

Red Line Product

# Outdoor PTZ Camera SD500 Series Gen 3



SD530H

**BOLIN**

# Full HD Outdoor Pan Tilt Zoom Camera

The SD530H outdoor PTZ camera, upgraded from Bolin's legacy outdoor SD500 Series, is equipped with the newest Sony image block with 30x zoom range UHD lens to provide Full HD (1080P60) crystal high-quality color image in tough low light environment and stable image with super image stabilizer to output 3G-SDI and IP video streaming for POV, broadcast, operational awareness, spots application in outdoor environment and even in extreme weather conditions.

## SD530H

## KEY FEATURES



- Sony 1/2.8 type CMOS sensor STARVIS II
- 30X zoom range
- Resolution 1080i59.94, 1080p60
- IP Video Resolution: Up to 1080p60
- Video Output: Simultaneous 3G-SDI, IP
- RTSP, RTMP, SRT Supported
- Visca Over IP, Onvif, FreeD, Serial Control Supported
- Extreme Low Light Performance
- Super Image Stabilizer
- Weatherproof IP67 rated

**FHD**  
1080p60  
1080i59.94

ZOOM  
**30X**

**HDMI**

**3G-SDI**

**IP**  
H.265  
HEVC

Image  
Stabilizer

Low Light

**VISCA**  
over  
IP

RTSP  
RTMP

FreeD

SRT  
READY

**Onvif**

**IP67**

## IMAGE MODULE

- The latest Sony new image block that achieves higher visibility by 1/2.8-type Full HD STARVIS II 2M image sensor and ISP from Sony.
- Equipped with full HD resolution 30x optical zoom
- Enhanced High Resolution image quality
- Advanced AF performance
- Wide Dynamic Range (Wide-D)
- Visibility Enhancer (VE)
- Super low light in color performance
- Super image stabilizer

**SONY**



# FEATURES

## Image Quality Upgraded in Day and Night

1/2.8-type Full HD STARVIS II sensor and ISP from Sony provides an overwhelming sense of resolution, and the advanced AF/AE/AWB functions reproduce faithful images even in low-light environments.



High Resolution-Day Light (Pre/New)



High Resolution-Night View (Pre/New)

## Super Image Stabilizer

- Smooth and stable images even in extreme conditions
- Enables capturing of highly precise video with reduced blurring even in harsh environments with strong vibrations by greatly improving blur suppression and image stabilizer.
- Equipped with the “Super” and “Super+ (plus)” \* modes.



Standard Image Stabilizer: ON



Image Stabilizer: Super+

## Low Light Performance

- Thanks to the new Sony CMOS STARVIS II sensor, the camera produces clear and clean image in extreme low light condition in color, and even with ICR on in color.
- The new ICR ON COLOR function enables the camera to capture shots with color even when the IR cut filter is removed.



General ICR: ON

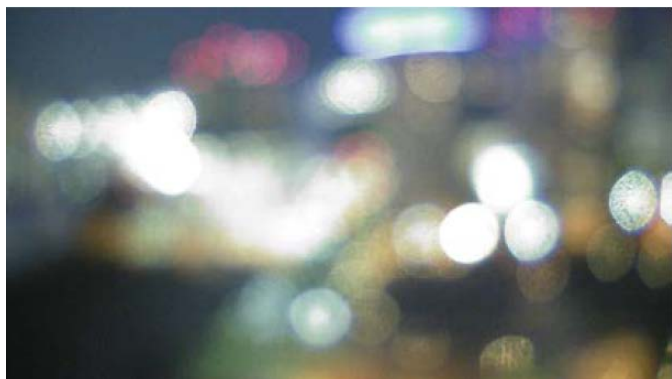


ICR: ON COLOR

# FEATURES

## Advanced AF Performance

Sony's proprietary AF algorithm enables zoom and focus at the same time. Algorithm design minimizes defocusing



Cannot zoom and focus at the same time in difficult conditions, cannot refocus after defocusing.



Zoom and focus at the same time in difficult conditions, algorithm design minimizes defocusing

## SD530H Output Interface

3G-SDI	Full HD IP Streaming	RTSP, RTMP, RTMPS, SRT	True Dual-Output
FreeD	AVC/HEVC	On-screen Character Generator	Serial/IP Control

## Full Broadcast SDI Format and Standard

### Full Format

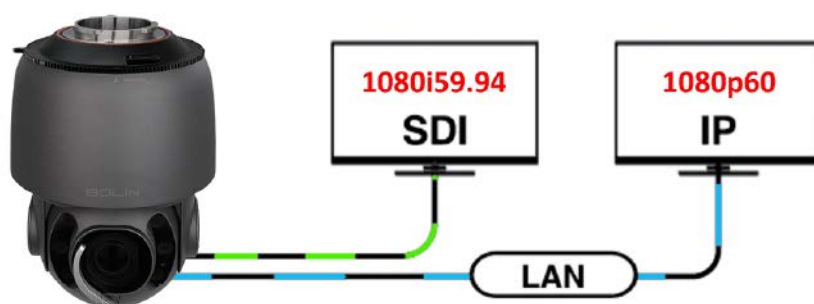
1920 x 1080P 60/59.94/50/30/29.97/25  
1920 x 1080i 60/59.94/50  
1280 x 720P 60/59.94/50

### SDI Standard

SMPTE 292M  
SMPTE 296M (1.5Gb/s)  
SMPTE 424M  
SMPTE 274M  
SMPTE 425-A (3Gb/s)  
With SMPTE352 SDI Metadata Supported

## True Dual-Output

IP and SDI video format can be set to independent formats for different application use



# FEATURES

## FreeD Protocol Integrated for VR/AR Video Production

FreeD helps provide all the axis data needed for a Bolin PTZ camera to intelligently and smoothly pan, tilt, and zoom while following targeted objects and people. Broadcasters can combine Bolin's FreeD-enabled PTZ cameras with available, sophisticated software to automate complex camera operations with spectacular results. It is especially useful for virtual live video productions with baseband video feeds and, with Bolin PTZ cameras, with ultra-low latency AV Over IP streaming.

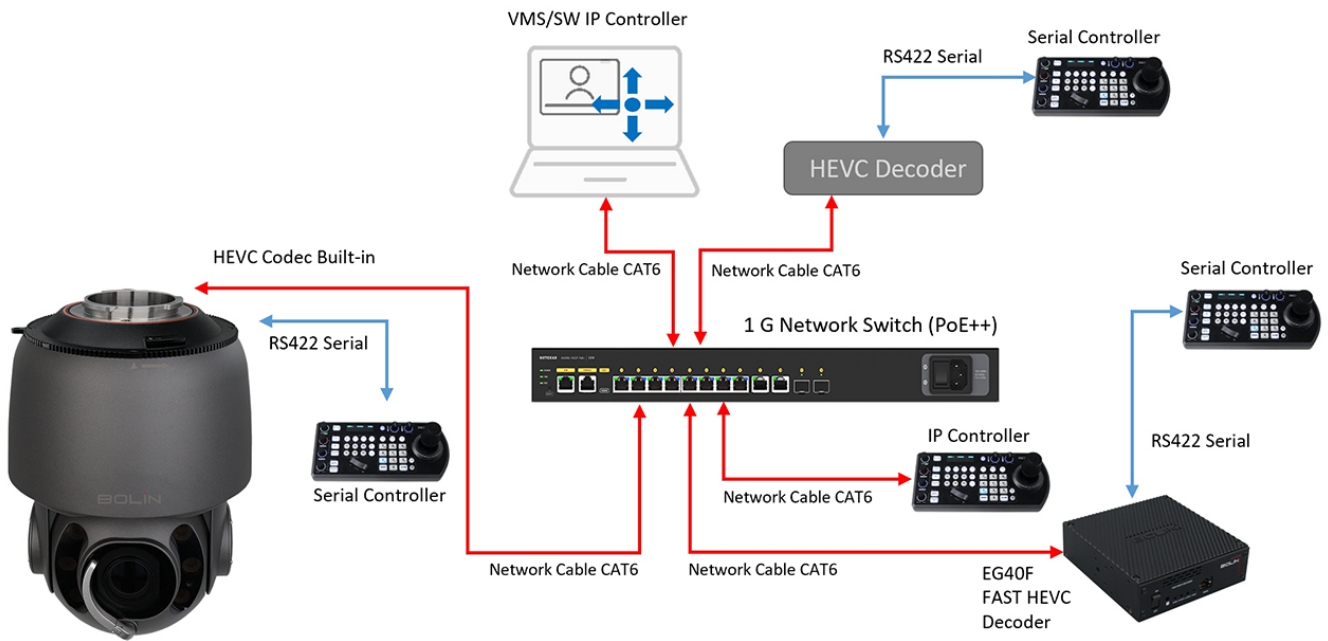


# OUTPUT



## Various Control Methods

- IP Control, Serial Control, IR Remote Control, Rest API-Software Control
- Protocol Supported: VISCA Over IP, ONVIF, VISCA, PELCO P/D, FreeD

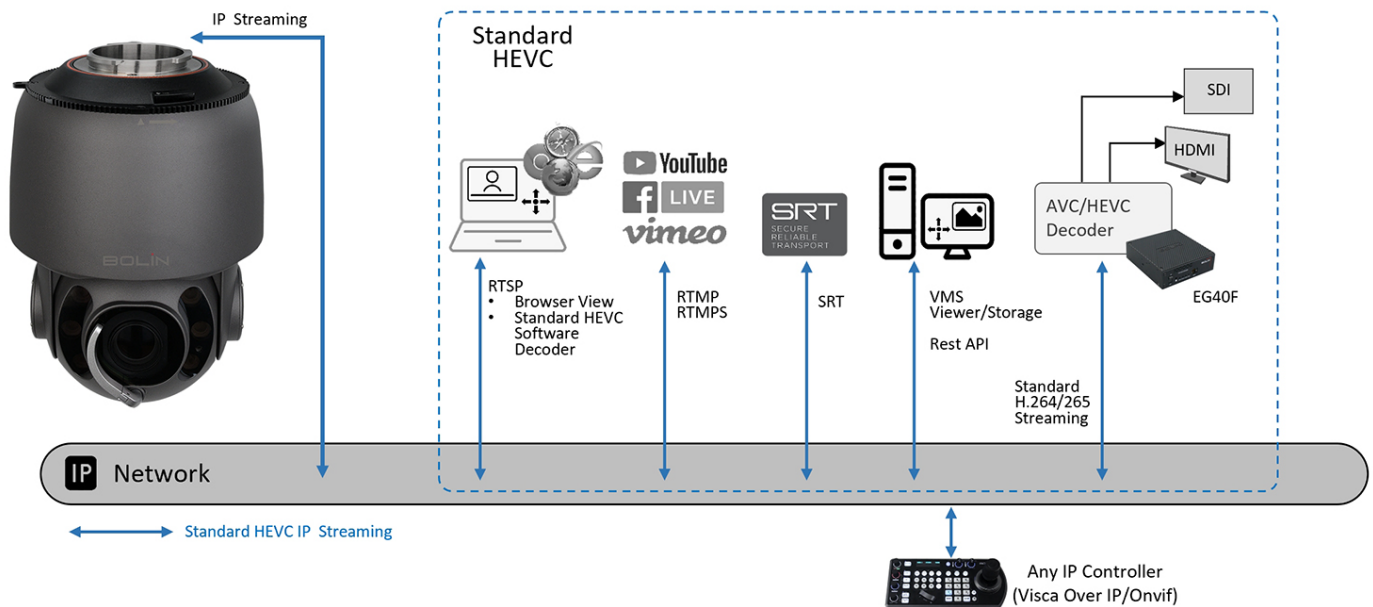


## CODEC - IP STREAMING

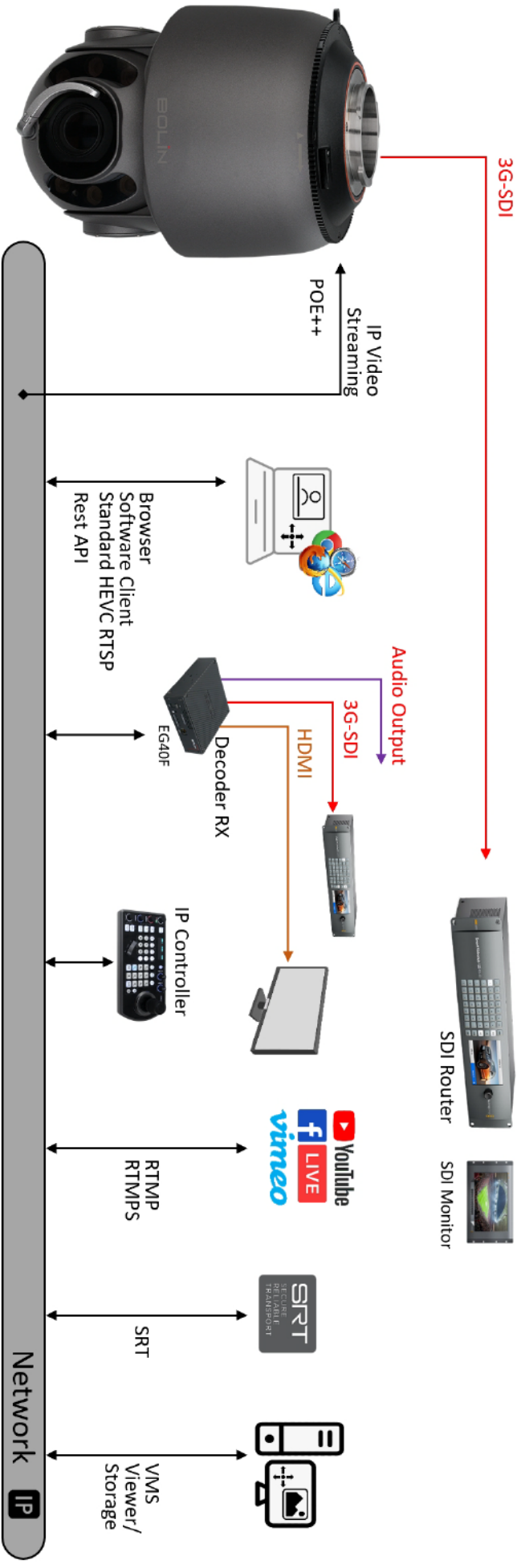
- Stand AVC/HEVC, H.264/265
- Up to Full HD 1080p60
- Dual stream, Multicast Support
- RTSP, RTMP, RTMPS, SRT, ONVIF
- IP Control protocol: Visca Over IP, Onvif
- Software Decode and Hardware Decode



## IP Workflow



# WORKFLOW



\*Genlock Input On Decoder is model specific

# 3rd GENERATION

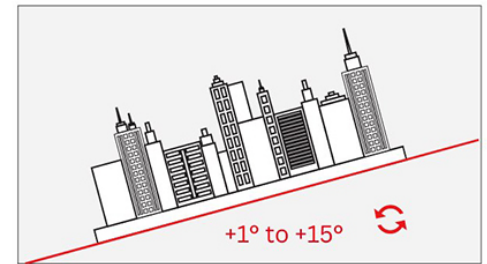
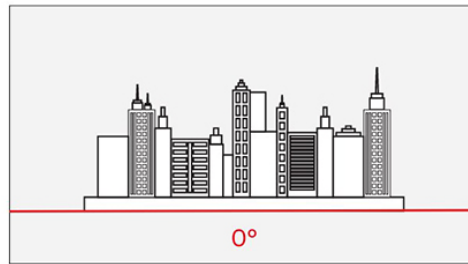
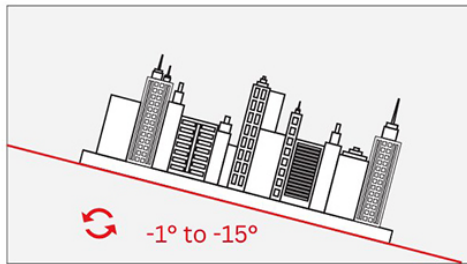
## Gen 3 Upgraded

- New Sony Image Block
- Smooth Control and Accuracy
- Fine PT Movement - Supports up to 255 VISCA steps
- Horizontal plane Rolling Axis Adjustment
- FreeD Control Protocol Enabled
- Image Character Generator
- Reinforced Rain Wiper
- Quick Install and Release Mount
- Tail Cable - Optional
- C5 Corrosion Resistant Power Coating



## Image Rolling Functionality

- Pan, Tilt, Zoom, + the 4th Axis
- Image Rolling Adjustment
- 1-15° horizontal adjustment capability, allows to adjust the image to be leveled with the angle at where PTZ camera aims to the subject.



## RUGGED and DURABLE

- Made for Extreme Weather Conditions
- Dustproof and Waterproof IP67 Rated
- Wind Load Durability, Non-Destructive and Steady Operation at 60 m/s or less
- -40 °C to 60 °C (-40°F to 140°F) Operational



# MOVEMENT

\*

## Smooth and Accurate Movement

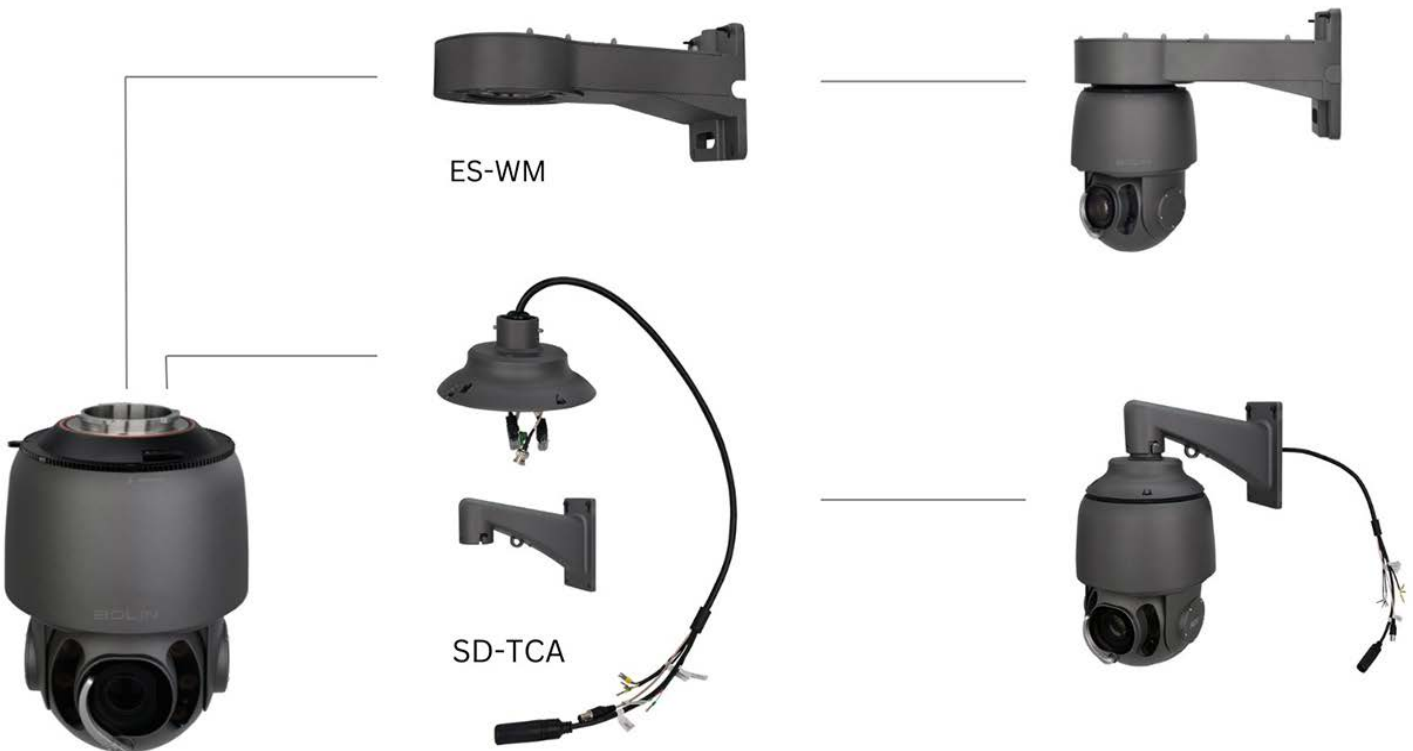
- PAN: Continuous 360°; Fully proportional speed 0.05° to 100°/s
- TILT: 120° (-90° to +30°); Fully proportional speed 0.05° to 50°/s
- Preset: 255 positions, Speed 150°/s, 0~5 Level Adjustable, Accuracy: 0.05°
- Picture Profile Preset
- Motionless Preset
- PTZ Trace Memory
- Noise Criterion less than NC55
- ZDP (Zero Deviation Positioning), Position Deviation Self-Correction



# INSTALLATION

## Two Installation Mount Options

- Quick release docking system
- IP67 Wall Mount Bracket (ES-WM)
- IP67 Tail Cable Wall Mount Adapter (SD-TCA)



# SPECIFICATIONS

<b>Model No.</b>	<b>SD530H</b>
<b>Camera Image</b>	<b>30X Full HD</b>
Image Block	Sony
Image Sensor	Progressive scan CMOS image sensor 1/2.8 type, STARVIS™ 2
Number of effective pixels	2.13MP
Picture elements	1920x1080
Lens	Optical zoom 30X
Digital Zoom	12X
Horizontal Angle of View	64° (W)~2.4° (T)
Focal Length	f= 4.3 mm (WIDE) to 129 mm (TELE)
Min. object distance	10mm (Wide), 1200mm (Tele)
Aperture	F1.6 (Wide) to F4.7 (Tele)
Min. Illumination (50%, High Sensitivity Mode ON)	ICR-OFF mode: 0.009 lx (Shutter Speed: 1/30 s), ICR-ON mode: 0.00008 lx (Shutter Speed: 1/30 s)
Min. Illumination (50%, High Sensitivity Mode OFF)	ICR-OFF mode: 0.09 lx (Shutter Speed: 1/30 s), ICR-ON mode: 0.00063 lx (Shutter Speed: 1/30 s)
Shutter Speed	1/1 sec to 1/10000 sec (22 steps)
Focus	Auto, Push, Manual
White Balance	Auto, ATW, Indoor, Outdoor, One Push WB, Manual WB, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto/Outdoor Auto)
Exposure	Auto, Manual, Shutter /Iris /Brightness priority
Features	Backlight Compensation, E-FLIP, Mirror, Day/Night, Flicker ,Contrast, Effect, Sharpness
WDR	Yes
ND Filter	/
Image Stabilizer	Yes: Super image stabilizer (Super / Super+)
Contrast	Yes
Color Gain	Yes
Color Hue	Yes
Color Matrix	Yes
Gamma	0-1
Noise Reduction	On/Off (level 5 to 1 / Off, 6 steps), 3D / 2D Noise Reduction
S/N Ratio	≥50db
Spot Light Avoidance	Yes
E-Flip	Yes
Spherical Privacy Zone Masking	Yes
Defog	Yes (low/mid/high)
High Sensitivity	Yes
Slow AE Response	Yes
Day/Night (Auto ICR)	Yes: ON (B&W/Color)
Backlight Compensation	Yes
Low Latency Mode	Yes
Focus Zone	Central Area
Scene Style	Default, Clear, Bright, Soft
<b>Mechanical</b>	
Pan Movement	PAN: 360° ; Fully proportional 0.05°~100°/S
Tilt Movement	TILT: 120° (-90° to +30°); Fully proportional 0.05°~50°/S
Image Rolling Adjustment	±15°
Speed Proportional	Pan/Tilt speed proportional to zoom range
Preset Position	255 positions, Speed 150°/s, 0~5 Level Adjustable, Accuracy: 0.05°
Preset Memory	Picture Profile Preset-Preset Memory for image parameters: 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
Cruise	Yes, 4
Position Limit	Pan/Tilt, programmable
Quietness	NC55
Home Position	Yes
FreeD	Yes
Position Deviation Correction	Yes
Environmental	IP67 (Waterproof and Dust Proof)
Body Finishing	C5 Corrosion Resistant Power Coating
Wind Load Durability	0-15m/s Operation Normal 15-30m/s Pan/Tilt Operational 30-60m/s Non-Destructive and steady operation at 60 m/s or less
Wiper	Yes
Heater	Yes
Illumination	IR LED (70M)

# SPECIFICATIONS

<b>Model No.</b>	<b>SD530H</b>
<b>Interface</b>	
SDI Video Output	3G-SDI, SMPTE 292M, SMPTE 296M (1.5Gb/s), SMPTE 424M, SMPTE 274M, SMPTE 425-A (3Gb/s) standard / 75 Ω (BNC x 1), with SMPTE352 SDI Metadata Supported
Network LAN Port	RJ45 Standard 10M/100M/1000M Ethernet, LAN connector for IP control/video output/audio output/System FW Upgrade
Camera Environment Temperature	Outside camera body temperature sensor built in
System Firmware Upgrade	FW Upgrade via IP interface (Including MCU, IP, FPGA)
Power Connector Type	AC24V/ DC 36V PoE++ (IEEE802.3bt)
Control Interface	RS422, IP Control
Control Protocol	Serial: VISCA, PELCO P/D, IP: VISCA Over IP, ONVIF, Freed
<b>SDI Signal Format</b>	
SDI Video Format	1080p: 60/59.94/50/30/29.97/25; 1080i: 60/59.94/50; 720p: 60/59.94/50
Color Precision	10bit(SDI), YCbCr, 4:2:2
Color Space	YUV
Standard	SMPTE 292M , SMPTE 296M (1.5Gb/s), SMPTE 424M, SMPTE 274M, SMPTE 425-A (3Gb/s) standard / 75 Ω (BNC x 1), With SMPTE352 SDI Metadata Supported
True Dual Output	IP and SDI signal can be set to independent resolution formats
OSD Menu Display	Yes
On-Screen Information Display	Yes, In-video On-Screen character generator (Image Parameter Setting, Camera Optional Data, User Customization Character, Image/Logo Insert)
<b>Network</b>	
Video Compression	H.264/H.265 by SoC
IP Resolution/Frame Rate	Main Stream: 1920x1080,1280x720 P60/50/30/25 2nd Stream:704x576, 640x480,640x360,576x480,352x228,320x240,320x180 P60/50/30/25
True Dual Output	IP and SDI signal can be set to independent resolution formats
IP Protocols	TCP/IP, ICMP, ARP, RTP, SIP, UDP, HTTP, HTTPS, DNS, DHCP, FTP, NTP
Application Protocols	RTP, RTSP, RTMP,RTMPS, SRT
Multi-stream	2 Stream (Simultaneous up to 20 users)
OSD	Customized OSD
Compatible Integration	ONVIF2.4 (Profile S, Profile G, Profile T), VISCA Over IP
Bandwidth ( results may vary depending on network configuration and management settings.)	
Latency (Overall latency may increase depending on network configurations)	≤ 150ms
Browser Support	HTML5 support for Microsoft Edge, Google Chrome, Firefox, and Safari
<b>General</b>	
Operating Temperature	,-40 to +60 (°C)
Operating Humidity	100% Suitable for Use
Power Input	AC 24V/DC 36V, PoE++(Compatible with IEEE802.3bt)
Power Consumption	Min: 30W(Static state with no movement); Max: 55W (Fully loaded operation with heater on)
Installation Method	Pendant Mount
Mounting Bracket	Ceiling Mount, Wall Mount
Body Color	Grey
Dimension	Φ212×297mm
Weight	11.5lbs/5.2kg (Net weight)
Accessories Included	Power Adaptor x1, Safety Chain Lock x1, Power Connector x1
Accessories Optional	Wall Mount with Tail-cable - SD-TCA Wall Mount - ES-WM
Certificate	CE, FCC, IC, UKCA, UL, CCC, ROHS, WEEE

## ORDER INFORMATION

- SD530H (Full HD, 30X, HEVC, Dark Grey)

# ACCESSORIES

Items marked \* are optional to purchase



C-PMSB  
\*Pendant Mount for Drop Ceiling /Hard Surface Ceiling



ES-WM  
\*Wall Mount Bracket



SD-TCA  
\*Tail Cable Wall Mount Adaptor with Wall Mount Bracket Included



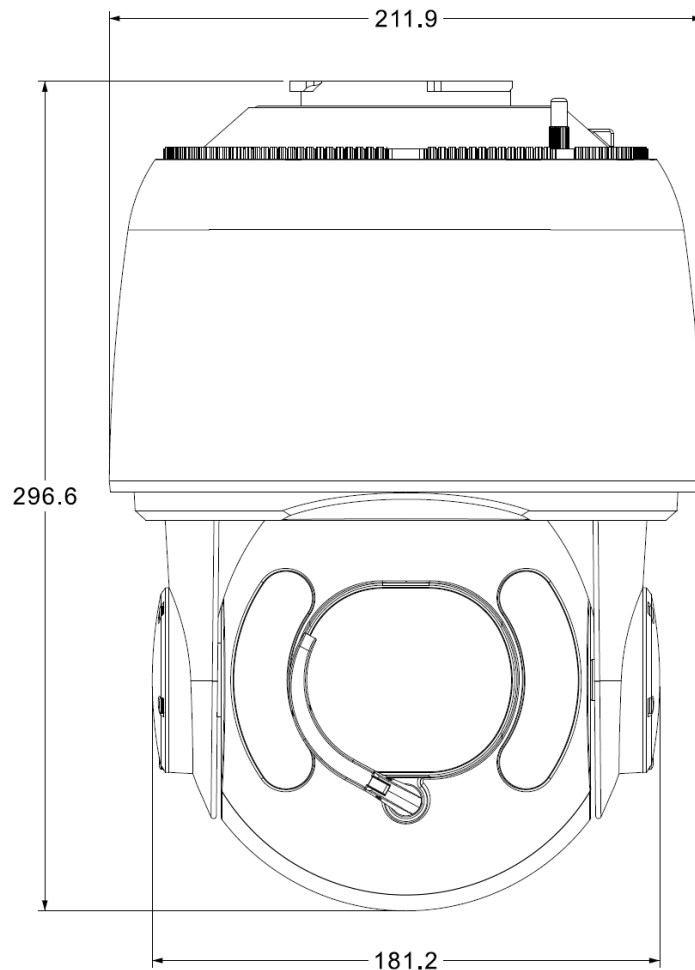
EG40F  
\*FAST HEVC Decoder



BL-PP97  
\*97W POE POWER INJECTOR

## DIMENSIONS

Unit: mm



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