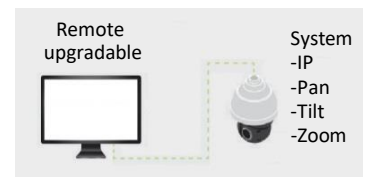


- ▶ All systems (P/T/Z/IP) are remote upgradable
- ▶ Servo Feedback
- ▶ High Dynamic Range (HDR) Electronic Image
- ▶ Stabilizer (EIS) H.265/H.264/MJPEG
- ▶ simultaneous streaming
- ▶ 2M/3M/4M resolution in one platform
- ▶ 30x/33x/40x Zoom Lens available
- ▶ Triple power support (PoE+/DC12V/AC24V)



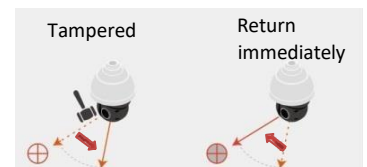
## All Systems (P/T/Z/IP) are Remote Upgradable

721/821 PTZ is remote upgradable for its software systems, including IP system, pan, tilt and zoom block. With this feature, the maintenance costs can be greatly reduced and new features can be added instantly.



## Servo Feedback

721/821 PTZ features Servo Feedback technology. When encountering external force, such as vandalism, or environmental vibration, the PTZ can immediately return to its original position.



## Features

- Multiple Progressive Scan CMOS Sensor support up to 4M Resolution
- Up to 40x Optical Zoom
- Multi Exposure HDR
- Electrical Image Stabilizer (EIS) Support
- Multi Codec support (H.265/H.264/MJPEG)
- Low Latency Streaming
- Quad Streams support
- 3D Motion Compensated Noise Reduction (MCTF)
- Smart Event function - External Input/Motion Detection/Network Failure Detection/Periodical Event/Manual Trigger/Audio Detection
- Text Overlay and Privacy Masks
- Micro SD/SDHC/SDXC Card support
- ONVIF Profile S/G/Q/T support
- Smart Low Bitrate control
- Weatherproof (IP66)<sup>1</sup>
- Vandal Proof (IK10 Rating)<sup>1</sup>
- Servo Feedback - Guarantees no Drifting
- Zero-Down-Time (ZDT) Power Switching

<sup>1</sup>821 only

## Custom Specification ( Default )

Sony 3M		
Image Sensor	Sony 3M 1/2.8" Progressive CMOS	
Effective Pixels	HxV = 2065x1553 (3M)	
Pixel Size	2.5 μm	
Frame Rate (Maximum)	H.265 HDR 3M @30fps + 3M @30fps	
	H.264 HDR 3M @30fps + 3M @30fps	
	MJPEG 1080p @30fps	
Lens : Default		
Minimum Illumination	Color	0.04 lux
	B/W	0.002 lux
Lens	Type	40x Zoom Lens, P-Iris, Auto-Iris, F1.6
	Focal Length	4.3-170 mm
	Horizontal FOV	63.7° (wide), 1.7° (tele)
	Vertical FOV	49.2° (wide), 1.3° (tele)

## Common Specification

Camera		
Day and Night	Automatically removable IR-cut filter	
Shutter Time	1~1/10K sec.	
HDR	Yes	
EIS	Yes	
Zoom	Optical zoom, digital zoom ready	
Image Settings	Color, Brightness, Sharpness, Contrast White Balance, Exposure Control 2DNR, 3DNR, NR by Motion Masking, Text Overlay	
Corridor Mode	90°, 180°, 270° rotation	
Pan/Tilt		
Pan/Tilt Range	Pan : 0~360° endless	Tilt : -10~100°
Manual Speed	Pan : 0.1~90°/s	Tilt : 0.1~55°/s
Preset Speed	Pan : 400°/s	Tilt : 300°/s
Preset	256	
PTZ Mode	8 Sequence, 8 cruise, 4 auto pan	
Video Codec		
Compression	H.265/H.264/MJPEG	
Streaming	Up to 4 individually configurable streams in H.265/H.264/MJPEG Configurable resolution/frame rate/bandwidth LBR/VBR/CBR in H.265/H.264	
Audio Codec		
Compression	G.711/G.726/AAC/LPCM	
Streaming	2 way	
Audio Input	Line in	
Audio Output	Line out	
Network		
Interface	10/100Mbps Ethernet	
Security	User Authentication/HTTPS/IP Filter/IEEE 802.1x	
Supported Protocols	ARP, PPPoE, IPv4/v6, ICMP, IGMP, QoS, TCP, UDP, DHCP, UPnP, SNMP, SMTP, RTP, RTSP, HTTP, HTTPS, FTP, NTP, DDNS	
ONVIF	Profile S/G/Q/T conformant	

System Integration		
Analytics	Motion Detection/Audio detection	
Event Triggers	External Input, Analytics, Network Failure Detection, Periodical Event, Manual Trigger	
Event Actions	External output Activation Video and audio recording to edge storage File Upload : FTP, network share and email Notification : HTTP, FTP, email	
General		
Casing	Metal and Plastic	
Power	PoE+ IEEE802.3at, class 4 DC12V, 2.12A, max 25.4 watt AC24V, max 25.4 watt	
Connectors	RJ45	
	Alarm in x4, Alarm out x2, Terminal Block	
	DC12V Terminal Block	
	AC24V Terminal Block	
	Audio in Terminal Block	
	Audio out Terminal Block	
RS485 Terminal Block*		
Storage	Support for microSD/microSDHC/microSDXC card Support for recording to NAS	
Operating Conditions	721 R2	-25°C~50°C without heater
	821 R2 <sup>1</sup>	-40°C~50°C with heater 10%~90%, No Condensation
Storage Conditions	-20°C~70°C	
Approvals	EMC	CE/FCC
	Safety Environment	LVD IP66 <sup>2</sup> , IK10 <sup>2</sup>
Dimensions	721 R2	∅ 212x264 mm
	821 R2	∅ 210x279 mm with Sunshield
Weight	721 R2	2.6 kg
	821 R2	2.9 kg

<sup>1</sup>Operating conditions for 33x lens: -30°C~50°C with heater

<sup>2</sup>821 only

## Custom Specification

### Options



Sony 3M						
Image Sensor	Sony 3M 1/2.8" Progressive CMOS					
Effective Pixels	HxV = 2065x1553 (3M)					
Pixel Size	2.5 μm					
Frame Rate (Maximum)	H.265 HDR 3M @30fps + 3M @30fps H.264 HDR 3M @30fps + 3M @30fps MJPEG 1080p @30fps					
Lens						
Minimum Illumination	Color B/W	0.04 lux 0.002 lux	Color B/W	0.04 lux 0.002 lux	Color B/W	0.04 lux 0.002 lux
Lens	Type	40x Zoom Lens, P-Iris, Auto-Iris, F1.6	Type	33x Zoom Lens, P-Iris, Auto-Iris, F1.6	Type	30x Zoom Lens, P-Iris, Auto-Iris, F1.6
	Focal Length	4.3-170 mm	Focal Length	4.6-152 mm	Focal Length	4.3-129 mm
	Horizontal FOV	63.7° (wide), 1.7° (tele)	Horizontal FOV	55.4° (wide), 1.9° (tele)	Horizontal FOV	62.0° (wide), 2.0° (tele)
	Vertical FOV	49.2° (wide), 1.3° (tele)	Vertical FOV	42.8° (wide), 1.4° (tele)	Vertical FOV	47.0° (wide), 2.0° (tele)

### Options

Omni Vision 4M						
Image Sensor	Omni Vision 4M 1/3" Progressive CMOS					
Effective Pixels	HxV = 2688x1520 (4M)					
Pixel Size	2.0 μm					
Frame Rate (Maximum)	H.265 HDR 4M @30fps + 1080P @30fps H.264 HDR 4M @30fps + 1080P @30fps MJPEG 1080p @30fps					
Lens						
Minimum Illumination	Color B/W	TBD TBD	Color B/W	TBD TBD	Color B/W	0.1 lux 0.01 lux
Lens	Type	40x Zoom Lens, P-Iris, Auto-Iris, F1.6	Type	33x Zoom Lens, P-Iris, Auto-Iris, F1.6	Type	30x Zoom Lens, P-Iris, Auto-Iris, F1.6
	Focal Length	4.3-170 mm	Focal Length	4.6-152 mm	Focal Length	4.3-129 mm
	Horizontal FOV	TBD	Horizontal FOV	TBD	Horizontal FOV	TBD
	Vertical FOV	TBD	Vertical FOV	TBD	Vertical FOV	TBD

### Options

Sony 2M						
Image Sensor	Sony 2M 1/2.8" Progressive CMOS					
Effective Pixels	HxV = 1945x1097 (2M)					
Pixel Size	2.9 μm					
Frame Rate (Maximum)	H.265 HDR 1080p @30fps + 1080p @30fps H.264 HDR 1080p @30fps + 1080p @30fps MJPEG 1080p @30fps					
Lens						
Minimum Illumination	Color B/W	0.02 lux 0.001 lux	Color B/W	0.02 lux 0.001 lux	Color B/W	0.02 lux 0.001 lux
Lens	Type	40x Zoom Lens, P-Iris, Auto-Iris, F1.6	Type	33x Zoom Lens, P-Iris, Auto-Iris, F1.6	Type	30x Zoom Lens, P-Iris, Auto-Iris, F1.6
	Focal Length	4.3-170 mm	Focal Length	4.6-152 mm	Focal Length	4.3-129 mm
	Horizontal FOV	66.1° (wide), 1.8° (tele)	Horizontal FOV	TBD	Horizontal FOV	59.0° (wide), 2.4° (tele)
	Vertical FOV	39.8° (wide), 1.1° (tele)	Vertical FOV	TBD	Vertical FOV	35.2° (wide), 1.4° (tele)