

Outdoor NDI PTZ Camera EX1030NX

NDI HX3



BOLIN

EX1030NX

Full HD Outdoor NDI HX3 PTZ Camera

The EX1030NX outdoor NDI HX3 PTZ camera, upgraded from Bolin's legacy outdoor EX1000 Series, is equipped with the newest Sony image block with 30x zoom range lens to provide Full HD (1080P60) crystal clear high-quality color image in tough low light environment and stable image with super image stabilizer to output 3G-SDI, and NDI HX3 video streaming for NDI® and are fully compatible with NDI-enabled hardware and software for Live production in outdoor environment and even in extreme weather conditions.

EX1030NX

KEY FEATURES



- NDI HX3
- 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, NDI HX3
- RTSP, RTMP, SRT, ONVIF Supported
- NDI Control, Visca Over IP, Onvif, FreeD, Serial Control
- Extreme Low Light Performance
- Super Image Stabilizer
- Weatherproof IP67 rated , Nitrogen Filled Housing
- Laser LED Illumination, Rain Wiper



IMAGE MODULE

- The latest Sony new image block that achieves higher visibility by 1/2.8-type Full HD STARVIS II 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

Wide Dynamic Range (Wide-D)

Wide-D mode is a function that enables image acquisition in which portions ranging from dark to light can be recognized, even when capturing a subject with a wide intensity range created by backlit or includes extremely light regions of interest.



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

NDI Video Streaming Format

1920 x 1080P 60/59.94/50/30/29.97/25

1280 x 720P 60/59.94/50

FEATURES

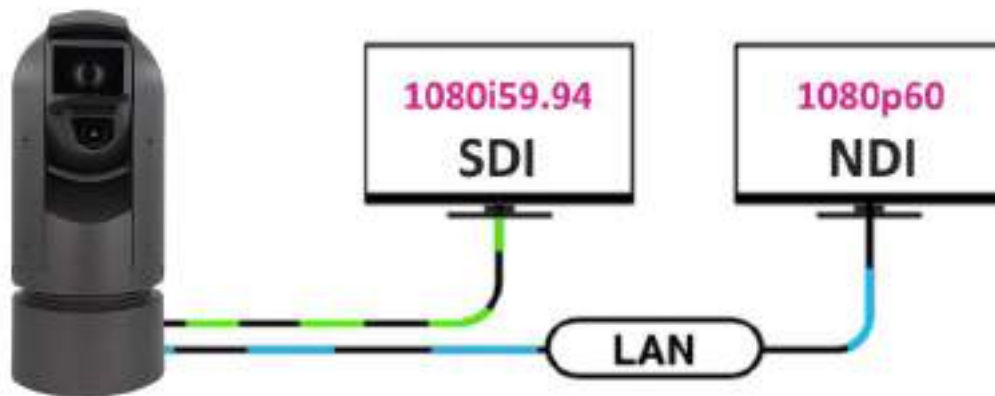
FreeD Protocol Integrated for VR/AR Video Production

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.



True Dual-Output

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



Various Control Methods

- IP Control, Serial Control, Rest API-Software Control
- Protocol Supported: NDI Control, VISCA Over IP, ONVIF, VISCA, PELCO P/D, FreeD
- NDI Control is fully compatible with NDI Ecosystem, Tricaster, vMix, OBS, ProPresenter, etc.



Interoperability | Low Latency | High Quality



NDI HX3 NDI Embedded Bridge, NDI 6 Ready

NDI Embedded Bridge

With Bolin's NDI Embedded Bridge PTZ cameras and decoders, the devices send and receive encrypted NDI streams over WAN from any location globally. With one device running the embedded bridge, all NDI streams on a network can be sent and received. With NDI embedded devices, no complex setups required and configurations can easily be done ahead of time for plug and play operation in the field.

Bolin's NDI PTZ cameras with NDI Embedded Bridge provide real-time collaboration, robust security, and a seamless user experience for remote production and broadcast, virtual events, and content creation.

"It essentially allows individuals or teams from multiple locations to share, send, and receive high-quality, low-latency video, audio, and metadata streams, and control across the globe."



INTERFACE



EX1030NX Output Interface

3G-SDI	NDI HX3	NDI 6	NDI Embedded Bridge
True Dual-Output	AVC/HEVC	RTSP, RTMP, RTMPS, SRT	FreeD
NDI Control	Serial Control	On-screen Character Generator	PoE Power

NDAA COMPLIANT



NDAA Section 889 Statement of Compliance: Bolin certifies it does not and will not provide “covered telecommunications equipment or services” or products containing “covered telecommunications equipment or services” complying with Section 889(a)(1)(B) of the National Defense Authorization Act (NDAA) for the Fiscal Year 2019 as a part of its offered products or services to customers.

See Beyond

Laser IR Illuminator

- EX1030H camera includes a built in laser IR lighting device. In dark environments, it generates safe and invisible infrared illumination, lighting up to 500 meters without impact or perception to humans and animals. The camera provides high-definition black and white video images when the illuminator is turned on.



Roll-Axis Functionality

- Pan, Tilt, Zoom, + NEW Roll Axis
- Roll-Axis Adjustment
- 1-15° horizontal adjustment capability allows to image to be leveled with the horizon and/or subject, or to capture unique angles.



360° Range of the Aerial View

- EX1030H series PTZ camera features 360° horizontal continuous rotation and vertical 180° rotation with auto-flip. Based on the upright installation, the camera provides a 360° range of the aerial view.



3rd GENERATION

Gen 3 Upgraded

- New Sony Image Block
- Expanded 255 VISCA Steps for finer PT Movement and Control Accuracy
- New Adjustable Roll-Axis
- FreeD Control Protocol Enabled
- Image Character Generator
- Rain Wiper
- Environment Temperature Sensor
- Quick Install and Release Mount
- Waterproof back pannel cable connection
- C5 Corrosion Resistant Power Coating



MOVEMENT

*

Smooth and Accurate Movement

- PAN: Continuous 360°; Fully proportional speed 0.05° to 100°/s
- TILT: 180° (-45° to +135°); Fully proportional speed 0.05° to 100°/s
- Preset: 255 positions, Speed 100°/s, 0~5 Level Adjustable, Accuracy: 0.05°
- Auto-Flip
- Picture Profile Preset
- Motionless Preset
- PTZ Trace Memory
- Noise Criterion less than NC55
- ZDP (Zero Deviation Positioning), Position Deviation Self-Correction



RUGGED and DURABLE

- Made for Extreme Weather Conditions
- Dustproof and Waterproof IP67 Rated
- Nitrogen filling for inner moisture condensation free
- Wind Load Durability, Non-Destructive and Steady Operation at 60 m/s or less
- -30 °C to 60 °C (-22°F to 140°F) Operational



INSTALLATION

*

Three Installation Mount Options

- Quick release docking system
- Wall Mount: Use IP67 Wall Mount Bracket (ES-WM)
- Upright Mount: Mounting Base (QR-BM)
- Pendant Mount: Drop Ceiling Pendant Mount System (C-PMSB) + Pendant Mount Base Adaptor (C-PMBA)



Wall Mount



Upright Mount



ACCESSORIES

Items marked * are optional to purchase



ES-WM
*Wall Mount Bracket



QR-BM
*Mounting Base



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



C-PMBA
*Pendant Mount Base Adaptor



EG40N
*NDI Decoder



BL-PP97
*97W POE Power Injector



SPECIFICATIONS

Model No.	EX1030NX
Camera Image	30X Full HD
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 F14 (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)
Focusing System	Auto, Manual, One Push Trigger, Full Scan one push trigger, Near Limit, Spot Light Avoidance, Spot Focus
White Balance	Auto, ATW, Indoor, Outdoor, One Push WB, Manual, Outdoor Auto, Sodium Vapor Lamp Auto, Sodium Vapor Lamp, Sodium Vapor Lamp Outdoor Auto
Exposure	Full Auto, Gain Limit Setting, Shutter Priority, Iris Priority, Manual, EV Compensation
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	-
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	All, Central Area
Scene Style	Default, Clear, Bright, Soft
Auto Flip	Yes
Mechanical	
Pan Movement	PAN: 360° Continuous ; Fully proportional 0.05°~100°/S
Tilt Movement	TILT: 180° (-45° to +135°); Fully proportional 0.05°~100°/S
Image Rolling Adjustment	±15°
Speed Proportional	Pan/Tilt speed proportional to zoom range
Preset Position	255 positions, Speed 100°/s, 0~5 Level Adjustable, Accuracy: 0.05°
Preset Memory	Picture Profile Preset-Preset Memory for image parameters: Backlight Compensation, White Balance, 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, 12
Position Limit	Pan/Tilt, programmable
Quietness	NC55/45/35 or less when operating speed is 60°/30°/15°/sec or less
Home Position	Yes
FreeD	Yes, FreeD protocol for AR/VR camera tracking, via IP
Position Deviation Correction	Yes
Environmental	IP67 (Waterproof and Dust Proof)
Environment Temperature Sensor	Yes
Body Finishing	C5 Corrosion Resistant Power Coating
Wind Load Durability	0-15m/s Operation Normal 15-30m/s Pan/Tilt Operational Non-Destructive and steady operation at 60m/s or less
Wiper	Yes
Heater	Yes
Illumination	Laser IR LED (500M)

SPECIFICATIONS

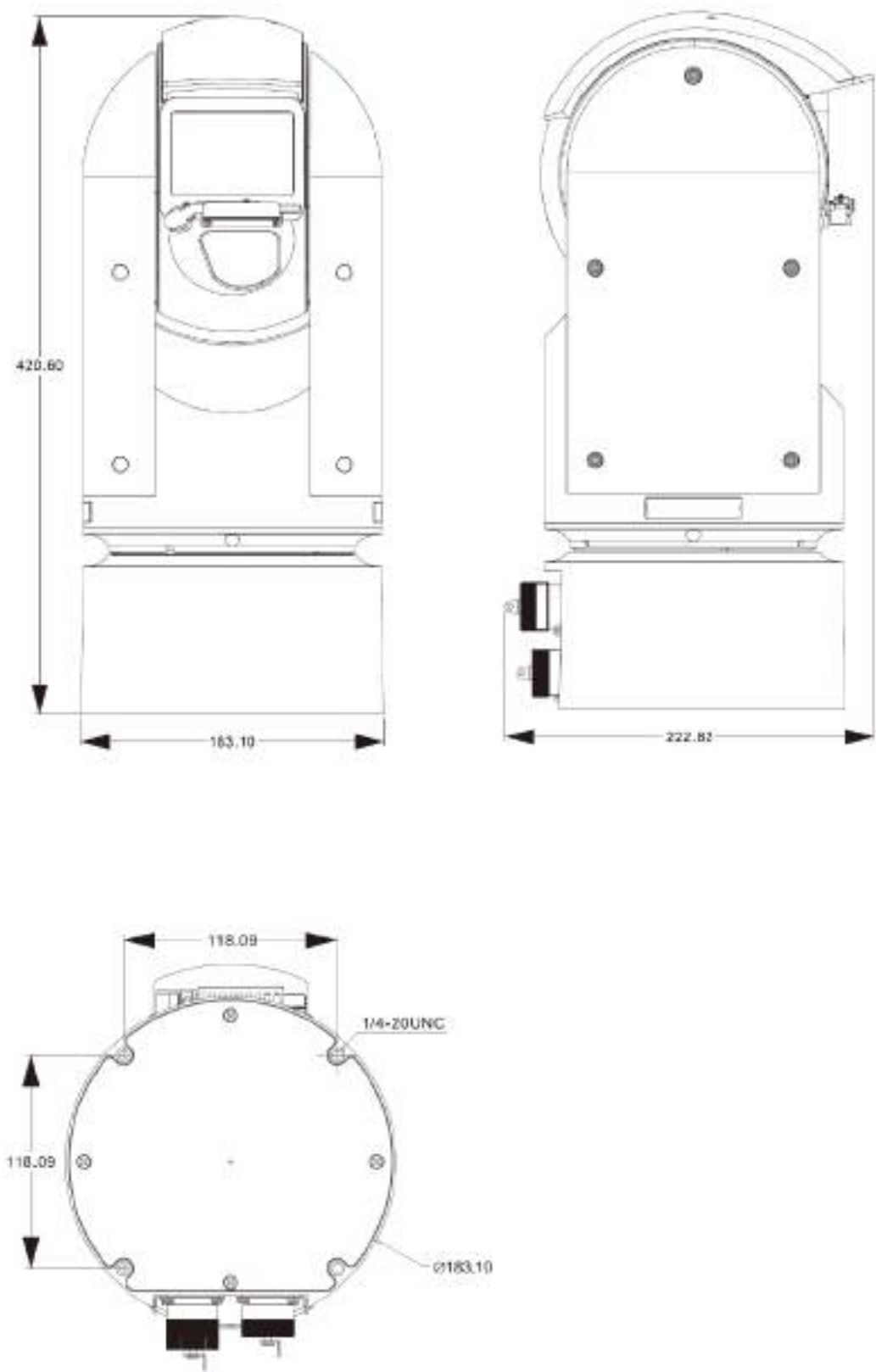
Model No. EX1030NX	
Interface	
SDI Video Output	3G-SDI, Standard 75 Ω (BNC x 1)
Network LAN Port	RJ45 Standard 10M/100M/1000M Ethernet, LAN connector for IP control/video output/audio output/System FW Upgrade
Camera Environment Temperature	Outside camera body temperature sensor built in
System Firmware 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, NDI, FreeD
SDI Signal Format	
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, 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)
Network	
Video Compression	NDI HX3, MJPEG,H.264/H.265 by SoC
IP Resolution/Frame Rate	NDI HX3: 1080P60/59.94/50/30/29.97/25; 720P60/59.94/50
True Dual Output	IP and SDI signal can be set to independent resolution formats
IP Protocols	TCP/IP, ICMP, ARP, RTP, UDP, HTTP, HTTPS, DNS, DHCP, FTP, NTP, NDI HX3
Application Protocols	RTP, RTSP, RTMP,RTMPS, SRT, ONVIF, NDI HX3, NDI 6
NDI Bridge	Yes, embedded
Multi-stream	2 Stream (Simultaneous up to 8 users)
OSD	Customized OSD
Compatible Integration	ONVIF2.4 (Profile S), VISCA Over IP
Bandwidth (results may vary depending on network configuration and management settings.)	10-100Mbps, 1080p60
Latency (Overall latency may increase depending on network configurations)	NDI Certified, <120ms
Browser Support	HTML5 support for Microsoft Edge, Google Chrome, Firefox, and Safari
General	
Operating Temperature	,-30 to +60 (°C)/-22 to 140 (°F)
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: 58W (Fully loaded operation with heater on)
Installation Method	Pendant Mount, Upright Mount
Mounting Bracket	Ceiling Mount, Wall Mount
Body Color	Grey / White
Dimension	Φ180×423mm
Weight	23.1lbs/10.5kg (Net weight)
Accessories Included	Power Adaptor x1, Safety Chain Lock x1, Power Connector x1, Waterproof Connectorx4
Accessories Optional	Wall Mount - ES-WM
	Upright Mounting Base - QR-BM
	Pendant Mount Base Adaptor - C-PMBA
	Pendant Mount System - C-PMSB
Certificate	CE, FCC, IC, UKCA, ROHS, WEEE

ORDER INFORMATION

- Visit Bolin Technology Website

DIMENSIONS

Unit: mm



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