production, video conferencing and educational cases.

Dante AV-Ultra™ vs Dante AV-H™

- **Ultra**
  - **High Quality**
  - **Extremely Low Latency**
  - **Perfectly Timed Audio and Video**
- VS
- **A Light-Weight Codec**
  - **Lower Bandwidth**
  - **Low cost**
  - **H**

## Dante Ecosystem Friendly

- Instant compatibility with over 3000 existing Dante-enabled products.
- Unified control of camera audio and video using familiar tools - Dante Controller and Dante Domain Manager (DDM)
- No need to replace network infrastructure. Dante AV™ works with already installed, cost-effective 1Gbps network gear.
- Use for Dante ecosystem applications: House of Worship, Video Conferencing, Video Production, Education.



## D2-210H

FHD PTZ Camera 10X

## D2-220H

FHD PTZ Camera 20X



### OVERVIEW

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#### Meet Dante AV Software Environment

Bolin's Dante AV-H™ IP PTZ camera enhances your PC's capabilities and extends the functionality of software applications with Dante Studio. Dante Video RX™, Dante Video TX™, and Dante Video Viewer™ provide system designers, integrators and end users with a completely networkable AV workflow.

#### Seamlessly integrate with Dante Ecosystem

Audinate's latest software-based Dante AV-H™ codec integrates seamlessly into the Dante audio and video over IP ecosystem, using a standard 1 Gbps network. Video integration into the Dante ecosystem just got more economical, and easier with software applications.

#### Multicast Mode

Point to Multipoint and Point to Point Distribution – supports both unicast and multicast video distribution.

#### High Quality Imaging - Full HD

Bolin's Dante AV-H™ PTZ cameras are equipped with Sony sensor to provide brilliant, high-quality images in 1080p60 resolutions with 10x and 20x optical zoom.

#### Video Resolution

Two models are available: D2-210H with 10X optical zoom range with a wide horizontal angle of view, and D2-220H with 20X optical long-range zoom capability. Both cameras support up to Full HD 1920x1080p, 60/59.94 image resolutions.

#### Video Output

Deliver Dante AV-H™ version IP streaming video to the Dante network, and local HDMI video and USB streaming output to conventional workflows in FHD. D2-220H also provides 3G-SDI, lossless baseband video for live production use.

#### AI Featured Smart Focus and Exposure

Built with Bolin's latest AI-powered face analytical engine which enables precise smart focus and smart exposure to bring customer a greater level of user experience and effective image quality improvement in a complex user environment.

## KEY FEATURES

D2-210H



D2-220H



### Color Matrix

- Convenient access to image Color Matrix via WebUI
- Easy adjustments to Gain and Hue for RGBCMY you can easily make subtle and specific corrections to the colors in your camera's image.

### Video Settings

Image parameter adjustments include exposure, focus, iris, shutter speed, white balance, gamma, wide dynamic range, E-flip/mirror and more with configurable video settings.

### PTZ Movement

Extremely quiet and smooth operation for Pan/Tilt movements combined with enhanced adaptive, variable, and super slow speed control provides accurate and effective operation experiences. Picture Profile Preset: Image parameter settings restored with presets and quick access operation.

### Remote Control and Setup PTZ Camera

Bolin's Dante AV-H™ PTZ cameras support serial RS422, Dante AV™ Serial over IP control if a Dante AV Ultra™ encoder is used, and Visca over IP control via Dante AV™ network. Remotely control pan, tilt, zoom movements with full access to camera's image parameter settings via keyboard controller or IR controller.

### Audio

HDMI/SDI/USB embedded high-quality audio and Dante AV™ video streaming embedded audio with support for Mic-in and Line-in audio input. The audio that is input to the camera can be routed within a Dante audio over IP system.

### Ease of Installation and Use

Simply connect one network cable from camera to any stand ethernet network/POE device to access to existing Dante Audio-Over-IP system.

### Always Up to Date

Free firmware updates, upgrade via IP interface to keep DanteAV camera features and performance up to date and even for customized function upgrades.

# SPECIFICATIONS

Model No.	D2-210H	D2-220H
Product Name	Dante AV-H PTZ Camera	Dante AV-H PTZ Camera
<b>Camera</b>	<b>10X Full HD</b>	<b>20X Full HD</b>
Image Sensor	Sony Progressive scan CMOS image sensor 1/2.8 type	
Number of effective pixels	1920X1080, 2.13 MP	1920X1080, 2.13 MP
Zoom	Optical Zoom 10X, Digital Zoom 16X	Optical Zoom 20X, Digital Zoom 16X
Focal Length	f= 4.34 mm (Wide) to 35.17 mm (Tele)	f= 5.2 mm (Wide) to 104 mm (Tele)
Aperture	F1.85 (Wide) to F2.63 (Tele)	F1.6 (Wide) to F3.0 (Tele)
Horizontal Angle of View	68.8 °(W)~8.8° (T)	55.8° (W)~3.2° (T)
Vertical Angle of View	39.5° (W)~5.1° (T)	-
Min. object distance	10mm (Wide)	
Min. Illumination	0.5lux(color), 0.1lux(black)	
Shutter Speed	1/25~1/100K sec	
Focus	Auto, Manual, One Push	
White Balance	Auto, Indoor, Outdoor, OPW, ATW, Manual, SVL USER	
Exposure	Auto, Manual, Shutter/Iris priority	
Image Adjustment	Brightness, Color(Saturation), Contrast, Sharpness, HUE	
Back Light Compensation	On/Off	
E-Flip	On/Off	
WDR	On/Off	
Image Stabilizer	-	
Defog	Yes	
Mirror	Horizontal	
Day/Night	On/Off	
Contrast	Yes	
Color Gain	Yes	
Color Hue	Yes	
Color Matrix	Yes	
Black Level	-	
Gamma	Yes, 4 levels (0.45, 0.50, 0.55, 0.63)	
High Sensitivity	Yes	
Scene	Default, Clear, Bright, Soft	
Focus Zone	Face Priority, All Area, Upper Area, Central Area, Lower Area	
AI Face Detection Focus	Yes	
AI Face Auto Exposure	Yes	
Noise Reduction	2D/3D, 0-100	
S/N Ratio	≥50db	
OSD	Editable	
<b>HDMI Signal System</b>		
Video Format - HDMI	1920x1080p:60/59.94/50/30/29.97/25; 1280x720p:60/59.94/50/30/25	
Color Format	8bit(RGB), 12bit(YUV422),	
Color Space	YUV, RGB	
OSD Menu Display	YES	
<b>SDI Signal System</b>		
SDI Video Format	-	1080p:60/59.94/50/30/29.97/25; 720p:60/59.94/50/30/25
Color Precision	-	8bit(SDI), YCbCr, 4:2:2
Color Space	-	YUV
Standard	-	3G-SDI, SMPTE424M/SMPTE292M, TE 425-A(3Gb/s), with SMPTE352 SDI Metadata Supported
True Dual Output	-	SDI and HDMI has same video format when HDMI outputs FHD and lower.
OSD Menu Display	-	YES
<b>USB Signal System</b>		
USB Port	USB2.0, Type C	
Encoder	H.264/MJPEG/YUV2	
USB Video Format	1920×1080p60/50/30/25fps ,1280X720p60/50/30/25fps	
Compatible Integration	UVC, UAC	
Video Conference	Most video conference platform in the market	
Compatibility		
<b>Network-IP Streaming</b>		
Dante AV	Dante AV-H Licensed Software Module	
Dante Eco-Friendly	Instant Dante Ecosystem compatibility with Dante Studio, Dante AV RX software tools.Unified control of audio and video using Dante tools - Dante Controller and DDM (Dante Domain Manager)	
Video Codec	MJPEG, AVC/HEVC-H.264/265	
Network Interface	RJ45 port-Standard 1Gbps Ethernet	
IP Video - 1st Stream	1920×1080p60/59.94/50/30/29.97/25fps ,1280X720p60/59.94/50/30/25fps	
IP Video - 2nd Stream	704x576, 640x480, 640x360, 576x480, 352x228; Frame Rate P30/25	
True Dual Output	Video resolution and framerate: IP and HDMI can be output with different format (SDI and HDMI will be the same, SDI is the same or lower than HDMI, USB is the same as IP)	
IP Protocols	TCP/IP, ICMP, ARP, RTP, UDP, HTTP, DNS, DHCP, FTP, NTP	
Application Protocols	RTP, RTSP, RTMP, RTMPS, SRT	
Video Streaming	Unicast or Multicast	
Audio Compression	AAC-LC, Broadband Audio Encoding	
Multi-stream	2 Streams (Up to 8 viewers at the same time)	

# SPECIFICATIONS

Model No.	D2-210H	D2-220H
Product Name Camera	Dante AV-H PTZ Camera 10X Full HD	Dante AV-H PTZ Camera 20X Full HD
<b>Network-IP Streaming</b>		
Compatible Integration	ONVIF2.4 (Profile S), VISCA Over IP, Dante AV-H	
OSD	Customized OSD	
Browser Support	Cross Browser Compatibility - HTML5 support for Microsoft Edge, Google Chrome, Firefox, and Safari	
Latency - Codec	<100ms	
Bandwidth	1Mbps - 100Mbps	
	Results may vary depending on network configuration and management settings.	
<b>Interface</b>		
HDMI Video Output	HDMI 1.4X1 Type A	
IP Video Stream	Up to 1080p60	
SDI Video Output	3G-SDI, standard / 75 Ω (BNC x 1)	
Camera Control Interface	RJ45X1-RS422, RJ45X1-IP Control, IR Remote Control	
Control Protocol	VISCA, VISCA Over IP, Pelco P/D, Onvif	
LAN Port	RJ45X1 (1000BASE-T Ethernet port)	
USB Port	USB2.0, Type C	
USB Protocol	UVC, UAC	
Synchronization	Internal synchronization	
Tally Light	Tally lamp in front, Red and Green Color	
Dip Switch	Camera bottom panel: 8 PIN x 2	
Firmware Upgrade	Upgrade via IP for camera system MCU and Encoder	
IR ID	ID selector for IR controller, total 3	
Power Connector Type	DC12V (IEC60130-10 (JEITA standard RC-5320A) TYPE4 ) INPUT: RJ45, PoE(IEEE802.3af)	
Audio Input	MIC/LINE input, 3.5mm audio jack	USB port to 3.5mm audio jack
	AAC (Bit Rate(bps)48K*/64k / 96K / 128k; Sampling Rate(bps)44.1k / 48k	
Audio Output	USB port to 3.5mm audio jack-(Not Activated)	
Audio Output	Embedded with HDMI, SDI, IP, USB streaming, 24bit Stereo, sample rate: 44.1KHz, 48KHz, PCM24	
Audio S/N Ratio	≥85dB	
Audio THD+N	≤0.05%	
Audio Noise (RMS)	≤-90dB	
<b>Mechanical</b>		
Pan Movement	Horizontal:±170 degrees continuous pan (Zoom Adaptive Speed Range: 0.05° ~100°/S )	
Tilt Movement	Vertical:+90 degrees to -30 degrees (Zoom Adaptive Speed Range: 0.05° ~70°/S)	
Speed Proportional	Pan/Tilt Speed proportional to zoom range	
Preset Position	255 positions, Speed 100°/s, Accuracy: 0.05° 9 presets on remote controller	
Preset Speed	0~5 Level Adjustable	
Preset Memory	YES, ( Picture Profile Preset-Preset Memory for image parameters, like: Backlight Compensation, White Balance, R-Gain/B-Gain, Auto Exposure, Bright, Iris, Shutter, Gain, Aperture, Effect, Noise Reduction, Mirror, Gamma, Ex-COMP, Color Hue, Contrast etc.)	
Motionless Preset	On/Off	
PTZ Trace Memory	Yes, 4 (Supported via IP interface)	
Cruise	Yes, 12	
Adaptive PT	Zoom range adaptive Pan/Tilt speed	
Pan/Tilt Direction	Normal, Invert	
Quietness	NC35 or less	
Home Position	Support	
Environmental	Indoor	
<b>General</b>		
Body	Partial Magnesium Alloy	
Mount	Ceiling mount, Wall mount, Tripod	
Size of Tripod Screw Hole	1/4"-20UNC with safety joint	
Operating Temperature	55.8° (W)~3.2° (T)	
Operating Humidity	≤80% Suitable for Use	
Power Input	DC±12V, PoE (IEEE802.3 af Type 1 Calss 3)	
Power Consumption	Min:10W(Static state with no movement); Max:13W(Fully loaded operation)	
Dimension	143x143x161mm (LxWxH)	
Weight	1.5kg (Net weight)	
Body Color	Black	
<b>Accessory</b>		
Power Supply	12VDC 2A X1, Universal various power core.	
Remote Controller	Full Function IR Controller X1	
Serial Control Adaptor	RS232/RS422 adapter cable x1 For serial RS232/422 control	

## ORDER INFORMATION

- Visit Bolin Technology Website

## ACCESSORIES



VCC-RC-2  
IR Remote Controller



VCC-P12-2  
12VDC 2A Power Adapter



VCC-CC45RS  
RJ45 To RS232/RS422/485 Adapter



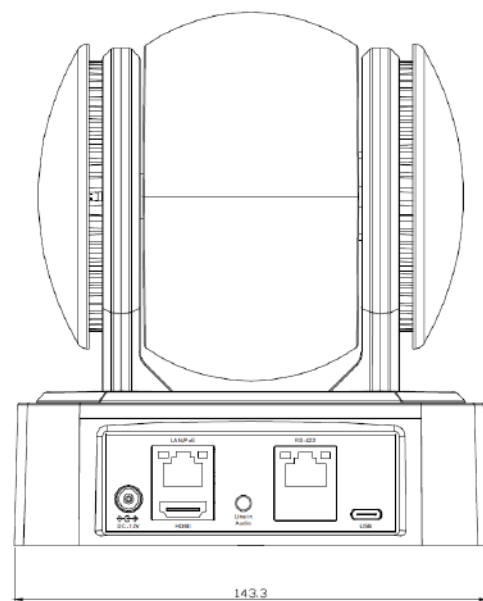
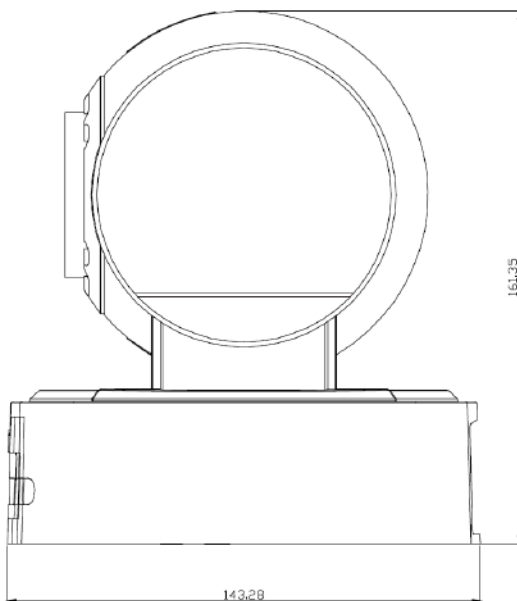
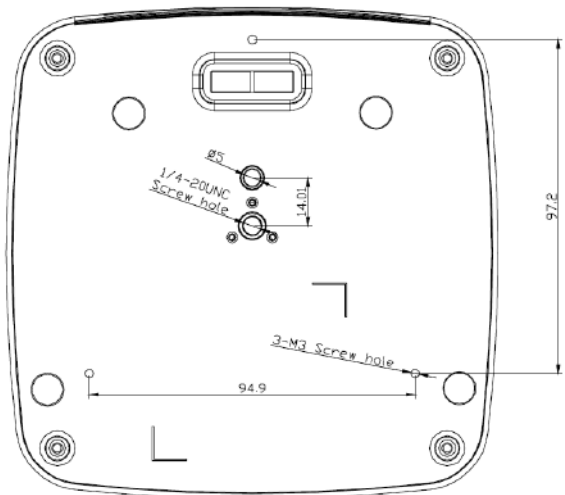
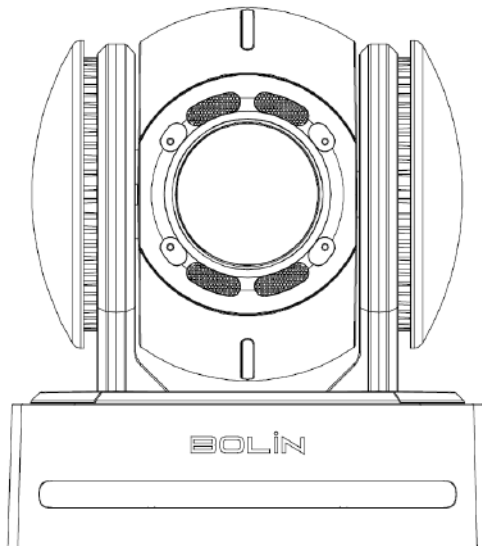
C-WM1B  
Wall Mount Bracket-Optional



VCC-CM  
Ceiling Mount Bracket-Optional

## DIMENSIONS

Unit: mm



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