



2024

# CATALOGUE

PRODUCTION. SIMPLIFIED.

**NDI.**

**PTZ RANGE**

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## PTZ RANGE



\$2995  
USD

## BirdDog | X5 ULTRA

### Simply Xtreme.

Elevate your production with superior image quality, connectivity, robotic control, and AI assistance. Ultra-smooth and accurate next-generation robotics give natural movements on air, combined with the highest performance NDI® | HX3 even at 4K60 resolutions, ensuring quality output at all times. X5 Ultra features connections for any production, including 12G-SDI, 2 x HDMI, NDI® HX3, USB Webcam, SRT and more, and includes NDI® HX 2/3 decode for confidence monitoring, return feeds, teleprompting, and more. Featuring BirdDog's signature 'Halo' Tally light ensuring on-air talent is always engaged with their viewers, combined with customisable dual e-ink displays including QR-code shortcuts, making setup and maintenance a breeze. Next-level AI powers including ultra-smooth movement, auto framing, and MORE, to make your next production even more polished. Make no compromises, connect with ease, and feel the performance of the X5 Ultra.

### **Halo Tally.** **A higher order of visual queue.**

Professional results need professional tools. The X5 Ultra sports the most visible and effective Tally system available. Up front, with a large, daylight-visible border keeping talent looking directly at the camera. Your cast and crew will always know where to look, keeping your audience engaged.

### **AI Tracking.** **Built for now and the future.**

We aren't playing catch-phrase bingo here. X5 Ultra takes AI auto-tracking and framing to the next level. Featuring an order of magnitude more neural processing capabilities, the out-of-the-box X5 Ultra has incredible AI powers but also the headroom to grow as AI progresses. Magic.

### **NDI® | HX3.** **Performance meets convenience.**

The X5 Ultra delivers superior network performance via our implementation of NDI® | HX3. Significantly reducing network impact while maintaining excellent image quality, meaning it is more friendly in more network environments. BirdDog's NDI® | HX3 surpasses certification parameters, delivering quality and performance you can count on.

\*NDI® | HX2 and NDI® | HX3 supported.



### Connectivity for days.

Video productions all look different. We love NDI® because it allows a single network cable to operate everything, but sometimes it makes sense to take a different path. X5 Ultra makes this a snap. In a world of compromise, the X5 Ultra stands proud. With 12G-SDI output, dual HDMI outputs, multiple network formats, including NDI® | HX3, SRT, RTMP and RTSP, Webcam connectivity over USB, however you work and whatever demand in quality you have, X5 Ultra has got your back for today's production... and tomorrow's!

### Integrated NDI® | HX Decoder. It can't get much more convenient!

The X5 Ultra is part of the family of PTZ cameras featuring the first simultaneous NDI® | HX\* Decoder designed specifically for confidence monitoring, return feeds, or teleprompter usage. We've pulled all this connectivity into a single cable, radically simplifying how you interface with your equipment. Less gear. Less hassle. Less complexity. Whether you're broadcasting live or delivering a CEO address, the integrated NDI® | HX decoder enables more engagement with less setup.

\*NDI® | HX2 and NDI® | HX3 supported.

### E-ink Label. Get Inked.

The dual, always-on e-ink labels on the X5 Ultra are a game-changer. From network addresses for easy access to controls to customisable logos\* to complement your brand image, this cool feature ensures that your set-up is clear and each camera is easily identifiable even when the power is off.

\*Coming soon.



X4 ULTRA  
\$2195  
USD

## BirdDog | X4 ULTRA

### Freedom to Create, Anywhere.

The True Swiss Army Knife for Live Production. A game-changing camera that combines top-tier image quality with unmatched connectivity. No cables? No problem. With a built-in battery that lasts up to 4 hours and Wi-Fi 6, X4 Ultra goes where you go. Perfect for capturing those impossible shots in places where wires can't reach. Use it solo, or wirelessly manage up to 4 cameras with Wi-Fi 6, streaming smoothly via NDI|HX3 when paired with our receiver. And when you need it, the X4 Ultra comes with: 3G-SDI, NDI, HDMI, USB-C, RTMP & RTSP. All the connections you could want, right there.

It's flexible, versatile, and ready for anything. Just pick it up and start shooting.

#### 4K Brilliance

X4 Ultra features superior image quality with the latest Sony image sensor. Boasting enhanced low-light performance and High Frame rates up to 4k60p performance.

#### Halo Tally.

Professional results need professional tools. The X4 Ultra sports the most visible and effective Tally system available. Surrounding the lens with a large, daylight-visible border, it keeps your talent looking directly at the camera. Your cast and crew will always know where to look, keeping your audience engaged.

#### AI Tracking.

##### Built for now and the future.

The X4 Ultra's AI controls are designed to be easy to use, ensuring predictable and consistent performance with every shot. As your needs grow, the AI capabilities expand, adapting to deliver precise, automated control over your PTZ camera movements.

#### Boost your Performance.

The X4 Ultra has an optional Matching Wi-Fi 6 Receiver base station, allowing you to pair up to 4 x X4 Ultra PTZ cameras to a single, reliable receiver converting the NDI® | HX3 signal into Ethernet.

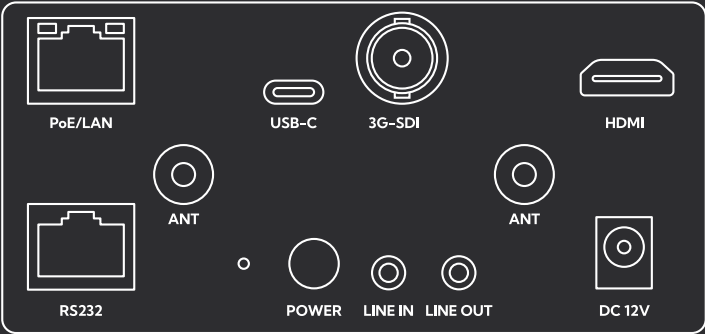
#### NDI® | HX3.

##### Performance meets convenience

The X4 Ultra delivers superior network performance via our implementation of NDI® | HX3. Significantly reducing network impact while maintaining superior image quality, meaning it is more friendly in more network environments. BirdDog's NDI® | HX3 delivers quality and performance you can count on.



RECEIVER  
\$395  
USD



**Wi-Fi 6 and Battery.  
A match made in heaven.**

The X4 Ultra features Wi-Fi 6 for ultra-fast, reliable wireless connectivity, ensuring smooth and stable streaming. Its built-in battery provides up to 4 hours of continuous operation, giving you the freedom to shoot on the go without worrying about power. The X4 Ultra’s battery can be quickly recharged via USB, and you can extend its operation time by connecting it to a portable power source for uninterrupted shooting.

**E-ink Label. Get Inked.**

The always-on e-ink label on the X4 Ultra is a game-changer. From network addresses for easy access to controls to customisable logos\* to complement your brand image, this cool feature ensures that your set-up is clear and each camera is easily identifiable even when the power is off.

\*Coming soon

**Advanced features in BirdUI.**

BirdUI gives complete access to every function of your X4 Ultra, all within a beautiful and intuitive interface. As a browser-based application, it can be accessed from anywhere on the same network as the X4 Ultra. BirdUI adds features including a dashboard for monitoring the camera and light/dark modes to suit your production environment.

**5 Year Warranty.**

BirdDog P-series and X-series cameras feature a 5 year, global warranty. BirdDog prides itself on delivering the best possible products to customers, but if something was to go wrong, you can rest assured knowing that no matter where in the world you are, BirdDog has your back.



X1  
\$995  
USD

X1 ULTRA  
\$1495  
USD

## BirdDog | X1 · X1 ULTRA

### Bring on the X-Factor.

Get ready to revolutionize your content creation experience with BirdDog X1 and X1 Ultra – PTZs like no other.

Experience category defining smooth, controllable movement and stunning image quality with X1 and X1 Ultra, with Halo Tally and AI Tracking for pure live production magic. Say hello to seamless connectivity with NDI® | HX3 and Wi-Fi, ensuring you stay at the cutting edge of technological excellence. And here's the showstopper: an industry-first e-ink display that not only tells you everything you need to know, but stays brilliantly visible even when the camera is off! One more thing... X1 and X1 Ultra decode NDI® | HX\* at the same time! Say goodbye to guesswork with confidence monitoring or teleprompting output directly from your camera.

Elevate your creativity, embrace innovation, and let the excitement unfold with X1 and X1 Ultra.

\*NDI | HX2 and NDI | HX3 supported.

#### Halo Tally.

Professional results need professional tools. X1 and X1 Ultra sport the most visible and effective Tally system available. Up front with a large, daylight visible border, and out back with an interchangeable, illuminated numbering system. Your cast and crew will always know where to look to keep your audience engaged.

#### AI Tracking.

Every production could use a little help from a friend. The X1 and X1 Ultra keep your subject in focus with AI tracking technology, intelligently following your subject's movements in real-time. Whether you're orchestrating a live event, capturing spontaneous moments in a hybrid environment, or focusing on details in a TED talk, AI tracking helps you get well framed – without needing an octopus to run the controller. You can even select the individual in the frame to follow.

#### NDI® | HX3.

The X1 and X1 Ultra delivers superior network performance via NDI® | HX3 integration. Significantly reducing network impact while maintaining excellent image quality, meaning its more friendly in more network environments. BirdDog's NDI® | HX3 surpasses certification parameters, delivering quality and performance you can count on.

\*NDI® | HX2 and NDI® | HX3 supported.





### Wi-Fi.

No need to use cables to capture every shot. On top of regular Ethernet with PoE, X1 and X1 Ultra have built-in Wi-Fi functionality. Easily capture shots from spots where it's hard to run cable, seamlessly integrating into any environment. Your set up just became a whole lot more flexible.

### Integrated NDI® | HX Decoder.

The X1 and X1 Ultra are the world's first PTZ cameras featuring a simultaneous NDI® | HX\* Decoder designed specifically for confidence monitoring, return feeds, or teleprompter usage. We've pulled all this connectivity into a single cable, radically simplifying how you interface with your equipment. Less gear. Less hassle. Whether you're broadcasting live or delivering a CEO address, the integrated NDI® | HX decoder enables more engagement with less setup.

\*NDI® | HX2 and NDI® | HX3 supported.

### E-Ink Label. Get Inked.

The always-on e-Ink label on the X1 and X1 Ultra is a game-changer. From network addresses for easy access to controls through to customisable logos\* to complement your brand image, this cool feature ensures that your set-up is clear and each camera easily identifiable even when the power is off.

\*Coming soon.

# MAKI



12x\*  
\$1295  
USD

20x\*  
\$1295  
USD



## Make A Killer Image.

Introducing the groundbreaking MAKI Ultra NDI® | HX3 camera, where compact innovation meets potent performance.

This powerhouse combines lightning-fast autofocus and 4K60 capabilities, ensuring you capture every moment with stunning precision. Intuitive physical buttons located on the side of the camera give you seamless control, immerse yourself in your creative zone without being bogged down by technicalities. Featuring BirdDog's HALO Tally system, MAKI Ultra makes it simple and clear to see which camera is live on air at any time.

Choose between 12x and 20x zoom options to tailor your shooting experience.

### Halo Tally.

Professional results need professional tools. MAKI Ultra sports the most visible and effective Tally system available. Up front with a large, daylight visible border. Your cast and crew will always know where to look to keep you audience engaged and your look polished.

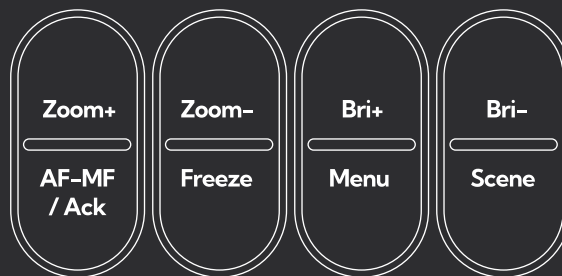
### Compact. Yet Mighty.

The MAKI Ultra boasts a compact footprint helping you capture those unusual and engaging camera angles with ease. With MAKI Ultra you can deliver killer POV shots that put your audience right in the game at eSports events, or attach MAKI Ultra to a band rig to capture incredible angles of your drummers or instrumentalists, be they in a band or a house of worship. Wherever the action is, MAKI Ultra ensures you never miss a beat.

### Super-Fast Autofocus. Keeping Pace with Your Vision.

It's fast AF. MAKI Ultra's super-fast autofocus is a game-changer for dynamic content and fast-paced environments. Equipped with a ToF sensor and powered by advanced automatic focusing algorithms, MAKI Ultra ensures rapid and accurate autofocus. Whether your subjects are zipping across the frame or moving closer and further away to the camera, MAKI Ultra keeps them sharp and in focus. Every. Single. Time.

\*Maki Ultra is available in 12x or 20x zoom.



### 4K60 - Capture Every Moment with Ultra detail.

With its 4K60 capabilities, MAKI Ultra expands your options on what and how you capture content. From fast-moving action shots to incredible detail in low-light sets, you can get all the detail thanks to MAKI Ultra's high frame rate and advanced image processing capabilities.

### NDI® | HX3: Enhanced Reliability on More Networks.

MAKI Ultra delivers superior network performance via NDI® | HX3 integration. Significantly reducing network impact while maintaining excellent image quality, meaning it's more friendly in more network environments. BirdDog's NDI® | HX3 surpasses certification parameters, delivering quality and performance you can count on.

### On-board Buttons. Let your digits take control.

MAKI Ultra's intuitive physical buttons means that once you've set it up, you can just reach in and make quick adjustments to zoom and focus, and access to the onscreen menu. No awkwardly placed controls or a walk back to your controller. One and done, on to the next task.



\$1495  
USD

## BirdDog | P100

### Your entry into the world of NDI®.

Built on BirdDog's custom NDI® silicon chip with a Sony CMOS Sensor, the P100 PTZ camera is your entry into the world of full NDI®. Featuring frame rates up to 1080p60, 10x optical zoom, USB 2.0, HDMI, SDI, and Full NDI® outputs, P100 gives you professional level quality, performance, and total flexibility. 3.5mm audio connectors allow P100 to work with BirdDog Comms, the world's first NDI® audio intercom platform.

#### Full NDI®.

In the world of NDI® there are two flavours, NDI® and NDI|HX. NDI® is a variable bit rate, I-Frame codec that reaches around 140Mbps at 1080p60 and is visually lossless. NDI|HX is a compressed, long-GOP, H.264 variant that reaches around 12Mbps at 1080p60. Mini hardware only uses Full YUV422 NDI®.

#### Sony Sensor.

The best pictures come from the best silicon. P100 is teamed up with a world class Sony CMOS Backlit Sensor with the BirdDog custom NDI® chip to form a match made in silicon heaven. Your productions deserve the best.

#### NDI®, SDI, HDMI, & USB.

With NDI®, SDI, and HDMI simultaneous outputs the P100 is ready to go live with full NDI® today or can be used as a traditional SDI/HDMI camera. You can rest easy in the knowledge that P100 has you covered for all workflow situations. P100 can connect via USB to use as a webcam. Perfect for boardrooms and huddle rooms.

#### Tiny Footprint.

P100 is incredibly small with a diameter of just 145mm / 5.7 inches making it perfect for courtrooms, boardrooms, classrooms, and any application where you need a small, yet powerful, PTZ camera.

#### Extreme Speed. Optics done right.

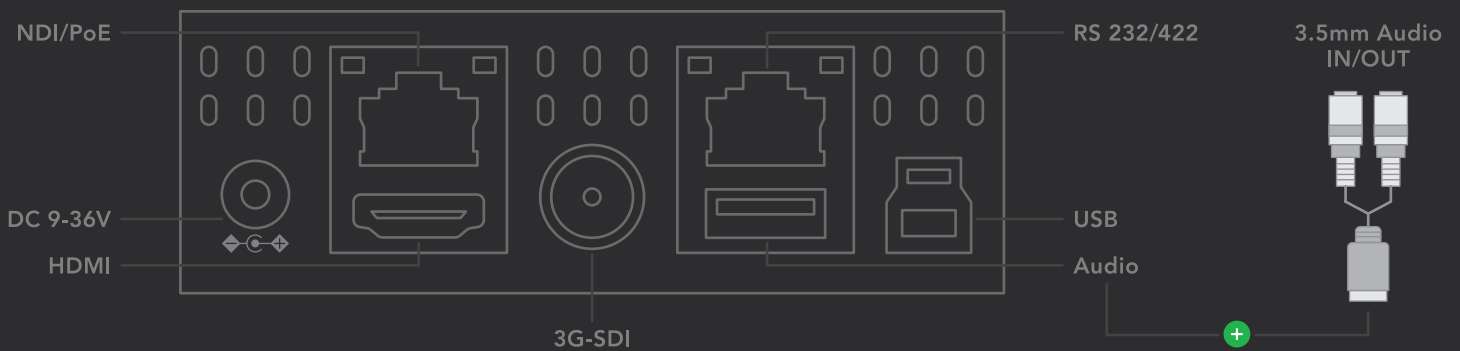
Lightning auto focus. Insanely fast zoom. Precision optics. P100 has been engineered to meet the most demanding situations whether you are in a boardroom streaming your quarterly results, producing a live event for your church, or live streaming sports.

#### PTZ Keyboard. Take control.

Combine P100 with the BirdDog PTZ Keyboard and you have total control of all functions remotely. PTZ Keyboard is a full featured controller that can control up to 255 PTZ cameras and can control P100 over NDI® or by RS422 / RS232 when using in SDI mode.



BOLIN



### Colour Matrix.

Dialling in your cameras just levelled up. P100 has a full colour matrix with individual saturation and hue control over Red, Green, Blue, Cyan, Yellow and Magenta, all with 64 levels of control.

### Webcam now.

#### Production cam later.

P100 might be the best camera investment you can make. Use it now as a super high quality camera with the USB 2.0 for Zoom, Teams, Meet, Chime, Messenger, and even Skype if that's still your thang, and then when the world returns to normal you can use it as a production camera with its broadcast video connections – SDI, HDMI, and NDI.

### RESTful API. DIY automation.

Download the free BirdDog RESTful API and program your own automation for all BirdDog hardware endpoints, including cameras.

### Free Cam Control. Paint, set, match.

The Cam Control app is the easiest and most user-friendly way to dial in BirdDog cameras. Simply load on a Windows 10 machine on the same network as your BirdDog cameras and access all functions of the camera through a beautiful interface. Quickly dial in the look you like and copy settings across multiple cameras in seconds. And it's 100% FREE with all BirdDog PTZ cameras.

### 5 Year Warranty.

BirdDog P-series and X-series cameras feature a 5 year, global warranty. BirdDog prides itself on delivering the best possible products to customers, but if something was to go wrong, you can rest assured knowing that no matter where in the world you are, BirdDog has your back.

Visit page 26 for full tech specs comparison.



 BirdDog | P4K

THE HIGHEST QUALITY FULL NDI®  
CAMERA ON THE PLANET.

\$8395  
USD

 BirdDog | P4K

### Hello Sony 1" Sensor. Meet NDI.

P4K is the real deal. A huge 1" Sony Exmor R CMOS back lit Sensor and 14.4 million effective pixels enable P4K to deliver stunning pictures in 4K resolutions with Full Bandwidth NDI®. Excellent light sensitivity makes P4K perfect for all broadcast applications, sports, remote studios, news-rooms, house of worship and any shoot where quality matters.

#### **Sony 1" Sensor. Size does matter.**

The best images come from the best sensors and the P4K is built exclusively around the best sensor in its category. The massive 1" Sony Exmor R CMOS backlit sensor delivers truly stunning pictures in all shoot modes and frame rates whether in HD or 4K.

#### **Full NDI. No compromises.**

In the world of NDI® there are two flavours, NDI® and NDI|HX. NDI® is a variable bit rate, I-Frame codec that reaches around 140Mbps at 1080p60 and is visually lossless. NDI|HX is a compressed, long-GOP, H.264 variant that reaches around 12Mbps at 1080p60. P4K is a Full NDI® camera.

#### **Carl Zeiss Vario-Sonnar T lens. Glass matters.**

The glass you use is super important in creating stunning pictures and P4K uses only the best. With precision optics and a T coating lens that reduces Ghost and Flare caused by reflections on the surface of the lens.

#### **More than just a production PTZ. Shoot true cinematic styles.**

P4K is a PTZ designed for the most demanding live production shoots and supports all the traditional frame rates you would expect including 29.97 but now you can use your PTZ as a camera for TVC's, drama, and shoot 24p for that wonderful cinematic look.

#### **Advanced Colour Controls.**

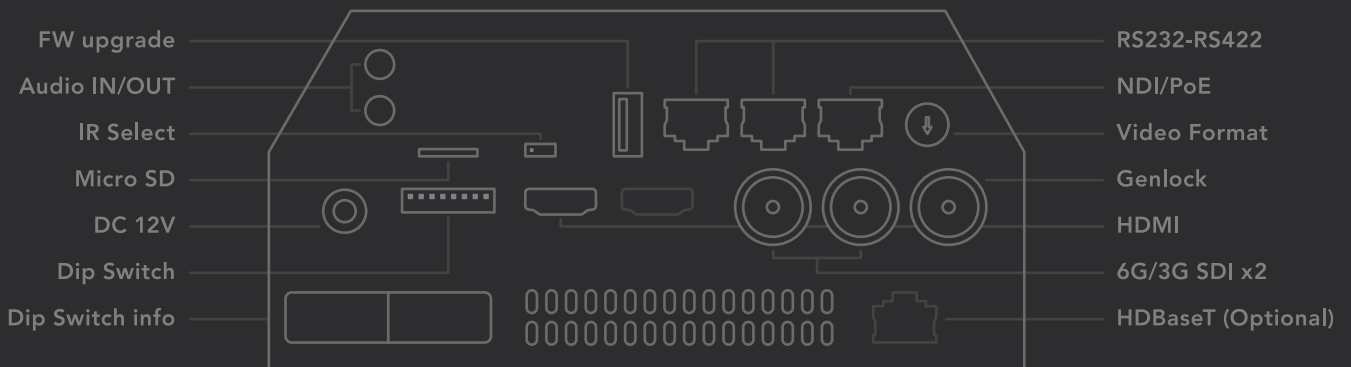
With user selectable gamma settings and black gamma adjustment, fine tuning your shot has never been more flexible in a PTZ. Sony's legendary sensor technology sets the tone for your next quality production.

#### **Superfine Robotics. Precise control at your fingers.**

P4K's robotics are super precise and super sensitive. Wind down the panning and tilting speeds to create super professional shots that are dramatic, or crank up the speeds for high action sports to allow you to follow the movements.



BOLIN



### 360 degree Tally lights.

The front, rear, and side Tally lights combine to create a 360 degree Tally light. Now everyone on the production set can see which camera is live to air.

### Full NDI. 6G SDI. HDMI 2.0.

Full NDI. Two independent 6G SDI outputs and one HDMI 2.0 output, all live all the time to create amazingly flexible workflows.

### Genlock. Let that sync in.

With Genlock you can now synchronise multiple cameras using the Genlock input. Now all your cameras can be hitting your NDI enabled vision mixer at the same time and lets you eliminate the need to add frame buffers.

### PTZ Keyboard. Take control.

Combine P400 with the BirdDog PTZ Keyboard and you have total control of all functions remotely. PTZ Keyboard is a full featured PTZ Keyboard that can control up to 255 PTZ cameras on a single network so can scale to even the most complex installations. PTZ Keyboard can control P400 over NDI® or by RS422 / RS232 when using in SDI mode.

### RESTful API. DIY automation.

Download the free BirdDog RESTful API and program your own automation for all Bird-Dog hardware endpoints, including cameras.

### Free Cam Control. Paint, set, match.

The Cam Control app is the easiest and most user-friendly way to dial in Bird-

Dog cameras. Simply load on a Windows 10 machine on the same network as your BirdDog cameras and access all functions of the camera through a beautiful interface. Quickly dial in the look you like and copy settings across multiple cameras in seconds.

### 5 Year Warranty.

BirdDog P-series and X-series cameras feature a 5 year, global warranty. BirdDog prides itself on delivering the best possible products to customers, but if something was to go wrong, you can rest assured knowing that no matter where in the world you are, BirdDog has your back.

Visit page 26 for full tech specs comparison.

## X-SERIES PTZ CAMERAS (INDOOR)

### Features & Specifications Comparison

Feature	X1	X1 Ultra	X4 Ultra	X5 Ultra
<b>IMAGING</b>				
Image Sensor	Sony 1/2.8" CMOS · FULL HD	Sony 1/2.8" CMOS · ULTRA HD	Sony 1 / 1.8" CMOS – ULTRA HD	Sony 1/2.8" CMOS · ULTRA HD
Lens	f=5.5mm ~ 110mm	f=4.1mm – 49.2mm	f=6.25mm – 125mm	f=5.4 – 104mm
Optical Zoom	20x	12x	20x	
Video Format	1080p @ 60/50/30/25fps 720p @ 60/50/30/25fps	2160p @ 30/29.97/25fps 1080p @ 30/29.97/25fps 720p @ 30/29.97/25fps	2160p @ 60/59.94/50/30/29.97/25fps 1080p @ 60/59.94/50/30/29.97/25fps 1080i @ 59.94/50fps 720p @ 60/59.94	2160p @ 60, 59.94, 50, 30/29.97/25fps 1080p @ 60, 59.94, 50, 30/29.97/25fps, 720p @ 60, 59.94, 50fps
Horizontal angle of view	55.8° (W) – 3.2° (T)	70.28° (W) – 6.57° (T)	60° (W) ~ 3.5°(T)	56.6°(W)-3°(T)
Vertical angle of view	32.2° (W) – 1.8° (T)	42.06° (W) – 3.76° (T)	35° (W) ~ 2.0°(T)	32.5°(W)-1.7°(T)
Diagonal angle of view	61° (W) – 3.64° (T)	78.36° (W) – 7.5° (T)	66.6°(W) ~ 4.0°(T)	64.7°(W)-3.5°(T)
Aperture	F1.6 ~ 3.5	F1.8 ~ 2.68	F1.58 (W) ~ 3.95 (T)	F1.6(W)-F3.6(T)
Focus	Auto, Manual			
Exposure	Auto, Shutter Priority, Iris Priority, Manual			Auto, Shutter Priority, Iris Priority, Manual, BLC, WDR
Backlight Compensation	Yes			
Shutter Speed	–		1/1 – 1/10000s	
Digital Noise Reduction	2D and 3D Noise Reduction		3D Noise Reduction	
SNR	>50dB		≥45dB	>50dB
Effective Pixels	2.07 MP	8.29 MP	8.42 MP	8.46 MP
Filter Ring	–	–	–	ø49mm
AI Tracking	Presenter		Presenter + Zone	Presenter
<b>MECHANICAL</b>				
Pan/Tilt Rotation	±175°, -90° +90°		±170°, -30° ~ +90°	
Pan Control Speed	0.1 – 80°/sec		1.7 – 80°/sec	0.1 – 200°/sec
Tilt Control Speed	0.1 –60°/sec		1.7–60°/sec	0.1 –200°/sec
Preset Number	255 presets			128 presets, Speed Adjustable
Integrated Tally Light	Halo Style, RGB		HALO tally and rear number tally system	Halo Style, RGB
Pan/Tilt Drive System	–	–	–	Ultra-fine Drive
Display	e-Ink 2.93" Display		e-Ink 2.16" Display	e-Ink 2.93" Display
Quietness	–	–	–	Max 28dB at full speed pan

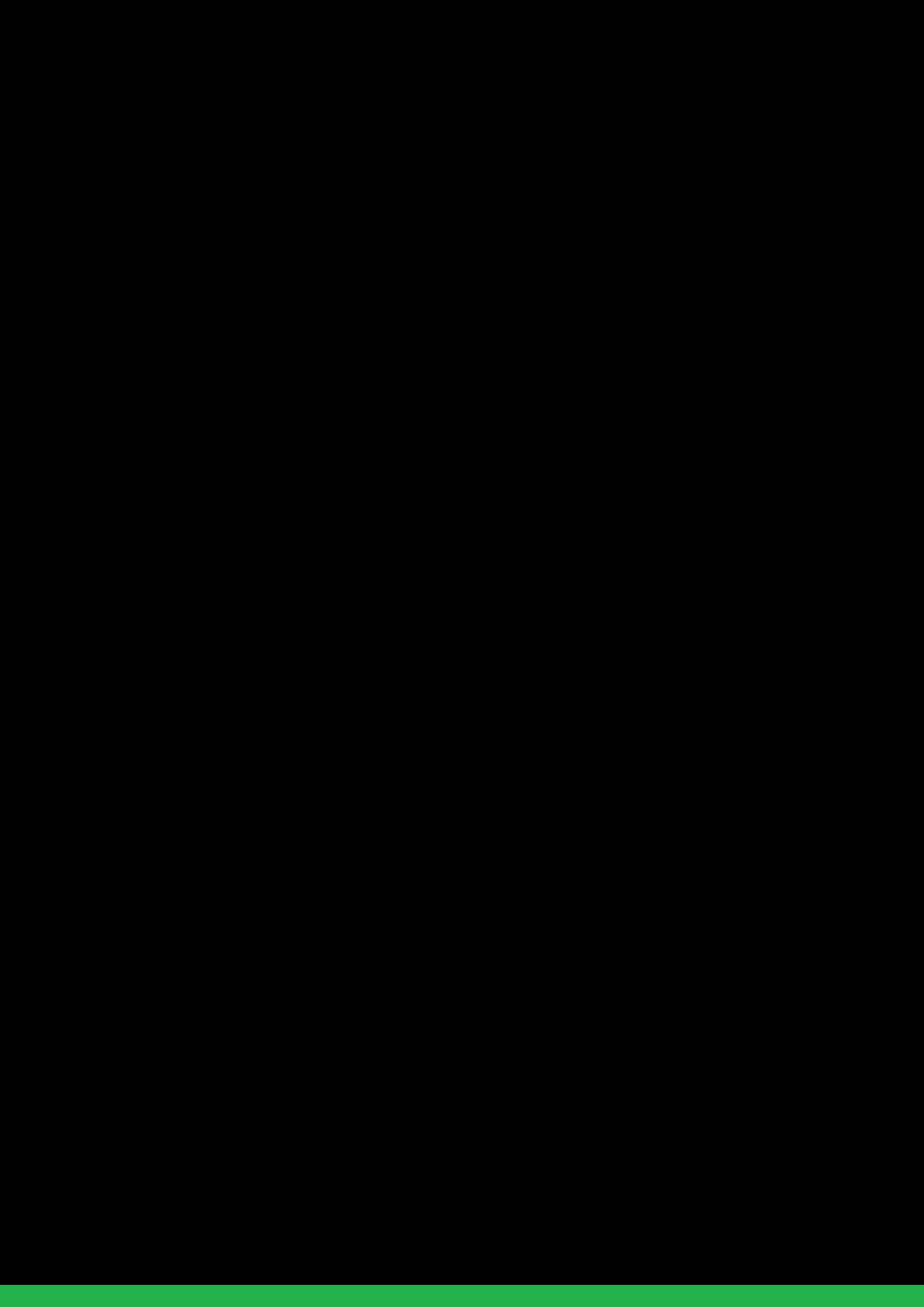


Feature	X1	X1 Ultra	X4 Ultra	X5 Ultra
<b>I/O INTERFACE</b>				
Video Output Interfaces	HDMI, USB-C UVC 1.1, Network		3G-SDI, HDMI, USB-C UVC, Network	12G-SDI, HDMI 2.0, HDMI 1.4, USB-C UVC 1.1, 1Gb Network
Video Compression Format	H.264, H.265			
Network Interfaces	100M adaptive Ethernet port; POE IEEE802.3af, Wi-Fi IEEE 802.11ac		1Gbps adaptive Ethernet port; PoE IEEE 802.3at, WiFi 6 2x2 MIMO (Optional Base station)	1GbE adaptive Ethernet port; POE+ IEEE 802.3at
Encoder Network Protocols	NDI HX2, NDI HX3, RTSP, RTMP		NDI® HX2, NDI® HX3, SRT, RTSP, RTMP	
HDMI Decoder Network Protocols	NDI HX2, NDI HX3		-	NDI® HX2, NDI® HX3
Control Interfaces	10M/100M Ethernet, Wi-Fi IEEE 802.11ac, RS232 (input & output), RS485, TYPE-C (UVC1.1)		1Gbps Ethernet, USB-C, RS-232	1GbE Ethernet, RS232 (input & output), RS422, TYPE-C (UVC1.1)
Control Protocols	VISCA Baud Rate: 9600/4800/38400/2400, VISCA-IP, NDI		VISCA Baud Rate: 38400/9600/4800/2400, VISCA-IP, NDI®, ONVIF	VISCA Baud Rate: 38400/9600/4800/2400, VISCA-IP, NDI
Analogue Audio	-		3.5mm TRS Line input/Mic Input	3.5mm (1/4") Mic In / Line In (Stereo)
Digital Audio	-		-	Embedded with Main and Secondary HDMI, 12G-SDI, Network Video, USB (UVC)
<b>GENERAL PARAMETER</b>				
Environmental Operation	-		Internal	
Input Voltage	DC 12V, POE IEEE802.3af		DC 12V, POE IEEE 802.3at	DC 12V, POE+ IEEE 802.3at
Input Current	2.0A (Max.)		5.0A (Max.)	2.0A (Max.)
Power Consumption	13W (Max.)		-	18W (Max.)
Battery Capacity	-		9450mAh	-
Battery Operating Time (Per Charge)	-		Up to 6 Hours Run Time (Usage Dependent)	-
Working Temperature	-10° +40°		0°C ~ +40°C	
Working Humidity	20% 80%			
Dimension (W*H*D)	171.6*192.6*171.6mm/ 260*217*197mm (before/ after packing)		140.2*188.9*203.2mm/ 295*245*254mm (before / after packing)	185.7*171.9*200.90mm/ 271*275*245mm (before / after packing)
Net and Gross Weight	1.35kg/2.05kg (Net/ Gross weight)	1.43kg/2.096kg (Net/Gross weight)	2.19kg (Net / weight)	2.31kg/3.76kg (Net/Gross weight)
Price in USD	\$995	\$1495	\$2195	\$2995

## MAKI ULTRA BOX CAMERAS (INDOOR 4K)

### Features & Specifications Comparison

Feature	Maki Ultra 12x	Maki Ultra 20x
<b>IMAGING</b>		
Image Sensor	1/2.8 inches, CMOS	
Optical Zoom	12x	20x
Video Format	2160p @ 60/59.94/50/30/29.97/25fps, 1080p @ 60/59.94/50/30/29.97/25fps, 720p @ 60/59.94/50/30/25fps	
Horizontal angle of view	72.8° (W) ~ 6.8° (T)	61.2° (W) ~ 3.38° (T)
Vertical angle of view	44.1° (W) ~ 3.8° (T)	35.3° (W) ~ 1.9° (T)
Aperture	F1.8~F2.68	F1.6~F3.6
Focus	TOF, Auto, Manual	
Exposure	Auto, Shutter Priority, Iris Priority, Manual	
Backlight Compensation	Yes	
Digital Noise Reduction	Yes	
SNR	>55dB	
Effective Pixels	>8.4 Megapixels	
<b>MECHANICAL</b>		
Physical Buttons	Quantity: 8; Features: Zoom operation, focus operation, brightness adjustment, menu control, image freezing, and mode switching.	
<b>I/O INTERFACE</b>		
Video Interfaces	1 x HDMI 2.0; 1 x 3G-SDI, USB-C UVC 1.1	
Video Compression Format	H.264 / H.265	
LAN	100M/1000M adaptive Ethernet Support: PoE(802.3af)	
Network Protocol	NDI HX2, NDI HX3, RTMP	
Control Protocol	VISCA Baud Rate: 38400/19200/9600/4800/2400, VISCA-IP, NDI	
Control Interface	RS485: 2 pin phoenix port, TYPE-C (UVC1.1)	
Audio I/O	1 x Line In, 3.5mm Jack; 1 x Line Out, 3.5mm Jack, Built-in Mic	
USB	1 x USB3.0, Type-C (UVC 1.1)	
<b>GENERAL PARAMETER</b>		
Power Input	DC 005-2.0mm type (DC IN 12V)	
Input Voltage	DC 12V / PoE(802.3af)	
Input Current	1A(Max.)	
Power Consumption	12W (Max)	
Dimension (W*H*D)	145mm 79mm 80mm (SDI connector excluded)	
Net and Gross Weight	0.8kg/1.3kg (Net/Gross weight)	



## P-SERIES PTZ CAMERAS (INDOOR HD)

### Features & Specifications Comparison

Model	P100
<b>CAMERA</b>	
Max. Resolution	1080p
Sensor	Sony Backlit
Sensor Resolution	2.2MP
Sensor Format	1/2.86"
Lens (W - T)	4.7 - 47mm
Optical Zoom	10x
Digital Zoom	12x
Horizontal Field of View	60.9°(W) - 6.43°(T)
Vertical Field of View	34.3°(W) - 3.6°(T)
Aperture	F1.6(W) - F3.0(T)
Min. Illumination	0.5 lux
Shutter Speed	1/1 - 1/30000s
Filter Ring	none
Focus	Auto, Push, Manual
White Balance	Auto, Indoor, Outdoor, Manual, OPW, ATW, Temp (Kelvin)
Exposure	Auto, Manual, Shutter/Iris Priority
Pan Movement	Horizontal: ±175°
Tilt Movement	Vertical: +90° to -30°
Preset Positions	128 (Speed adjustable: Up to 150°/s)
Preset Speed	0-5 Level adjustable
Environmental	Indoor
Quietness	Max 41dB at full speed pan
Operating Temperature	-10 to +50 (°C)
Operating Humidity	≤80%
Illumination	-
<b>VIDEO INTERFACE</b>	
Video Outputs	Network Video/HDMI/SDI/USB2.0
4K Video Formats*	-
HD Video Formats*	· 1080p 60, 59.94, 50, 30, 29.97, 25 · 1080i 60, 59.94, 50 · 720p 60, 59.94, 50
HDMI Colour Space	YCbCr, 4:2:2 12bit
SDI Colour Space	YCbCr, 4:2:2 10bit
Network Video Protocols	Full Bandwidth NDI, NDI HX2 / HX3 in h.264, SRT, RTMP, RTSP
Analogue Audio I/O	3.5mm Audio In (Stereo) 3.5mm Audio Out (Stereo)**
Digital Audio Output	· Embedded with main HDMI, 24bit · Embedded with SDI, 24bit · Embedded with Network Video Stream
Onboard OLED Display	None
Tally Light	None
<b>CONTROL INTERFACE</b>	
Network PTZ Control	NDI Control (auto configuring), VISCA IP
Serial PTZ Control	1x RJ45: RS232/RS422/RS485
Serial Control Protocol	VISCA / Pelco D
<b>POWER &amp; DIMENSIONS</b>	
Power Input	12V DC, PoE+ (IEEE 802.3at)
Power Consumption	Min. 11.1W - Max. 15.2W
Dimensions	145x152x145mm
Weight	1.0Kg
Mount Options	Ceiling mount, Wall mount, Tripod
<b>NETWORK</b>	
Network Interface	1x RJ45(1000Mb)
Web Control Interface	Full control via Web/Mobile UI inc. Scene presets, Restful API

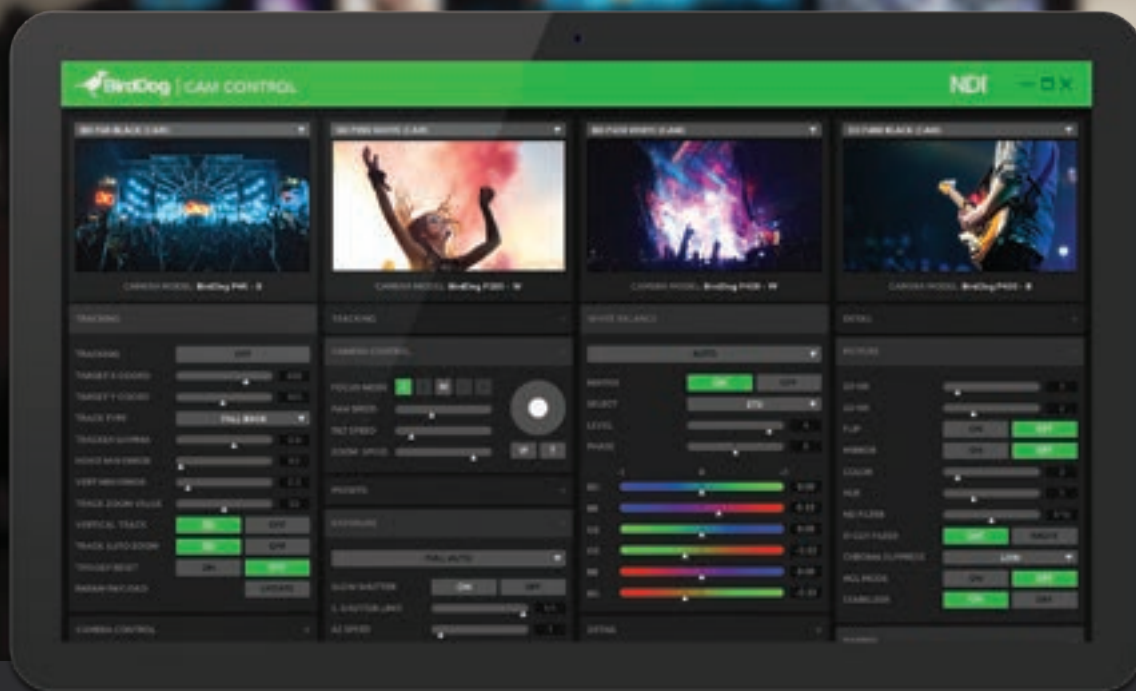
\* Limited Resolution support over USB.

\*\* NDI, HDMI, SDI only.

## P-SERIES PTZ CAMERAS (INDOOR 4K)

### Features & Specifications Comparison

Model	P4K
<b>CAMERA</b>	
Max. Resolution	UHD
Sensor	Sony Exmor R Backlit
Sensor Resolution	14.2MP
Sensor Format	1"
Lens (W - T)	9.3 - 111.6mm
Optical Zoom	12x
Digital Zoom	SRZ (Super Resolution Zoom): 18x in 4K, 24X zoom in Full HD
Horizontal Field of View	64.6°(W) - 6.1°(T)
Vertical Field of View	36.3°(W) - 3.4°(T)
Aperture	F2.8 Constant (W)-(T), 16 Steps
Min. Illumination	0.5 lux (1/30 sec, 50%, High Sensitivity mode On) 2.0 lux (1/30 sec, 50%, High Sensitivity mode Off) 0.067 lux (1/4 sec (1/3 sec), 50%, High Sensitivity mode On) 0.267 lux (1/4 sec (1/3 sec), 50%, High Sensitivity mode Off)
Shutter Speed	1/8 - 1/10000s
Filter Ring	None
Focus	Auto Focus (Trigger/Interval), Manual Focus (Variable Speed), One Push Trigger, Near Limit
White Balance	AUTO, ATW, Indoor, Outdoor, One Push WB, Manual WB, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto/Outdoor Auto)
Exposure	Full Auto, Gain, Gain Limit, Shutter Priority, Iris Priority, Manual, Bright, Slow Shutter, Max/Min Shutter Limit, Slow AE
Pan Movement	Horizontal: ±175°
Tilt Movement	Vertical: +90° to -30°
Preset Positions	128 (Speed adjustable: Up to 150°/s)
Preset Speed	0-5 Level adjustable
Environmental	Indoor
Quietness	Max 49dB at full speed pan
Operating Temperature	-10 to +40 (°C)
Operating Humidity	≤80%
Illumination	-
<b>VIDEO INTERFACE</b>	
Video Outputs	Network Video, 4K: Main 4K HDMI Type-A (x1) 6G-SDI (x2) or Dual Link 3G-SDI(2SI only) x1 HD: Main HD HDMI Type-A (x1) 3G-SDI x2
4K Video Formats*	· 4Kp 29.97, 25, 24, 23.98
HD Video Formats*	· 1080p 60, 59.94, 50, 29.97, 25, 24, 23.98 · 1080i 60, 59.94, 50 · 720p 60, 59.94, 50
HDMI Colour Space	YCbCr, 4:2:2 12bit RGB 8bit
SDI Colour Space	YCbCr, 4:2:2 10bit
Network Video Protocols	Full Bandwidth NDI
Analogue Audio I/O	3.5mm Audio In (Stereo) 3.5mm Audio Out (Stereo)**
Digital Audio Output	· Embedded with main HDMI, 24bit · Embedded with SDI, 24bit · Embedded with Network Video Stream
Onboard OLED Display	None
Tally Light	Bi-Colour Tally Front and Back
<b>CONTROL INTERFACE</b>	
Network PTZ Control	NDI Control (auto configuring), VISCA IP
Serial PTZ Control	1x RJ45: RS232/RS422
Serial Control Protocol	VISCA / Pelco D
<b>POWER &amp; DIMENSIONS</b>	
Power Input	12V DC, PoE+ (IEEE 802.3at)
Power Consumption	Min: 24.4W; Max: 28W
Dimensions	165x196x247mm
Weight	3.4kg
Mount Options	Ceiling mount, Wall mount, Tripod
<b>NETWORK</b>	
Network Interface	1x RJ45(1000Mb)
Web Control Interface	Full control via Web/Mobile UI inc. Scene presets, Restful API



FREE

## BirdDog | CAM CONTROL

### Total Camera Control.

The free Cam Control app is the easiest and most user-friendly way to dial in BirdDog cameras. Simply load on a Windows 10 machine on the same network as your BirdDog cameras and access all functions of the camera through a beautiful interface. Auto Tracking is built right in, with adjustable parameters to track via facial or body recognition.

#### Auto Tracking. Facial and Body Recognition.

Cam Control features fully automated tracking with adjustable parameters to dial in the sensitivity of how you wish to track your talent. You can set to track via facial or body recognition which gives maximum flexibility depending on the environment. Auto tracking is perfect for Broadcast studios, Lecturer and Teacher applications, House of Worship, or any time on-air talent is moving around

#### Colour match in seconds.

All BirdDog cameras feature a complete Colour Matrix offering an incredible set of tools for dialing in the look you want. With Cam Control you can match cameras quickly, easily, and all from within a single interface.

#### Four cameras. Multiple instances.

Inside Cam Control you can load up to four cameras. Need more than four? No worries, Cam Control supports multiple instances so you can load as many Cam Control windows as your computer can handle.

#### Save and Recall Presets.

As if Cam Control wasn't already the fastest and easiest to use camera shading tool on the planet, you can also save and recall camera presets. Use Preset 1 to save your favourite camera settings and when you fire up your cameras on your next job, Cam Control will already be set. No all you need to do is work out what you are going to do with all that time you just saved. We strongly suggest cat videos on YouTube.

#### All areas Access.

Along with the incredible access to Auto Tracking features and Colour Matrix tools found in all cameras, Cam Control also gives control over all settings found in each camera.

#### Mix & Match. Automatic Camera Detection.

Load any mix of BirdDog camera models side by side within Cam Control and the automatic camera detection will display all the adjustment settings available for that camera.

Full user interface at [BirdDog.tv/camcontrol](https://BirdDog.tv/camcontrol)

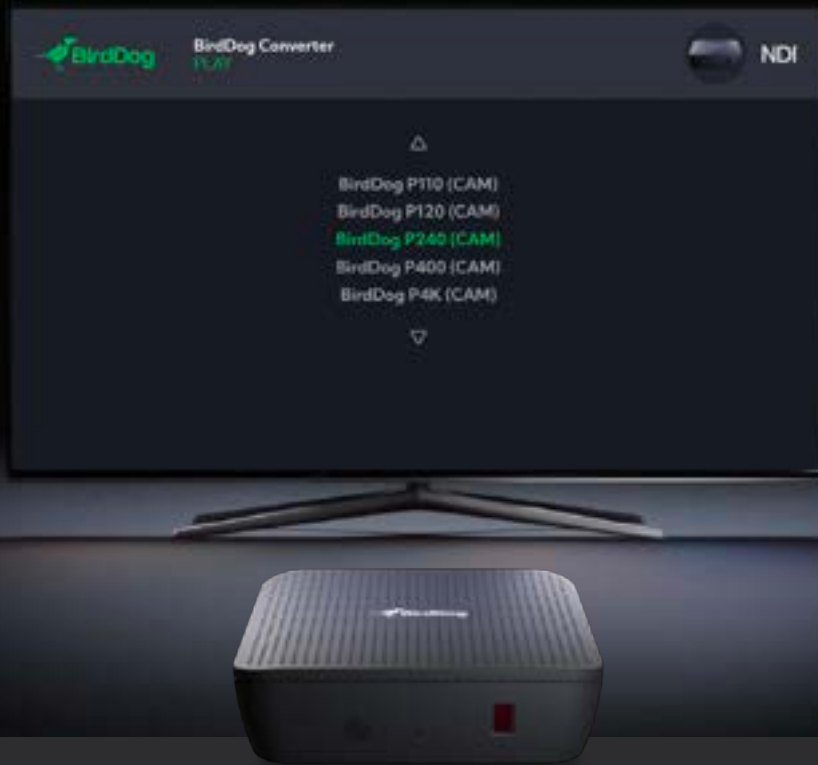
# CONVERTERS

Feature	MINI	PLAY
<b>SUPPORTED VIDEO FORMAT</b>		
UHD 2160p	–	25, 29.97, 30, 50, 59.94, 60
HD 1080p	25, 29.97, 30, 50, 59.94, 60	25, 29.97, 30, 50, 59.94, 60
HD 1080i	50, 59.94, 60	–
HD 720p	50, 59.94, 60	30, 50, 59.94, 60
<b>VIDEO I/O CONNECTIVITY</b>		
HDMI Input	✓ 1.4a	–
HDMI Output	✓ 1.4a	✓ 2.0
12G SDI Input	–	–
12G SDI Output	–	–
12G SDI Selectable Input/Output*	–	–
<b>VIDEO CODEC SUPPORT</b>		
NDI (Full bandwidth i-frame compression)	✓	✓ Up 1080p60
NDI® HX2 – UHD30p in h.264	–	✓
NDI® HX 2 – UHD60p in HEVC	–	–
NDI® HX3 – UHD30p in h.264	–	–
NDI® HX 3 – UHD60p in HEVC	–	–
<b>AUDIO INPUT</b>		
HDMI	2Ch, 48kHz	–
SDI	–	–
3.5mm AUDIO	Microphone(BirdDog Comms)	–
<b>AUDIO OUTPUT</b>		
HDMI	2Ch, 48kHz	2Ch, 48kHz
SDI	–	–
3.5mm AUDIO	Headphones(BirdDog Comms)	Not Supported
<b>DISPLAY</b>		
Integrated 4-line OLED Status Display	–	–
<b>TALLY</b>		
Onboard Bi-color Tally indicator	✓	–
Selectable Tally indicator on video loop outputs	–	–
<b>NETWORK CONNECTIVITY</b>		
Ethernet RJ45 1000baseT w/integrated PoE (Power over Ethernet)	✓	✓ NO PoE
Embedded Web configuration Panel	✓	✓
Open SFP+ Cage (10gb SFP+ Adapters sold separately)	–	–
<b>PTZ CONTROL</b>		
2.5mm 4-pole RS232 (VISCA)	–	–
<b>WEIGHTS &amp; DIMENSIONS</b>		
Size	98x110x22mm	85x85x19mm
Weight	200g	97g
<b>POWER</b>		
PoE (Power over Ethernet)	PoE 802.3af/at	–
DC Input	+5-18V DC 7w Max	USB-C 5vDC – 1.2a
DC Output	–	–
NP style Battery Output	–	–

\*Feature coming soon with free firmware update.



FLEX 4K IN	FLEX 4K OUT	FLEX 4K BP	4K HDMI	4K SDI	4K QUAD
25.00, 29.97, 30.00			23.98, 24.00, 25.00, 29.97, 30.00, 50.00, 59.94, 60.00		
25.00, 29.97, 30.00, 50.00, 59.94, 60.00			23.98, 24.00, 25.00, 29.97, 30.00, 50.00, 59.94, 60.00		
50.00, 59.94			50.00, 59.94		
50.00, 59.94, 60.00			50.00, 59.94, 60.00		
✓ 2.0	-	✓ 2.0	✓ 2.0	-	-
-	✓ 2.0	-	✓ 2.0	✓ 2.0	✓ *
-	-	-	-	✓	-
-	-	-	✓	✓	-
-	-	-	-	-	4
✓	✓	✓	✓	✓	✓
-	-	-	-	-	-
2Ch, 48kHz	-	2Ch, 48kHz	2Ch, 48kHz	-	-
-	-	-	-	2Ch, 48kHz	2Ch, 48kHz
Microphone/line input			Microphone(BirdDog Comms)		
-	2Ch, 48kHz	-	2Ch, 48kHz		
-	-	-	2Ch, 48kHz		
Headphones/line output			Headphones(BirdDog Comms)		
-	-	-	✓	✓	✓
✓	✓	✓	✓	✓	✓
-	-	-	✓	✓	✓
✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓
-	-	-	✓	✓	✓
✓	✓	✓	-	-	-
107×63×31mm		107×63×42.5mm	135×85×25mm		
140g		150g	260g	260g	320g
PoE+ 802.3at			PoE+ 802.3at		
DC 12v (30w max)			DC 12v/16w		
DC 12v (15w max)	-	DC 12v (15w max)	-	-	-
-	-	✓	-	-	-



**\$149**  
USD



### Hello World. Come PLAY.

Meet PLAY, the newest and smallest HD & 4K NDI® Player with full support for NDI® 5. Now connections are a breeze, simply connect PLAY to your NDI® network, plug it into your TV via HDMI, and use your own remote to browse sources and instantly connect.

#### **NDI® 5.**

PLAY supports all the new NDI® 5 functions including high bandwidth NDI, NDI® HX2. Learn more about all the amazing features of NDI 5 here.

#### **Tiny footprint.**

Play measures just 85mm x 85mm x 19mm and only weighs 97grams.

#### **4K UHD. HDMI 2.0**

Receive NDI® in resolutions all the way up to UHD60p\*.

#### **USB Power.**

PLAY is powered by standard USB-C for maximum flexibility.

#### **CEC control. BYO remote.**

The built-in CEC control lets you use your own remote to browse and play NDI® sources.

#### **Incredible API support.**

RESTful API, Crestron control module, Zoom API, Q-SYS API. You name it, PLAY supports it.

#### **Easy source selection.**

Navigation to your NDI® sources is an absolute breeze within the on-screen display, using your TV remote control.

#### **Automatic source detection.**

PLAY automatically scans your network for NDI® sources and brings them up on your TV.



TOP



BOTTOM



## Product Specifications

### Supported Video Formats\*

UHD 2160p – 25, 29.97, 30, 50, 59.94, 60  
 HD 1080p – 25, 29.97, 30, 50, 59.94, 60  
 HD 720p – 30, 50, 59.94, 60

### Video I/O Connectivity

1x HDMI 2.0 – Full size connector

### Audio I/O Connectivity

Stereo audio over HDMI 2.0; Analogue audio output is not supported.

### Video Codec Support

NDI® – High Bandwidth i-frame, low latency  
 NDI® HX2 – h.264(UHD30p max) / HEVC  
 long-GOP (UHD60p max)

### Network Connectivity

Ethernet RJ45 1000baseT

### Weights and dimensions

Dimensions – 85mm x 85mm x 19mm  
 Weights – 97g  
 Mounting Integrated magnetic base and rubber feet

### Power

Power Input – USB-C  
 Voltage – 5vDC  
 Current – 1.2a

\* Video decode resolution in Full NDI® 1080p60 max, NDI®HX UHD60p.

Visit page 32 for full tech specs comparison.

\$2495  
USD



### The World's First NDI® openGear card.

BirdDog OG4 is the world's first NDI® openGear card. OG4 features four independently configurable 12G SDI inputs and outputs. Full Dashboard support is included along with SFP+ port for 10GbE connectivity. A true OG.

#### openGear. United We Stand.

openGear is an open-architecture and modular 2RU rack frame system that allows for OG's from various manufacturers to live together in the same frame in total harmony.

#### Professional Cooling. Professional Power.

openGear frames include integrated cooling fans to provide maximum cooling for all cards and can be configured with dual, redundant power supplies for maximum reliability and uptime.

#### Dashboard.

BirdDog OG4 offers full support for Dashboard, the freely available unified control software for MacOS, Windows, and Linux.

#### SFP+ for 10GbE & long range.

Industry standard SFP+ connection allows for short, medium, and long-range connections over fiber and supports Ethernet protocols from 1GbE to 10GbE.

#### Encode & Decode up to 4Kp60.

With support for all resolutions up to 4Kp60, including all HD resolutions, Encoding and Decoding 4K Full NDI® has never been easier. OG4 supports up to 4x channels of 4Kp60 Encode and 2 channels of 4Kp60 Decode. Of course, OG4 supports 4 channels of 1080p60 decode.

#### Independent Channel Control.

Each channel has independent control of frame rates and resolutions so you can mix and match. Set channel 1 to 4Kp60 and channel 2 to 1080i50. Firmware supports all Encode or all Decode.



## Product Specifications

### Supported video formats:

#### UHD 3840x2160p

23.98, 24, 25, 29.97, 30, 50, 59.94, 60

#### HD 1920x1080p

23.98, 24, 25, 29.97, 30, 50, 59.94, 60

#### HD 1920x1080i

50, 59.94, 60

#### HD 1280x720p

50, 59.94, 60

### Video I/O Connectivity

12G SDI Selectable Input/Output\*

Full-size x 4

### Audio Input

SDI

2-ch Per SDI connector

### Audio Output

SDI

2-Ch. Per SDI connector

### Video Codec Support

NDI® (Full Bandwidth i-frame compression)

Max. 4ch UHD 60p

### Network Streaming Transport Support

NDI®

Full NDI®

### Network Connectivity

OpenGEAR Network Port (Integrated in Chassis backplane)

1 x 1Gbps

### SFP+ Network Port

1 x 10Gbps optional module, Optical 10GbE

### Dimensions

33.5cm x 7.5cm x 2.4cm (Processor card only)

### Control Support

#### System management and control

On-device WebUI, Published RESTful API, Q-Sys plugin, Crestron, Zoom, openGear Dashboard control system

### Health monitoring

On-device WebUI

\*4-Ch. 12G SDI encode/decode support over 10GB SFP+



\$529  
USD



### Pocket sized NDI®.

Big things come in small packages. Utilising BirdDog's custom NDI® silicon chip and housed in aircraft grade aluminium case, Mini is the ultimate entry point into the world of NDI® Encoding and Decoding. Featuring HDMI inputs and outputs, Active Loop Outs, Audio Intercom System, NDI® Tally System, PoE, and compatibility with BirdDog's Comms and Central Apps.

#### Full NDI®.

In the world of NDI® there are two flavours, NDI® and NDI|HX. NDI® is a variable bit rate, I-Frame codec that reaches around 140Mbps at 1080p60 and is visually lossless. NDI|HX is a compressed, long-GOP, H.264 variant that reaches around 12Mbps at 1080p60. Mini hardware only uses Full YUV422 NDI®.

#### NDI® Encode or Decode.

Built with total flexibility in mind, Mini can be configured as an NDI® Encoder or NDI® Decoder. In either Encode or Decode mode Mini is the perfect way to get your HDMI sources into and out of the world of NDI®.

#### Extreme Speed.

BirdDog's revolutionary custom silicon chip is what drives the best NDI® products on the planet. Only BirdDog's hardware can do line-based processing to give the fastest possible NDI® Encoding or Decoding technically possible.

#### Tally. It just works.

The world's first NDI® Tally system is built right into Mini and it requires zero configuration. Includes a built-in large Tally display for your on-air talent to easily see which camera is live, plus user selectable Tally borders on loop out, and an external Tally output.

#### Aircraft Grade Aluminium case.

It's easier to imagine Mini on display within the Louvre in Paris than on a live video production set, but that is where the deception of the senses first takes place. The perfectly finished casing is actually aircraft grade aluminium and designed to withstand the rigours of life on the road.

#### VESA or Camera Mount.

With the optional VESA and Camera mounts Mini is easy to mount. Use the VESA mount to attach to screens or use the camera mount for easy mounting with ball heads, magic arms, and other traditional mounting gear.



### Included COMMS Lite & CENTRAL Lite - 100% FREE



## Product Specifications

### Video Formats

(HD) 1080p 25, 29.97, 30, 50, 59.94, 60  
 (HD) 1080i 50, 59.94, 60  
 (HD) 720p 50, 59.94, 60

### Video Input

1 x HDMI Standard Type A connector HDMI v1.4a, RGB or YCbCr

### Video output

1 x HDMI Standard Type A connector HDMI v1.4a, RGB or YCbCr

### Audio digital

2-Channel, 24-bit HDMI embedded audio, 48 kHz sample rate, synchronous

### Audio analog

3.5mm Microphone headset input / output

### Video Codec support

Realtime, ultra-low latency, full-bitrate NDI (i-frame)

### Display

Bicolor Tally (Red/Green)

### Multicolour status information

Full status information on HDMI output (Selectable)

### Network Interface

10/100/1000 Ethernet (RJ-45) with PoE (Power over Ethernet)

Embedded web configuration panel for control and firmware updates

### User Interface Controls

Network settings  
 Video settings  
 Tally settings  
 Audio and Comms

### Size (WxDxH)

98x110x22mm

Weight

200g

### Power

+5-18V DC 7W Max

Power over Ethernet (PoE) 802.3af/at

Visit page 32 for full tech specs comparison.



\$429<sup>ea</sup>  
USD

## BirdDog | FLEX 4K FAMILY

### The Smallest 4K NDI® on the Planet.

4K NDI® in an incredibly small package. Flex delivers everything you have come to expect from BirdDog's one cable solution including Tally, Audio Intercom, Video, Audio, PTZ Control, and Power all down a single Ethernet cable. With 3 models to choose from in the Flex Family is a Flex to perfect for your workflow needs.

#### Small is the new Big.

With a footprint only slightly larger than a credit card, the Flex 4K NDI Encoders and Decoders are the smallest on the planet. Because sometimes the biggest things are also the smallest.

#### One cable to rule them all. Now with added power.

BirdDog's revolutionary Studio NDI gave the world NDI, Power, Video, Audio, Tally, and Audio Intercom all done a single Ethernet cable. Flex 4K IN and Flex 4K BACKPACK take it one step even further and provides an additional 15w extra power allowing you to use the DC output to power your monitor, recorder, or even your camera.

#### Halo Tally. It just works.

Flex's revolutionary Halo Tally system is built right into the Flex Family and it requires zero configuration when connected with any NDI enabled software based production system. The Halo Tally is designed to be seen by the camera operators as well as the on air talent.

#### Flex 4K BACKPACK. Upgrade your monitor.

Flex BACKPACK is the ultimate upgrade for your camera top monitor recorder. Featuring an NP style battery connection, and 15w power output, it allows you to encode NDI, power your monitor, and record all at the same time. With great power comes great responsibility.

#### The ultimate PTZ sidekick.

If you aren't lucky enough to own a BirdDog PTZ camera with full NDI natively then Flex can become the ultimate sidekick. Plug in HDMI to encode beautiful and Full NDI, and attach a PTZ control cable to have PTZ passthrough control. Perfect upgrade for your PTZ camera while waiting for Santa to bring you a BirdDog.

#### Cool touch thermals.

Sometimes the biggest features are also the least obvious. Flex 4K NDI has unmatched thermal design and whisper quiet fans to keep Flex cool and fresh even on the hottest days and in direct sunlight.





**FLEX 4K IN**  
\$429



**4K BACKPACK**  
\$429



**FLEX 4K OUT**  
\$429

Feature/Specification	FLEX 4K IN	FLEX 4K OUT	4K BACKPACK
<b>SUPPORTED VIDEO FORMATS</b>			
UHD 2160p		25.00, 29.97, 30.00	
HD 1080p		25.00, 29.97, 30.00, 50.00, 59.94, 60.00	
HD 1080i		50.00, 59.94	
HD 720p		50.00, 59.94, 60.00	
<b>VIDEO I/O CONNECTIVITY</b>			
HDMI 2.0 Input	✓	-	✓
HDMI 2.0 Output	-	✓	-
<b>AUDIO INPUT</b>			
HDMI	2Ch, 48kHz	-	2Ch, 48kHz
3.5mm AUDIO		Microphone/line input	
<b>AUDIO OUTPUT</b>			
HDMI	-	2Ch, 48kHz	-
3.5mm AUDIO		Stereo Headphone/Line Output	
<b>VIDEO CODEC SUPPORT</b>			
NDI (Full bandwidth i-frame compression)	✓	✓	✓
<b>TALLY</b>			
Integrated tricolour Halo Tally	✓	✓	✓
<b>PTZ CONTROL</b>			
2.5mm 4-pole RS232 (VISCA)	✓	✓	✓
<b>NETWORK CONNECTIVITY</b>			
Ethernet RJ45 1000baseT w/integrated PoE (Power over Ethernet)	✓	✓	✓
Embedded Web configuration Panel	✓	✓	✓
<b>WEIGHTS &amp; DIMENSIONS</b>			
Size	107x63x31mm	107x63x31mm	107x63x42.5mm
Weight	140g	140g	150g
<b>POWER</b>			
PoE (Power over Ethernet)		PoE+ 802.3at	
DC Input		DC 12V (30W max)	
DC Output	DC 12V (15W max)	-	DC 12V (15W max)
NP style Battery Output	-	-	✓

Visit page 32 for full tech specs comparison.

# 4K HDMI 4K 12G SDI 4K QUAD



## Next Level NDI® Tools.

Following on from the award winning HD NDI® products, the 4K Family has been engineered from the ground up for real-world users. Built around BirdDog's custom NDI® silicon chip and housed in an aircraft grade aluminium case, features include 12G SDI and HDMI 2.0 inputs and outputs, built-in cross converter, SFP+ port for 10GbE connectivity, active loop outs, audio intercom system, NDI® tally system, PoE, and compatibility with BirdDog's Comms Pro and Central Pro apps.

### Encode & Decode up to 4Kp60.

With support for all resolutions up to 4Kp60, including all HD resolutions, Encoding and Decoding 4K Full NDI® has never been easier.

### 12G & HDMI 2.0 connections.

All SDI connectors on the 4K line are 12G SDI, including all four SDI connectors on 4K Quad. All the HDMI connectors are 2.0 for maximum compatibility with your sources and destinations. The HDMI port is not enabled on QUAD.

### SFP+ for 10GbE & long range.

Industry standard SFP+ connection allows for short, medium, and long range connections over fiber and supports Ethernet protocols from 1GbE to 10GbE.

### NDI Tally that just works.

A full Tally system is built right into the 4K Family and it requires zero configuration. Includes a built-in large Tally light for your on-air talent to easily see which camera is live, plus user selectable Tally borders on loop out.

### Cross Converter.

4K SDI and 4K HDMI include a built-in cross converter and any of the 12G SDI inputs can be looped out the HDMI 2.0 port and any of the HDMI 2.0 inputs can be looped out the 12G SDI. This function is not available in QUAD.

### RESTful API. DIY automation.

Download the free BirdDog RESTful API and program your own automation for all BirdDog hardware endpoints, including cameras.

12G SDI

HDMI 2.0



BI-COLOUR TALLY  
USB 3.0  
AIRCRAFT GRADE  
ALUMINIUM CASE

3.5mm HEADSET/MIC  
SFP+  
PoE  
DC  
4 LINE OLED

### 4K HDMI



\$949\*  
USD

1x HDMI 2.0 Input  
1x HDMI 2.0 Output  
1x 12G SDI Output

### 4K 12G SDI



\$1099\*  
USD

1x HDMI 2.0 Output  
1x 12G SDI Input  
1x 12G SDI Output

### 4K QUAD



\$2099\*  
USD

1x HDMI 2.0 Output  
4x 12G SDI Input/Output

\*Pricing and specifications subject to change.

## Product Dimensions



Visit page 32 for full tech specs comparison.

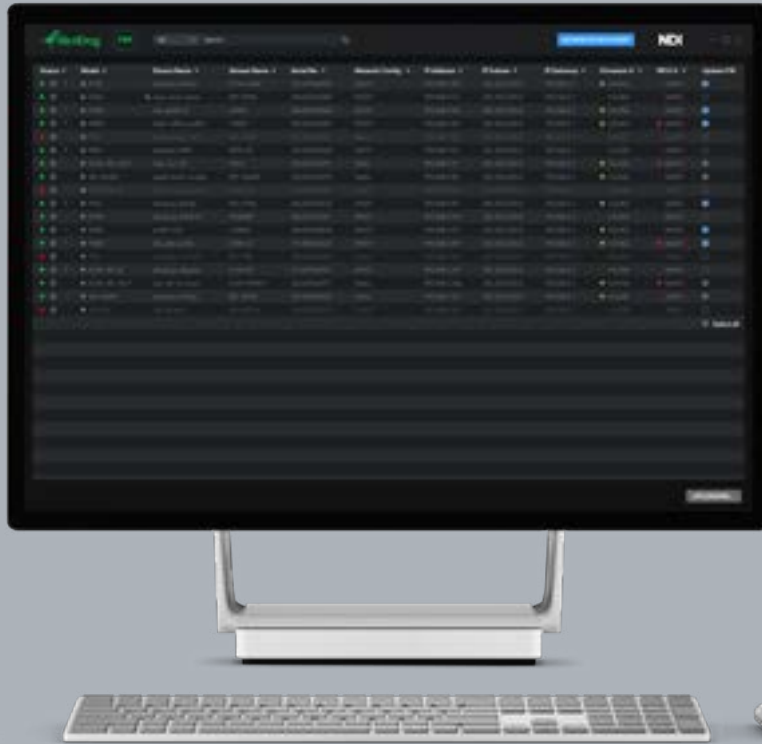
## 4K FAMILY

### Features & Specifications Comparison

Feature/Specification	4K HDMI	4K 12G-SDI	4K QUAD
<b>SUPPORTED VIDEO FORMATS</b>			
UHD 2160p	23.98, 24.00, 25.00, 29.97, 30.00, 50.00, 59.94, 60.00		
HD 1080p	23.98, 24.00, 25.00, 29.97, 30.00, 50.00, 59.94, 60.00		
HD 1080i	50.00, 59.94		
HD 720p	50.00, 59.94, 60.00		
<b>VIDEO I/O CONNECTIVITY</b>			
HDMI 2.0 Input	✓	-	-
HDMI 2.0 Output	✓	✓	✓ *
12G SDI Input	-	✓	-
12G SDI Output	✓	✓	-
12G SDI Selectable Input/Output	-	-	4
<b>AUDIO INPUT</b>			
HDMI	2Ch, 48kHz	-	-
SDI	-	2Ch, 48kHz	2Ch, 48kHz
3.5mm AUDIO	Microphone(BirdDog Comms)		
<b>AUDIO OUTPUT</b>			
HDMI	2Ch, 48kHz		
SDI	2Ch, 48kHz		
3.5mm AUDIO	Headphones(BirdDog Comms)		
<b>VIDEO CODEC SUPPORT</b>			
NDI (Full bandwidth i-frame compression)	✓	✓	✓
<b>DISPLAY</b>			
Integrated 4-line OLED Status Display	✓	✓	✓
Integrated Multiviewer*	-	-	HDMI OUT
<b>TALLY</b>			
Onboard Bi-color Tally indicator	✓	✓	✓
Selectable Tally indicator on video loop outputs	✓	✓	✓
<b>NETWORK CONNECTIVITY</b>			
Ethernet RJ45 1000baseT w/integrated PoE (Power over Ethernet)	✓	✓	✓
Open SFP+ Cage (10gb SFP+ Adapters sold separately)*	✓	✓	✓
Embedded Web configuration Panel	✓	✓	✓
<b>WEIGHTS &amp; DIMENSIONS</b>			
Size	135x85x25mm		
Weight	260g	260g	320g
<b>POWER</b>			
DC Input	DC 12V / 16W		
PoE (Power over Ethernet)	PoE+ 802.3at		

\* Feature coming soon with free firmware update.

# SOFTWARE



FREE

## BirdDog | FLEET MANAGER

### Total control of your BirdDog device.

Fleet Manager makes life easy for managing, monitoring, and updating BirdDog deployments. Each BirdDog device shows up automatically inside Fleet Manager giving instant access to all relevant device information including Status, IP Address, Subnet, Device Name, Stream Name, Serial Number, Firmware Version, MCU Version for PTZ cameras, and more. When new firmware is available, Fleet Manager will show an alert, and you can update the firmware directly to your devices without ever leaving the Fleet Manager interface.

#### **View everything, everywhere. All at once.**

Fleet Manager acts as a central window into your entire BirdDog network of hardware devices. It's a must have tool. And it's free.

#### **Just Pull it™. Then push it.**

With Fleet Manager you can monitor which version of firmware each device is on and see if there is a new version. If you want to update a device, Fleet Manager will pull it down from the web, and push it to the device. It's so easy to update firmware now. Just Pull It™. Then push it.

#### **Autodetection.**

Fleet Manager will autodetect any BirdDog device and it then just pops up with all the relevant information automatically viewable.

#### **Wizards are back.**

Should you need it, there is an Advanced Recovery Mode step by step walk through to connect your camera back to Fleet Manager. You can then view IP address and access the BirdUI to change settings. An MCU update wizard is included within Fleet Manager to make it as easy as possible for this update process.

#### **BirdUI easy access.**

It's super easy to open the BirdDog devices user interface. Within Fleet Manager just click the gear icon and it will take you directly to the BirdUI for that device.

#### **Status indicators.**

The status indicators give a quick view to ensure your BirdDog device is online or offline. Green means everything is peachy and the device is online, red means bad and it needs your attention.



\$19.95  
USD

## BirdDog | NDI PTZ CONTROL

### **NDI® PTZ Camera Control, NDI Vision Monitoring.**

NDI PTZ Control is the ultimate iOS app with support for all NDI® PTZ regardless of manufacturer. Featuring full Pan, Tilt, Zoom control including a live joystick, and save and recall pre-set PTZ positions. The inbuilt viewing monitor allows viewing of any NDI®, NDI® HX2, and NDI® HX3 source in full screen. NDI PTZ Control becomes even more powerful for BirdDog PTZ Camera users with Cam Control built in to access all the Colour Matrix tools to shade your BirdDog PTZ camera.

Available for iPad and iPhone. Android version coming soon.

#### **Automatic NDI® source detection.**

NDI PTZ Control scans your network for NDI® sources which populate into the app automatically.

#### **Control NDI® PTZ cameras.**

Using the virtual joystick controller, Panning and Tilting cameras around is a breeze. Zooming is also an incredibly tactile experience.

#### **Set Pan, Tilt, Zoom speeds.**

With the vertical slider bars, you can set the speed you wish to Pan, Tilt, and Zoom and each can be set independently so you have super tactile, fine controls.

#### **Save and recall preset.**

Once you have the camera framed just how you want it, save the position as a pre-set quickly and easily. When it's time to move back to that position just recall the pre-set and you are exactly where you need to be.

#### **Cam Control for BirdDog cameras.**

NDI PTZ Control app becomes next level powerful when used with BirdDog cameras. Access the Colour Matrix tools available to that camera to shade cameras right there on the iPad or iPhone. Full access to all the camera settings including exposure, aperture, gain, white balance, and more.

#### **HQ or Proxy. Your choice.**

Toggle between High Quality for the best possible image quality and Proxy to save on network bandwidth whilst still giving a great viewing monitor experience.



from  
\$495  
USD

## BirdDog | VIDEOWALL

### Complex Video Walls Made Easy.

VideoWall is a simple, yet powerful, way to display NDI® and NDI® HX video files across multiple screens to create video walls. Simply choose either a 2x2 or 3x3 screen layout, assign your PLAY or SDM to each screen, and choose the NDI® stream.

#### Choose Your Receiver.

VideoWall supports both BirdDog PLAY and BirdDog M1 SDM to create fully networked and low-cost videowall displays.

#### NDI® and NDI®HX.

VideoWall supports NDI, NDI HX2, and NDI HX3 with all the latest and greatest NDI 5 functions including Reliable UDP transmission protocol.

#### Generate playlists. Add Central.

With Central 2.0 you can create playlists out of your own media files. Use the free Central 2.0 Lite for a single VideoWall configuration or Central 2.0 Pro to push the same content to multiple VideoWall setups simultaneously.

#### Windows 11 System Tray App.

VideoWall lives in your Windows 11 System Tray for easy access anytime. You can pin it to your desktop or close it without affecting the NDI® stream.

#### Power with no wall warts.

PLAY is powered by USB so you can simply plug into the USB of the screen to power the PLAY hardware, and SDM lives inside the NEC Messenger series display and requires no external power input.

#### Change content in 2 clicks.

Click drop-down menu. Click NDI source. Look at you go! VideoWall is now updated and you can now go back to watching videos on YouTube. This cute panda video is a good place to start.

#### Super Easy Networking.

With the Videowall and PLAY / SDM solution, the networking side is a breeze. All you need is a 1GbE cable to each BirdDog PLAY, and a Layer-3 DHCP enabled network switch. Connect each PLAY or SDM to the switch, connect the switch to the Windows machine running VideoWall and you are all set.

#### Effortless Configuration.

VideoWall allows each PLAY or SDM to be assigned to each screen from within the application without needing to open the PLAY or SDM interface. Once each PLAY or SDM has been assigned to each screen that's it, you are all set never need touch the settings again.





\$49.99  
USD

## BirdDog | ANDROID TV MONITOR

### Turn your Android TV into an NDI® TV.

NDI TV Monitor is an app that turns your Android enabled TV into an NDI Monitor.

Use your remote to browse NDI® sources which appear automatically on your TV equipped with Android directly, or via Chromecast with Google TV device. NDI TV Monitor is free to receive and view direct BirdDog sources, with in-app purchase options for other NDI® sources.

#### **Automatic NDI® Source Detection.**

NDI TV Monitor scans your network for NDI® sources which populate into the app automatically.

#### **Change Sources.**

Use the channel up/down buttons on your TV remote to change NDI® sources.

#### **Control NDI® PTZ Cameras.**

Use the up/down/left/right arrows on your TV remote to control NDI PTZ cameras.

#### **View Stats.**

See all the relevant information you need about the NDI source such as frame rate, resolution, etc.



ENT.  
\$1995  
USD

PRO  
\$299  
USD

LITE  
FREE

## BirdDog | CENTRAL 2.0

**Enterprise grade NDI® routing. And so much more.**

Central 2.0 ushers in a new era of NDI® routing control. Browser-based with SSO support, smart grouping of NDI® receivers, real-time NDI® routing, media playback engine, and support for thousands of sources, Central 2.0 is your ultimate NDI® management tool.

### **Smart Grouping.**

Group NDI® decoders together to easily manage content distribution to multiple receivers.

### **Central. De-Centralised.**

Central 2.0 is browser based so you can access anywhere on your network.

### **SSO.**

Central 2.0 supports SSO to make life easy when working in an enterprise environment.

### **Video preview windows.**

The video previews allow interactive browser based monitoring and switching of sources making Central 2.0 a great option for pre-switching sources on large events and live shows.

### **NDI Routing. 3 clicks.**

At its core Central 2.0 is an NDI® routing application. Route NDI® video across your network easily by selecting a source, a destination device, or a group, and hitting connect.

### **Media player. Light as a feather.**

The built-in media player uses an insanely low amount CPU power, regardless of playing the file back once or looping 24/7. It achieves this by pre-rendering sources to NDI so when you play them back they are already natively NDI.

### **NDI audio re-insertion.**

Select any NDI® video source and join it with a separate audio source to create a new mix. great for creating sub mixes for distribution in venue or remotely via BirdDog Cloud and works seamlessly with BirdDog Dante NDI Bridge software.



\$2995  
USD

## BirdDog | CAMERA DIRECTOR

### PTZ Production software that makes multicam sports a breeze.

Camera Director is the ultimate tool for PTZ productions that have multiple BirdDog PTZ cameras. Create individual Pan, Tilt, and Zoom paths for each camera, then group those cameras together to move as one when you recall that preset. Create as many multicam presets as you wish and then set them to start automatically by adding waypoints. As the cameras hit each waypoint they will move to the next group preset. Set up as many waypoints as you wish, put them in order, and you have a totally automated multicamera production. Camera Director is perfect for any production where you have a repetitive set of movements, such as Horse Racing, Cricket, Awards Ceremonies, Presentations, Car Racing, and more.

#### **Group presets. Individual PTZ path.**

Group BirdDog PTZ Cameras to enable them to all move as one when you recall a preset. Each camera in the group can have its own unique pan, tilt, and zoom settings so will move to the path you set.

#### **Preset playlists.**

Create a playlist of group presets to choreograph your cameras in unison. Each camera will move to the individual motion path you set. A single button press to start the preset playlist and all your PTZ's will have the moves like Jagger.

#### **Multiple playlists.**

Save multiple movement playlists and easily move through them to handle requirements with numerous events such as horse racing.

#### **Speed control.**

When recalling presets, Camera Director gives real time speed control access so you can adjust the speed of the preset on the fly.

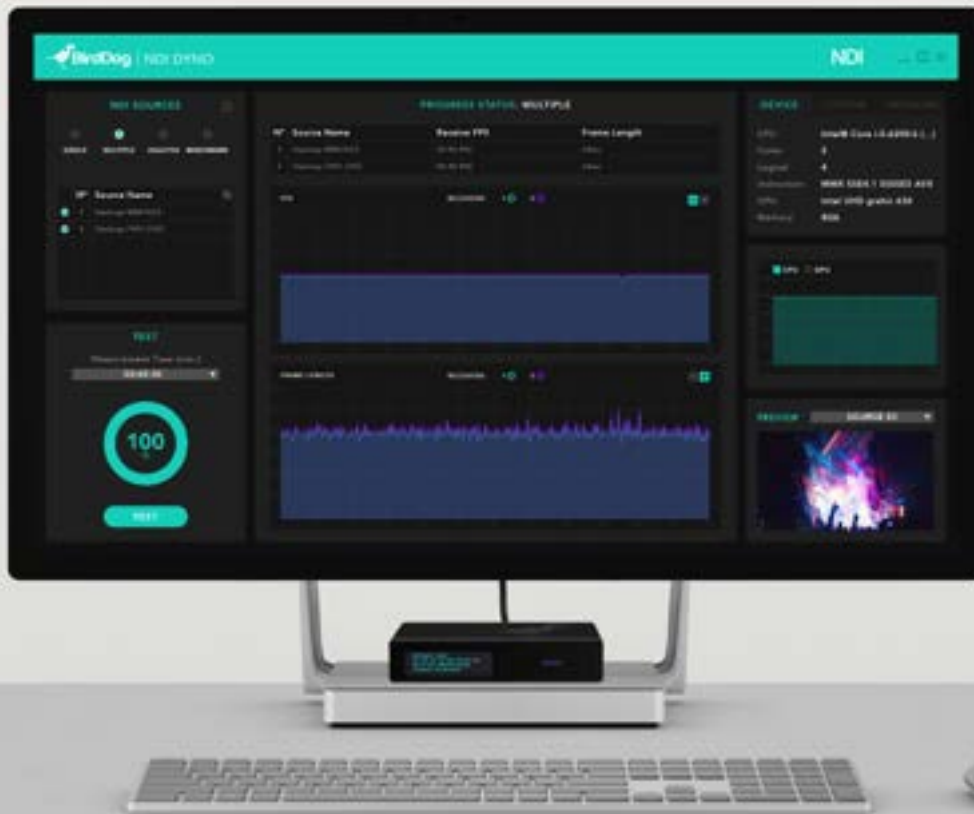
#### **Save and load profiles.**

Save production set up time by loading a profile with all your camera settings that brings in everything you need including camera groups, waypoints, and group presets.

#### **No software limits.**

Camera Director can support as many cameras as your PC can handle.

**Tldr** – if you want to automate your multicam PTZ Camera shoot then Camera Director is for you.



FREE



### Visual NDI® network performance monitoring.

DYN0 is a window into your NDI® network performance. Test your network speed, performance, and stability with a single NDI stream or multiple streams. Now you can be confident your network can deliver rock solid NDI® streams to your hardware and software receivers. All in a beautiful interface.

100% FREE. DYN0 is as free as a Bird(Dog).

#### Speed Test.

Test a single point to point NDI® source to ensure constant frame rates and those frames are being received smoothly and predictably.

#### Scale Test.

Monitor a single source delivering multiple NDI® streams. This will show you how many streams of NDI® any given source is able to deliver across current network infrastructure to your receiving computer.

#### Reliability Test.

Check your computer and networking infrastructure is able to reliably receive video frames from all NDI® sources simultaneously. Ensure frame rates are maintained and the pace of these frames is delivered predictably.

#### Pretty graphs. Powerful engine.

Dyno lays all that data out in easy to use and understand graphs. Visually monitor up to 8 resolution independent NDI streams and dynamically toggle on/off any the streams you wish Dyno to display. Switch between Raw or Average data display, or overlay Raw and Average simultaneously.

#### Visual NDI Analysis.

The free NDI Analysis tool (available from [ndi.tv/tools](http://ndi.tv/tools)) is an amazing test application that can report anomalies on an NDI source. With Dyno you can now monitor these test results in a beautiful graphical interface in NDI Analysis mode. All you need to do is ensure you have the free tools loaded on your computer and Dyno does the rest automatically.

#### NDI Source list.

View all NDI sources on your network including IP address, resolution and frame rate, and source name. When included in a multiple source test run, Dyno will display performance characteristics of each source.

#### Confidence Monitor.

Dyno has a monitor built in for viewing the NDI video source so you can watch graphs and video while Dyno does its thing. If you are testing multiple NDI sources you can switch between them without having to leave the Dyno interface.



FREE



### The all-new BirdDog User Interface with NDI® 5 support.

BirdUI is the easiest and fastest way to access all the functions of your BirdDog hardware devices, all within a beautiful and intuitive interface. A browser-based application, it can be accessed from anywhere on the same network as the BirdDog device.

#### NDI® 5 support.

BirdUI brings native NDI® 5 support for maximum compatibility across the entire NDI® ecosystem.

#### NDI® Genlock. Let that Sync in.

With NDI® Genlock you can select any NDI® source to be the timing master for your fleet of P110 or P120 cameras – allowing them all to operate off the same time-base, providing more predictable timing in multi camera environments. Perfect for greater continuity when recording concerts, conferences, and live productions.

#### Heads up display.

System statistics including the number of active connections, current bandwidth usage, and network traffic are presented to monitor the device and network without having to login.

#### RUDP. Trust us, it's awesome.

Reliable User Datagram Protocol (now you know why we say RUDP) reduces overall network load as not every packet needs to be acknowledged by every receiver. RUDP has error correction built in for smoothness and maximum reliability so you can be confident your packets are getting to where they need to go.

#### Backstage pass.

Once logged in you have total control over all settings including output formats, resolutions, and frame rates.

#### NDI® Video Scopes.

All BirdDog cameras can generate scopes in camera which can be sent out as overlays on the Full NDI® stream and the NDI® Proxy. Scope options include Waveform, RGB Parade, Vectorscope, and Histogram.

#### 3 Extra Features for Cameras.

PTZ Control, Cam Control, and FreeD. For free.



## BirdDog | CLOUD CONNECT

**Cloud Connect. This changes EVERYTHING.**

This is Cloud Connect. The game changing, globally scalable, totally interconnected video workflow with apps across Apple TV, Android TV, Apple iOS, Android, Windows, and MacOS. And of course the all-new BirdDog PLAY.

Available now at [BirdDog.Cloud](https://BirdDog.Cloud)

### **2 Frames Latency. We've gone to Plaid.**

Cloud Connect provides the fastest connection to your live production or editorial workflow. In as little as 2 frames from source to screen, you can be monitoring your NDI feeds anywhere in the world on your BirdDog PLAY, iPad, Apple TV, iPhone, or Android device.

### **NDI® 5.**

Cloud Connect integrates the amazing features of NDI® 5 including high bandwidth NDI, NDI® HX2, NDI® Remote, and NDI® Bridge. Learn more about all the amazing features of NDI 5 here.

### **Remote Editorial Workflows.**

Editors can output Avid or Adobe timelines in NDI® using the free plugins. Producers, Directors, and anyone needing to monitor can all use BirdDog PLAY or the Cloud Connect apps to view and collaborate.

### **Remote Production Workflows.**

With Cloud Connect it's easy to produce a Remote Production from anywhere in the world. Control the New York studio from London across the public internet with full PTZ control, Tally, and Talkback. Using BirdDog PLAY or the Cloud Connect suite of apps anyone who needs to monitor with as little as 2 frames latency.

### **Remote Monitoring. With Multiviews.**

Monitor all your NDI feeds from anywhere in the world over the public internet. Set up a Multiview and watch it on your giant TV using BirdDog PLAY with Cloud Connect. Or use Apple or Android TV. It's just so easy.

### **Beautiful Vistas.**

BirdDog Cloud Connect applications make navigation and use a breeze with cutting edge and beautiful user interfaces, no matter what device you have. Zoom in on your phone or lean back and watch on your TV.



### **For Cloud Connect.**

Over-the-shoulder editing has never been more portable. With direct integration to Adobe Premiere and Avid Media Composer, you can instantly connect to a live edit session from anywhere in the world. Easily and interactively switch between full screen and split stream views to monitor the edit and communicate live with the built-in videoconferencing system directly to the editor's timeline.

### **Dante or NDI. Flexible Audio.**

With an optional BirdDog Cloud Dante licence (add on to regular BirdDog Cloud licence) you can select Dante audio to be sent to your Cloud Connect receiver.

### **PTZ Control. Tally.**

PTZ control is a total breeze. When using Cloud Connect app on your phone you have PTZ control with your finger on the phone touchscreen. Tally is also sent with the NDI stream for maximum visibility of the production.

### **PTZ Camera Support.**

Cloud Connect supports all NDI and NDI HX PTZ cameras from all manufacturers. So don't have a BirdDog PTZ? No worries!

### **Security? We got you.**

Cloud Connect is totally secure. You can lock sessions to be one-on-one to avoid unwanted guest drop-ins as well as customising your session timeouts so people can't copy your connections.

### **Quality Control.**

Cloud Connect is built for production and offers much higher quality than video conferencing. You can also adjust the quality levels to handle the fastest and toughest network environments.

### **Wi-Fi & 4G Friendly.**

Connecting and monitoring your sources on the run has never been easier. Now you can monitor from airports, coffee shops, on the run, or just chilling out on the beach drinking a piña colada.

### **No Firewall configuration.**

Cloud Connect is totally network and IT admin friendly. There are no firewalls to configure allowing instant access to your NDI sources from anywhere.

### **Next-Gen Engine. Say that 3 times fast.**

Using the next generation BirdDog Cloud engine you can easily publish Cloud Connect sessions instantly, add in thumbnails and friendly names for easy identification. Underpinned by the latest NDI® 5 you can publish any source from anywhere on your network.



SRT  
READY

## BirdDog | CLOUD

**Connect any number of NDI or SDI sources to anywhere across the globe.**

BirdDog Cloud, the next generation of BirdDog's globally connected advanced media platform, is the fastest and easiest way to expand outside your local network to distribute your content to anywhere in the world. At its core Cloud harnesses BirdDog's specialised transport engine, a highly reliable and scalable media pipeline, delivering all the benefits and security of SRT, augmented with deep control layers for PTZ and metadata, and multi camera synchronisation support.

### **Remote Production.**

#### **Connect any studio, anywhere.**

Fully encrypted connections over the public internet.

#### **Control any production, anywhere.**

Full PTZ control for all BirdDog and 3rd party NDI PTZ cameras.

#### **Bridge NDI, SRT, and SDI workflows.**

Ultra-low latency. Broadcast quality.

### **Remote Editing.**

Collaboration for Adobe workflows. Editor here. Director there. No worries. As little as 2 frames latency. Over the shoulder without being over the shoulder.

### **Live Production.**

Take any number of NDI® or SDI video sources in any location across the globe and make them available to your production with the magic of BirdDog Cloud. Control remote PTZ cameras via software, or with the tactile BirdDog PTZ controller, and adjust colours and camera settings in real-time with BirdDog Cam Control. All remotely in almost zero latency.

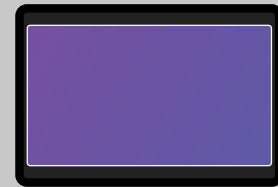
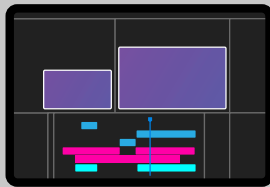
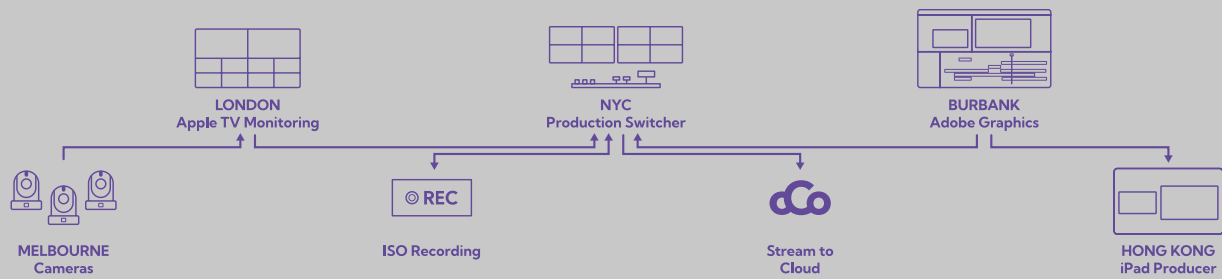
### **Cloud Recorder.**

With Cloud Recorder NDI® is able to be recorded at both the sender and receiver end-points.

### **Post Production.**

Intuitive and lightening fast remote editing workflows come to life with the award-winning, free Adobe panel for collaboration between directors, editors, and producers anywhere in the world. Producers can easily select their views interactively, instantly switching from timeline to confidence monitor to edit suite camera views, even with picture-in-picture overlays.





**Choose your own layout.**  
Timeline. Output. Timeline AND output.

iPad   
 iPhone   
 tv  
 android   
 TIZEN   
 androidtv

### Bring your own Device.

Apple TV, Android TV, Samsung TV, iOS, and Android devices just went Pro. Cloud delivers new Cloud Apps for all these devices deeply integrating them into your next media event. Utilising Cloud Apps allows anyone to be in on the action in real-time, from a producer who wants input in a shoot, a director who wants to see all the action, or an event manager ensuring the run-sheet is on point.

### Transport.

Built in conjunction with Google, transport is a globally connected, secure delivery network designed for easy operation with Bird-Dog Cloud. Have your own network infrastructure? No worries we can accommodate.

### Mobile App Audio.

#### Selection and Routing.

When in the game-changing Presenter Mode you can now switch in real-time which audio source you wish to monitor. Switch between microphone, mix-minus, program, or PC audio. The choice is yours.

### DX. IT admins rejoice.

DX is BirdDog's revolutionary technology that easily navigates video over challenging corporate IT networks. No need for port-forwarding or firewall exceptions. DX retains end to end encryption and total security of the network. Did we just hear the IT admins popping corks?

### API control.

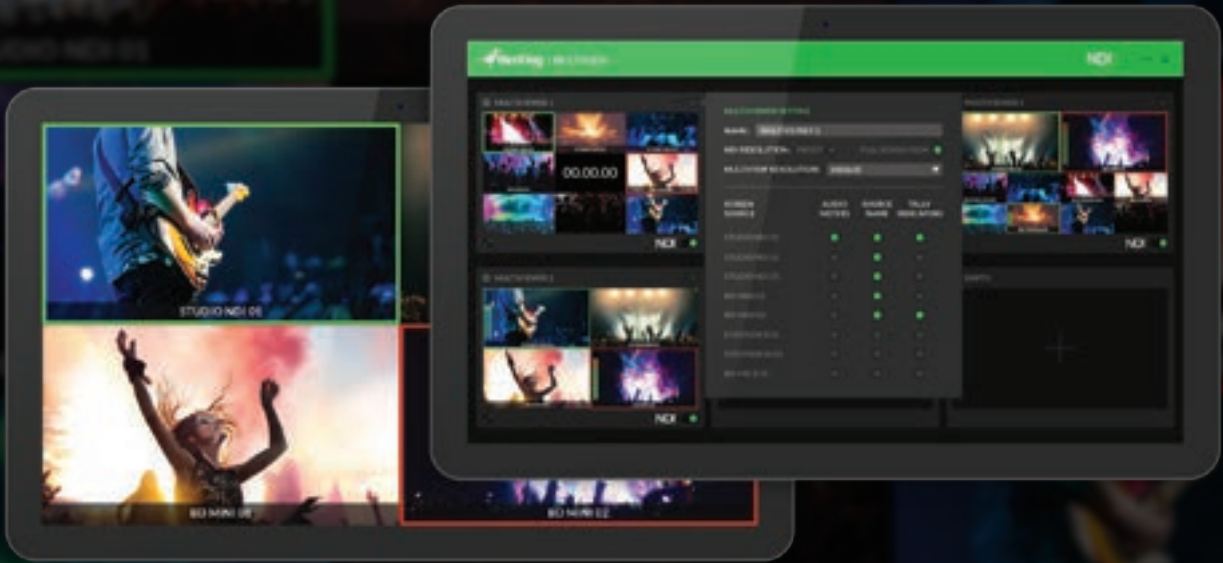
New API support creates incredible opportunities to build global and scalable video workflows like never before.

### More GPU support. M1 included.

Cloud ushers in a raft of new GPU accelerated processing including beefy Apple M1/M2 chips, nVidia, and Intel native acceleration. Making the fastest, highest quality, and most flexible remote production workflows.

For more information and pricing visit [BirdDog.Cloud](https://BirdDog.Cloud)

MULTIVIEW PRO  
\$299



MULTIVIEW LITE  
\$99

from  
\$99  
USD



### 6 NDI Multiview Outputs. 5 Layout Options. 1 Powerful Software App.

NDI Multiview has been designed to be incredibly powerful and super intuitive to use. Create an NDI Multiview stream in a matter of seconds. Simply select the Multiview layout of your choice, select which NDI® source you want in each window, and select which overlays you wish to see. Toggle on the NDI® switch and you are sending a Multiview window out as a standard NDI® source. Yes. It really is that easy.

#### Create NDI Multiviews in Seconds.

NDI Multiview Pro supports up to 6 Multiview outputs and each can be independently configured with any of the 5 preset layouts. Choose between full screen, 2x2, 3x3, 4x4 and the traditional 2&8 (two large and eight small windows). With all NDI® sources on your network automatically detected you can create your NDI Multiview outputs in an insanely short amount of time. NDI Multiview Lite supports 6 outputs with a maximum layout of 2x2.

#### Now available for Mac and Server Version.

Following on from BirdDog's hugely successful NDI® Multiview software are two new versions, Mac and Server Editions. The Mac version takes full advantage of the powerful Mac M1 CPU and GPU acceleration, while the server edition allows users anywhere on the network to access Multiview from their System Tray and generate Multiview NDI® streams.

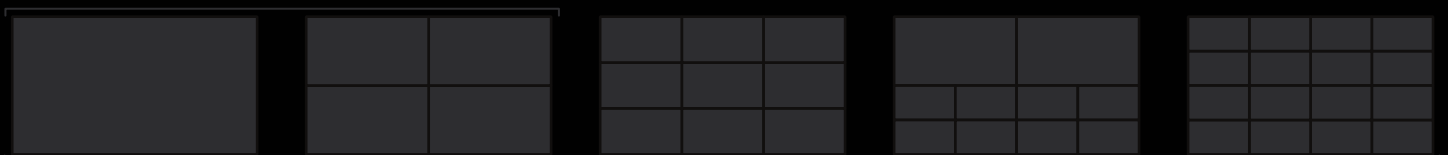
#### 96 sources in Pro. 24 sources in Lite.

NDI Multiview Pro supports up to six 4x4 windows for a total of 96 independent NDI sources. NDI Multiview Lite has maximum of six 2x2 windows for a total of 24. That's a lot of NDI® flying around the place but don't worry, we never cross the streams.

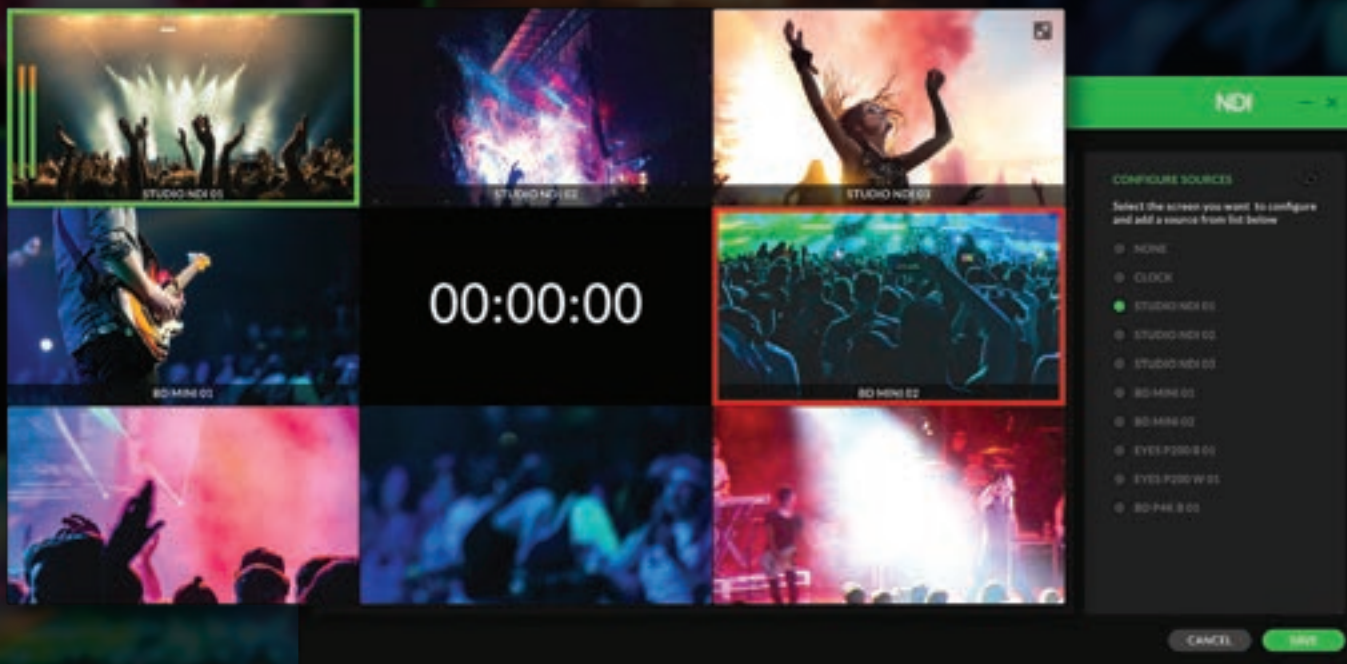
#### Full Screen Local Preview.

Once you have decided upon your layout and overlays you can view that Multiview on your local machine.

NDI MULTIVIEW LITE

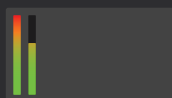


NDI MULTIVIEW PRO



### Selectable overlays per window.

Each window within NDI Multiview can have its own customised overlays. Simply toggle on or off in the setup.



#### Audio Levels.

VU Meters that run vertically on the left-hand side of each window.



#### Tally.

BirdDog's signature tally border overlays.



#### Source Labels.

Select the NDI Source name to display at the bottom of the window.

### Receive in software or hardware.

Multiview outputs a standard NDI stream per window which can be received on any Mac or PC running NDI Tools, any NDI compatible software based switcher, or use a BirdDog NDI Decoder to send back out to baseband video.

### Compatible with Central.

The NDI Multiview outputs are a standard NDI stream you can use Central to route the streams to BirdDog NDI Decoders.

### Bandwidth concerns? We got you.

NDI Multiview has a bunch of options to help you save on network bandwidth.

**Proxy Support:** Use the low bandwidth 6Mbps NDI Proxy as a source.

**Output Resolution:** Choose between 720p and 1080p.

**Output Framerate:** Drop the frame rate down as low as 1 frame per second.

**Multicast:** Using Multicast you only put one stream of NDI onto the network and each stream can be picked up multiple receivers.

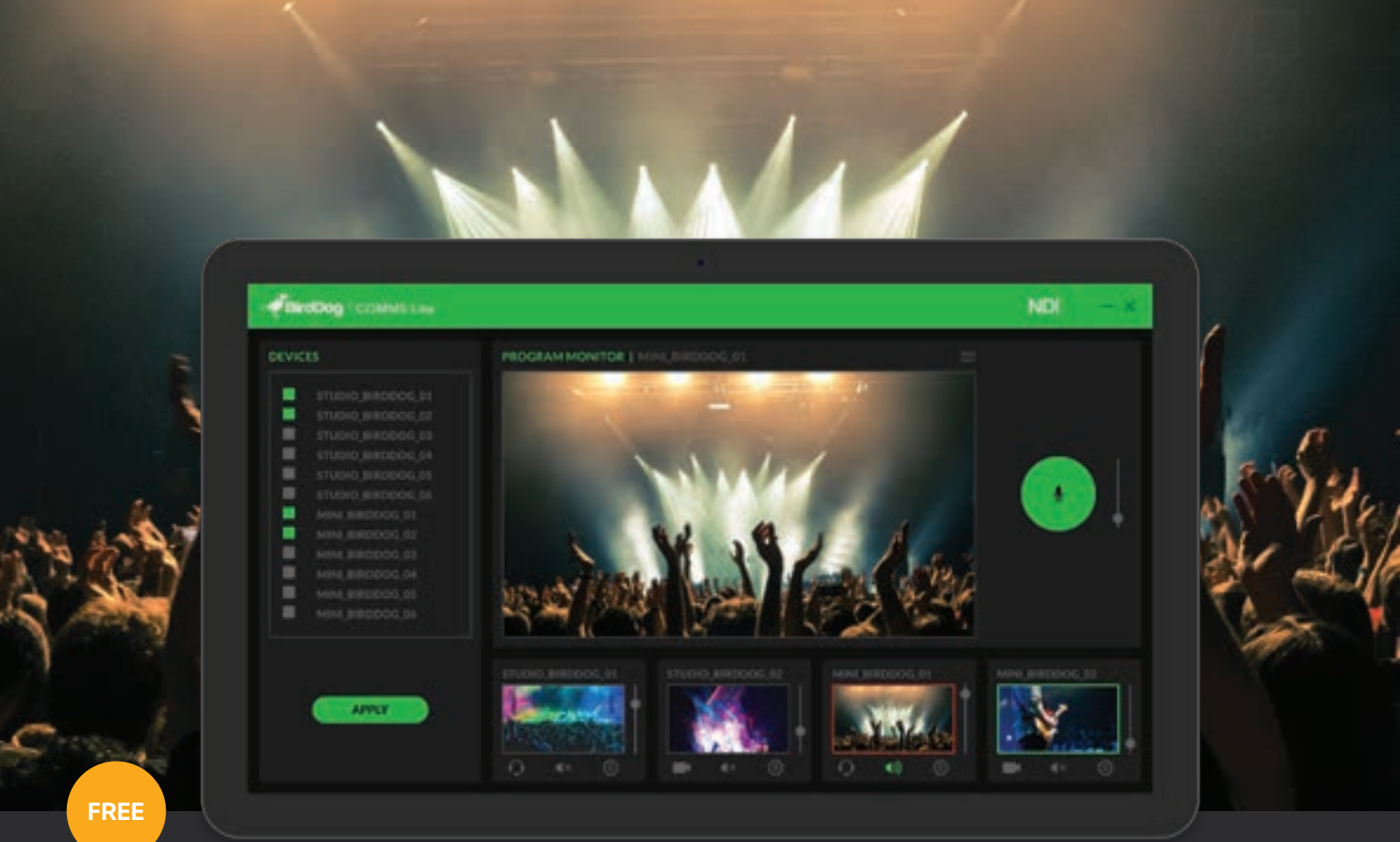
**Output Toggle:** Toggle between NDI output on and off to save bandwidth if Multiview window not in use.

### Receive in software or hardware.

Multiview outputs a standard NDI stream per window which can be received on any Mac or PC running NDI Tools, any NDI compatible software based switcher, or use a BirdDog NDI Decoder to send back out to baseband video.

### Audio Track Selector.

Select an audio track from any of the NDI inputs to send with the Multiview.



FREE

## BirdDog | COMMS Lite

### Enter the World of NDI® Audio Intercom.

Comms Lite is the entry point to the world's only audio intercom platform that supports video preview windows. With support for four BirdDog devices, plus a director, Comms Lite is a great way to start using Audio Intercom in your live productions. And it's free for all BirdDog hardware customers.

#### Four BirdDog's. One Director.

Comms Lite supports up to four BirdDog devices and one Director licence.

#### Touchscreen.

Use a Windows 10 Pro enabled touchscreen tablet for a touchscreen experience.

#### Auto source detection.

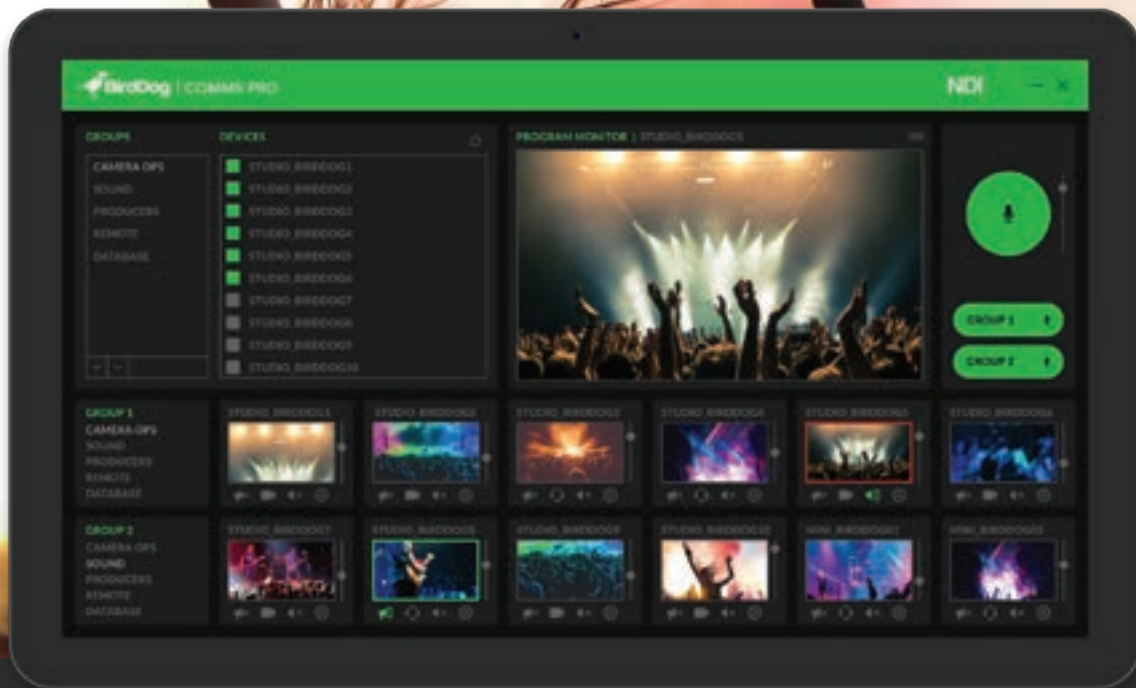
Comms Lite automatically detects all your BirdDog compatible devices so you can easily select which four you want to use. Super easy to set up and use.

#### 100% Free.

Simply log your details on our website on the Comms Lite page and we'll send you Comms for free.

Comms Features	Lite	Pro
Price in USD	Free	\$299
Groups	1	5
Max BirdDog's per group	4	6
Live video windows	4	12
Director Push to Talk buttons	1	3

Comms Features	Lite	Pro
Director to All	✓	✓
BirdDog to Director	✓	✓
Mute Camera Operator	✓	✓
Shortcut to Web Console	✓	✓
Monitor Camera Audio	✓	✓



**\$299  
USD**

## BirdDog | COMMS PRO

### World's Best NDI® Audio Intercom System.

Harnessing the true power of NDI®, BirdDog Comms Pro is the world's first audio intercom system integrating live camera feeds. Be in total control and see every angle of your live production with live video windows from every BirdDog NDI® enabled camera source.

#### 5 party lines.

With video windows available for all the BirdDog Encoded NDI® Sources, your director now has vision of all the cameras at their fingertips. Intuitive group management ensures everyone is on the right channel.

#### Push to talk.

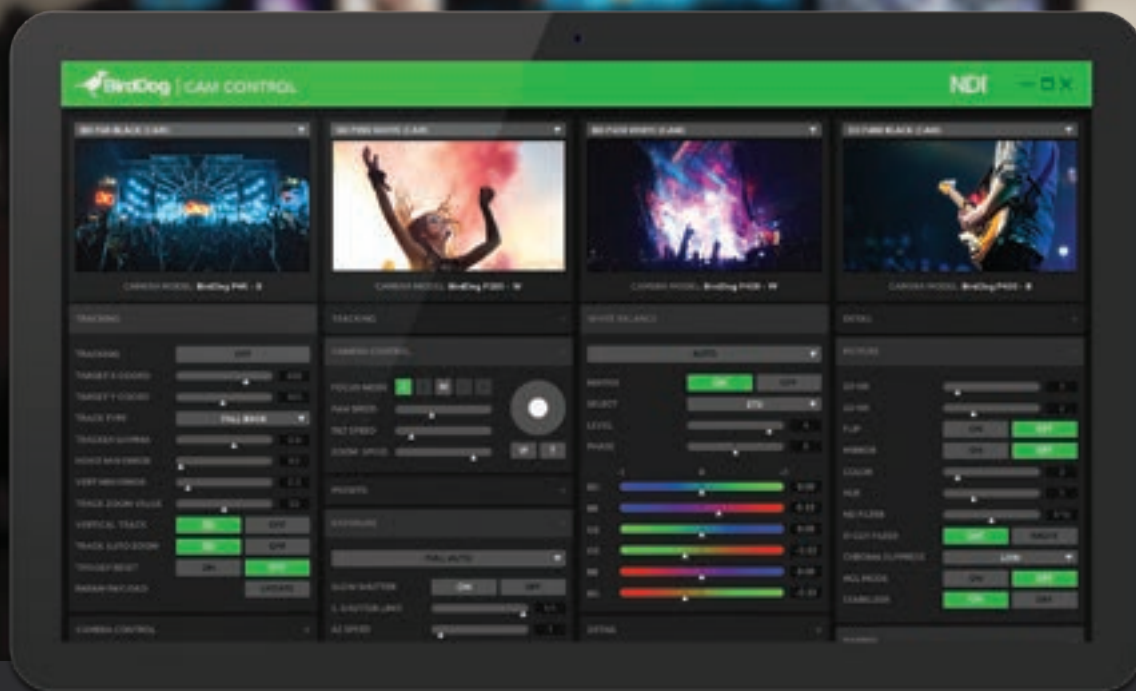
Your camera operators can simply push your call button on any 4 Pole TRRS headset and talk to the group you have been set up in. On the directors side you simply push any of the groups to talk to that group.

#### Auto-source detection & touchscreen.

Comms Lite automatically detects all your BirdDog compatible devices so you can easily select which four you want to use. Super easy to set up and use. Use a Windows 10 Pro enabled touchscreen tablet for a touchscreen experience.

Comms Features	Lite	Pro
Auto detect NDI® Sources	✓	✓
Volume slider bar	✓	✓
BirdDog Push to Talk	-	✓
Director to Group	-	✓

Comms Features	Lite	Pro
BirdDog Operator Broadcast	-	✓
Mix Minus	-	✓
Keyboard shortcuts / hot case	-	✓
Refresh NDI® Sources	-	✓



FREE

## BirdDog | CAM CONTROL

### Total Camera Control.

The free Cam Control app is the easiest and most user-friendly way to dial in BirdDog cameras. Simply load on a Windows 10 machine on the same network as your BirdDog cameras and access all functions of the camera through a beautiful interface. Auto Tracking is built right in, with adjustable parameters to track via facial or body recognition.

#### Auto Tracking. Facial and Body Recognition.

Cam Control features fully automated tracking with adjustable parameters to dial in the sensitivity of how you wish to track your talent. You can set to track via facial or body recognition which gives maximum flexibility depending on the environment. Auto tracking is perfect for Broadcast studios, Lecturer and Teacher applications, House of Worship, or any time on-air talent is moving around

#### Colour match in seconds.

All BirdDog cameras feature a complete Colour Matrix offering an incredible set of tools for dialing in the look you want. With Cam Control you can match cameras quickly, easily, and all from within a single interface.

#### Four cameras. Multiple instances.

Inside Cam Control you can load up to four cameras. Need more than four? No worries, Cam Control supports multiple instances so you can load as many Cam Control windows as your computer can handle.

#### Save and Recall Presets.

As if Cam Control wasn't already the fastest and easiest to use camera shading tool on the planet, you can also save and recall camera presets. Use Preset 1 to save your favourite camera settings and when you fire up your cameras on your next job, Cam Control will already be set. No all you need to do is work out what you are going to do with all that time you just saved. We strongly suggest cat videos on YouTube.

#### All areas Access.

Along with the incredible access to Auto Tracking features and Colour Matrix tools found in all cameras, Cam Control also gives control over all settings found in each camera.

#### Mix & Match. Automatic Camera Detection.

Load any mix of BirdDog camera models side by side within Cam Control and the automatic camera detection will display all the adjustment settings available for that camera.

Full user interface at [BirdDog.tv/camcontrol](https://BirdDog.tv/camcontrol)



\$129  
USD



## DANTE NDI BRIDGE

CONNECT YOUR IP WORLDS.

Dante NDI Bridge is a Windows 10 application for flipping audio tracks between NDI® and Dante®. With support for up to 3 stereo pairs, Dante NDI Bridge can receive 3 NDI® streams and create 3 stereo pairs of Dante® audio, or receive a single NDI® stream and create 3 Dante® stereo audio pairs. All this in sub-frame latency and of course the same applies in reverse.



FOR ALL EDUCATIONAL FACILITIES, HOUSE OF WORSHIP, NOT FOR PROFITS.

### Free Central Pro and Comms Pro Offer.

BirdDog is pleased to offer Central Pro and Comms Pro free to all Educational Facilities, House of Worship, and Not for Profit organisations.

BirdDog Central Pro and Comms Pro require compatible BirdDog hardware in order to function correctly.

To claim your licences please email [together@bird-dog.tv](mailto:together@bird-dog.tv) with your proof of purchase of relevant BirdDog hardware and ensure the email is sent from a registered email address of the organisation claiming the software.



FREE



### **Unrivalled Format Support. Globally Connected Workflows.**

Silicon 2 is a free update for all HD BirdDog cameras, and all 4K PRO converters, delivering unparalleled format support and never seen before workflow opportunities. For free. The usual suspects are all in there – NDI®, NDI®|HX2, NDI®|HX3, SRT, h.264, HEVC/h.265, RTMP, RTSP, plus we've added some additional magic to create globally connected workflows without any need for computers. That's right we've built Cloud Connect directly into the hardware so you can send directly from any of the supported hardware to another piece of supported hardware with no computers required. All this makes Silicon 2 more flexible than your yoga teacher.

#### **Global Connections. No Computers.**

When combined with Cloud Connect, Silicon 2 allows for globally connected devices without the need for any computers, opening up a whole new world of workflow possibilities. Connect a BirdDog PTZ Studio in London to a Master Control room in New York City whilst monitoring in Melbourne and Paris simultaneously.

All totally secure, totally reliable, and with super-low latency.

Cloud Connect is a series of applications so you can also monitor a Silicon 2 activated BirdDog Camera or Converter on any iOS, Apple TV, Android Mobile, Android TV, and even Samsung Tizen. All without any computers.

And that's just the start of what's possible...

#### **FPGA Implementation. Better. Faster.**

Silicon 2 is implemented into BirdDog's custom IP core making for the fastest possible NDI processing.

Including NDI|HX3 in both Encode and Decode modes.

\*Coming soon for converters.

For more information visit  
[BirdDog.tv/silicon2](https://BirdDog.tv/silicon2)



## AV SECTION



\$729  
USD

## BirdDog | WALLPLATE

### NDI® Wallplates for Building the Ultimate AV Experiences.

NDI® Wallplates are the answer to elegant and permanent NDI® installations. With two models to choose from, Dual Input or Dual Output, they have been designed to make boardroom setups a breeze. Install the Dual Output in the wall to drive content to the TV screens and install the Dual Input into the meeting table to take inputs from laptops and other devices.

#### Wallplate Input.

Wallplate Input features two independent inputs and is designed for connecting cameras, laptops, and other devices to convert them into the world of NDI. Perfect for installation into boardroom tables, meeting spaces, lecterns, stages, and anywhere you have sources that need to convert to NDI. Wallplate IN supports EDID connectivity to enable the source device to output 1080p video resolution.

#### Flush Mounted.

Wallplate can be flush mounted in almost every wall or surface such as boardroom walls, boardroom tables, and lecterns.

#### Wallplate Output.

Wallplate Output features two independent outputs and is designed for driving content to screens. Output the video conferencing group to one screen and output the presentation or laptop screen share to another screen to make for super engaging meetings. Use the RESTful API to automate the workflow.

#### RESTful API.

BirdDog Wallplates are programmable via the free RESTful API. It's never been easier to integrate NDI into automated and integrated AV solution no matter what the overarching system is.

#### One Cable for PoE, Video, Audio.

NDI Wallplates are powered by PoE, so you only need to run a single Ethernet cable to power the units, along with carrying video and audio. One cable to rule them all.

#### Extreme Speed. It's all about the silicon.

BirdDog's revolutionary custom silicon chip is what drives the best NDI® products on the planet. Only BirdDog's hardware can do line-based processing to give the fastest NDI® possible.



Wallplates are all built upon BirdDog's custom NDI® chip and can be totally automated via the programmable RESTful API, and also feature PoE for single Ethernet cable functionality, interchangeable faceplates, soft glow status indicators, and a easy to use web management console to change settings.

## Wallplate Input Preliminary Specs

### Video Format

(HD) 1080p 23.98, 25, 29.97, 50, 59.94

(HD) 1080i 25, 29.97

(HD) 720p 50, 59.94

### Video Input

2 x HDMI Standard Type A connector

HDMI v1.4a, RGB or YCbCr with EDID

### Audio digital

2-Channel, 24-bit HDMI embedded audio,

48 kHz sample rate, synchronous

### Video Codec support

Realtime, ultra-low latency, full-bitrate NDI (i-frame)

### Soft glow Indicators

Status indicators to show active/non-active connections.

### Network Interface

10/100/1000 Ethernet (RJ-45) with PoE

(Power over Ethernet)

Embedded web configuration panel for

control and firmware updates

### Power

Power over Ethernet (PoE) 802.3af/at

## Wallplate Output Preliminary Specs

### Video Format

(HD) 1080p 23.98, 25, 29.97, 50, 59.94

(HD) 1080i 25, 29.97

(HD) 720p 50, 59.94

### Video Output

2 x HDMI Standard Type A connector

HDMI v1.4a, RGB or YCbCr

### Audio digital

2-Channel, 24-bit HDMI embedded audio,

48 kHz sample rate, synchronous

### Video Codec support

Realtime, ultra-low latency, full-bitrate NDI

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### Soft glow Indicators

Status indicators to show active/non-active connections.

### Network Interface

10/100/1000 Ethernet (RJ-45) with PoE

(Power over Ethernet)

Embedded web configuration panel for

control and firmware updates

### Power

Power over Ethernet (PoE) 802.3af/at

Please note, analogue audio is not active.



\$199  
USD



### NDI® to USB Webcam. That's what it does.

Access any NDI® video and convert to a USB webcam. Connect to Zoom, Teams, Meet, and any conferencing or software application that supports a USB Webcam input.

Preliminary Specifications & Subject to Change.

#### 4 buttons. Switch sources.

Use the soft-touch buttons, conveniently numbered 1 to 4, to switch between sources.

#### PoE.

For the ultimate in elegant installations use with a PoE (Power over Ethernet) switch to power pod without the need for any wall plugs.

#### Grip ring.

The non-slip rubberised grip ring stops the Pod from moving around.

#### API controls.

Pod supports API commands so you can build out the ultimate Zoom Room. Or Teams room. Or whatever room you like really.

#### Automatic source detection.

Pod automatically scans your network for NDI sources.

#### Choose your colour.

Pod comes in your choice of cream, bone, white, off-white, ivory, or beige. Not really, it just comes in white. We miss you, Richie.



#### **SUPPORTED VIDEO FORMAT**

NDI® – High Bandwidth i-frame,

low latency NDI® HX2 – h.264/HEVC long-GOP

#### **VIDEO OUTPUT SUPPORT**

USB-C, UVC 1.1

#### **NETWORK CONNECTIVITY**

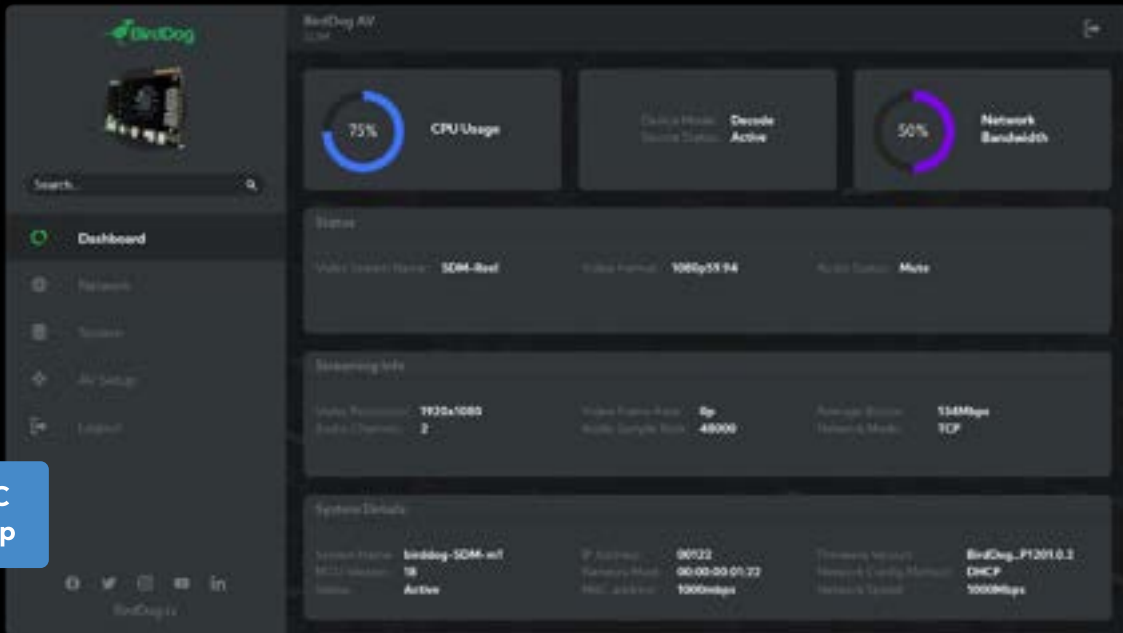
Ethernet RJ45 1000baseT

#### **MECHANICAL**

Power – PoE (802.11af)

Physical buttons – 4

Status Indicator – Multicolour LED



Works with NEC Message Line-up



### The ultimate NDI® experience integrated.

Built upon Intel® SDM platform the BirdDog SDM Family will revolutionise the way content is distributed to even the largest installations. Simply install the SDM module inside an SDM compatible flat panel display for the most integrated and scalable NDI® to screen solution available.

No more wall boxes or patch panels, now the AV distribution is built directly into the display.

#### SDM Family.

Controlled by the all in one BirdDog OS and with two BirdDog SDM modules to choose from, M1 and M2, there is a solution for every project. M1 is a full NDI Sender and Receiver based on the Intel SDM-L form factor and M2 is an NDI Receiver built on the Intel® SDM-S module. With support for resolutions all the way up to 4Kp60, there is also a RESTful API for programming completely automated spaces.

#### BirdDog OS.

BirdDog have created a complete Operating System for Intel® SDM platform, simply called BirdDog OS, to give a truly integrated NDI® distribution system. Underpinned with BirdDog's technology, BirdDog OS has built in Crestron control and a RESTful API for complete automation.

#### M1.

M1 is an NDI® Sender and Receiver module based upon the Intel® SDM-L module. Receive NDI® from anywhere on the network to display on screen. With the Send function, you can plug a source such as a laptop in and then duplicate that across any number of additional BirdDog Display activated screens.

#### M2.

M2 is an NDI® Receiver module based upon the Intel® SDM-S module. Receive NDI® from anywhere on the network to display on screen.



### **Beautiful Interface.**

The best user experiences are built upon easy to use interfaces. BirdDog OS features a clean and elegant design to make it super intuitive and easy to switch sources.

### **G'day Dante.**

With the optional \$99 USD Dante activation licence the M1 and M2 can have full Dante support. The M1 can embed Dante into the NDI stream and also de-embed Dante audio out of the NDI stream, and the M1 will allow for Dante embedding. Perfect for receiving NDI and splitting Dante out to the audio system in conference rooms, educational facilities, corporate AV spaces, and more.

### **Multiple Sources.**

Harnessing the power of NDI®, BirdDog Display can receive see virtually unlimited number of NDI® sources on the network. Simply use a remote control or any pointing device to bring that source to full screen.

### **Powered by Intel.**

BirdDog M1 and M2 are built upon Intel® SDM core architecture for maximum performance and reliability. Just as you'd expect when you use the best.

### **RESTful API. Crestron Control Library.**

BirdDog Display has a complete RESTful API for programming your own automation as well as a Crestron Control Library.

### **Distribute NDI® content everywhere. Just add Central.**

BirdDog Central is a software platform set to redefine the way we think about driving content to TV screens. By teaming up Central with any NDI® source, including all BirdDog hardware capable of creating NDI® sources, you can now drive your NDI® streams to any BirdDog Studio NDI or Mini to decode NDI® back to SDI or HDMI. For more information see Central page.

For Technical Specifications visit [BirdDog.tv/sdm-techspecs/](https://BirdDog.tv/sdm-techspecs/)

### **Crestron Control.**

BirdDog's Crestron Control Library is a collection of examples and documentation to allow integration of BirdDog products within standard Crestron protocols. It includes a simple user interface for controlling BirdDog PTZ cameras and recalling positions, as well as routing NDI sources to BirdDog hardware decoders such as NDI Wallplates, SDM Modules, and converters.

### **RESTful API.**

Download the free BirdDog RESTful API and program your own automation for all BirdDog hardware endpoints, including cameras.

### **Q-SYS Control Plugin.**

Download the free BirdDog Q-SYS Plugin to start programming your own automation and integration into AV installations.

# API





## BirdDog Helpful Links

Unlock the latest features by updating firmware  
[BirdDog.tv/downloads](http://BirdDog.tv/downloads)

Activate your warranty by registering  
[BirdDog.tv/register](http://BirdDog.tv/register)

Download the latest manual  
[BirdDog/downloads](http://BirdDog/downloads)

Help available  
[help@BirdDog.tv](mailto:help@BirdDog.tv) or [BirdDog.tv/support](http://BirdDog.tv/support)

Join our user group  
[www.facebook.com/groups/BirdDogUsers](http://www.facebook.com/groups/BirdDogUsers)



[BirdDog.tv](http://BirdDog.tv)

[hello@BirdDog.tv](mailto:hello@BirdDog.tv)