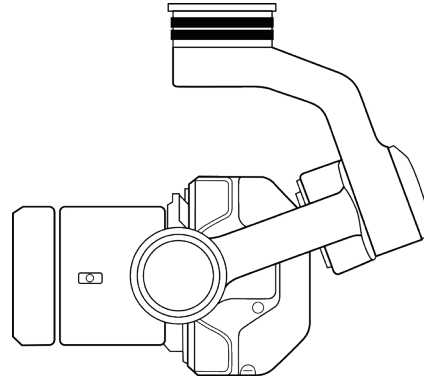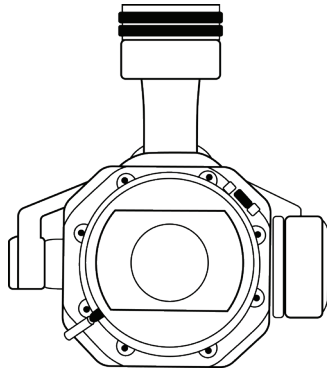# ZENMUSE X9 SENSOR

The Zenmuse X9-8K Air gimbal camera supports dual native ISO and recording 35mm full frame at up to 8K 75fps ProRes RAW or 8K 25fps CinemaDNG as well as 4K 120fps video.

The camera system can be controlled through traditional cinematography methods including camera operation using DJI Master Wheels and DJI Three-Channel Follow Focus systems.
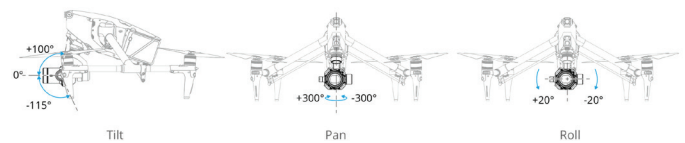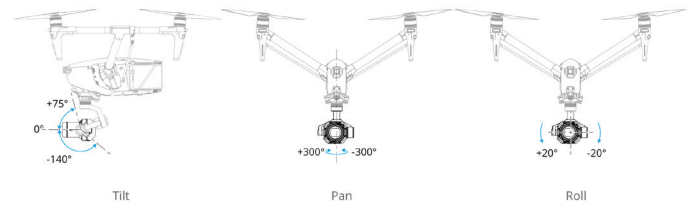
CAMERA AXIS RANGES

Controllable rotation range when landing gear lowered

| Tilt | Pan | Roll |

Controllable rotation range when landing gear raised

| Tilt | Pan | Roll |

35MM SENSOR

Sensor Type	35mm Full Frame CMOS
Sensor Size (Max Video Recording Area)	36.0x19.0mm
Max Video Resolution	8192x4320
Effective Pixels	44 MP
Video Formats	MOV, CinemaDNG
Dynamic Range	12+ Stops (above 30fps)
	14+ Stops (below 30fps)
Dual Native ISO	320/1600 (above 30fps)
	800/4000 (below 30fps)
Electronic Shutter Speed	1/8000 - 8s
ISO Range (Photos)	100 - 25600
ISO Range (Videos)	200 - 6400
White Balance (AWB/MWB)	2000K - 10000K

ASPHERICAL LENSES

Focal Length	18mm	24mm	35mm	50mm
Aperture Range	F2.8 - F22	F2.8 - F16	F2.8 - F16	F2.8 - F16
Field of View	90.0x66.8°	73.7x53.1°	54.4x37.8°	39.6x27.0°
Close Focus	11.8"	2' 2"	2' 10"	3' 1"
Filter Diameter	55mm	46mm	46mm	46mm
Elements, Groups, ASPH	9/8/3	9/8/3	9/8/3	9/7/2
Barrel Dimensions	64.5 x 62.8mm	55.0 x 71.2mm	55.0 x 71.2mm	55.0 x 71.2mm
Weight	182g	178g	179g	182g
Filtration	ND 1.2, ND 2.1, UV/IR Cut, UV MC Opt Flat			

RECORDING CODECS / RESOLUTIONS / FPS

Codec	Fov	Sensor Resolution		Sensor FPS/Rate									* Choose after enabling S&Q mode					
				23.976	24	25	29.97	30	48	50	59.94	60	72	75	96	100	119.88	120
Cinema DNG	FF	8192×4320	17:9	849MBps	849MBps	885MBps												
		7680×4320	16:9	796MBps	796MBps	829MBps												
		4096×2160	17:9	212MBps	212MBps	221MBps	265MBps	265MBps	425MBps	442MBps	531MBps	531MBps	637MBps	663MBps	849MBps	885MBps		
		3840×2160	16:9	199MBps	199MBps	207MBps	249MBps	249MBps	399MBps	415MBps	498MBps	498MBps	597MBps	872MBps	796MBps	829MBps		
	S35	5568×2952	17:9	394MBps	394MBps	411MBps	493MBps	493MBps	789MBps	822MBps								
		5248×2952	16:9	372MBps	372MBps	387MBps	465MBps	465MBps	744MBps	775MBps								
ProRes RAW	FF	8192×4320	17:9	425MBps	425MBps	442MBps	265MBps	265MBps	425MBps	442MBps	531MBps	531MBps						
		7680×4320	16:9	398MBps	398MBps	415MBps	249MBps	249MBps	398MBps	415MBps	498MBps	498MBps						
		8192×3424	2.39:1										505MBps	526MBps				
		4096×2160	17:9	106MBps	106MBps	111MBps	133MBps	133MBps	212MBps	221MBps	265MBps	265MBps	319MBps	332MBps	425MBps	442MBps	265MBps	265MBps
		3840×2160	16:9	100MBps	100MBps	104MBps	124MBps	124MBps	199MBps	207MBps	249MBps	249MBps	299MBps	311MBps	398MBps	415MBps	249MBps	249MBps
	S35	5568×2952	17:9	198MBps	198MBps	206MBps	247MBps	247MBps	395MBps	412MBps	494MBps	494MBps						
		5248×2952	16:9	186MBps	186MBps	194MBps	232MBps	232MBps	372MBps	387MBps	465MBps	465MBps						
ProRes 422 HQ	FF	8192×4320	17:9	377MBps	377MBps	393MBps	471MBps	471MBps										
		7680×4320	16:9	352MBps	352MBps	396MBps	442MBps	442MBps										
		4096×2160	17:9	94MBps	94MBps	98MBps	118MBps	118MBps	189MBps	197MBps	236MBps	236MBps	283MBps	295MBps	377MBps	393MBps	471MBps	471MBps
		3840×2160	16:9	88MBps	88MBps	92MBps	111MBps	111MBps	177MBps	184MBps	221MBps	221MBps	265MBps	265MBps	354MBps	369MBps	442MBps	442MBps
	S35	4096×2160	17:9	94MBps	94MBps	98MBps	118MBps	118MBps	189MBps	197MBps	236MBps	236MBps						
		3840×2160	16:9	88MBps	88MBps	92MBps	111MBps	111MBps	177MBps	184MBps	221MBps	221MBps						
H.264	FF	4096×2160	17:9	19MBps	19MBps	19MBps	19MBps	19MBps	26MBps	26MBps	26MBps	26MBps	38MBps	38MBps	38MBps	38MBps	38MBps	38MBps
		3840×2160	16:9	19MBps	19MBps	19MBps	19MBps	19MBps	26MBps	26MBps	26MBps	26MBps	38MBps	38MBps	38MBps	38MBps	38MBps	38MBps
	S35	4096×2160	17:9	19MBps	19MBps	19MBps	19MBps	19MBps	26MBps	26MBps	26MBps	26MBps						
		3840×2160	16:9	19MBps	19MBps	19MBps	19MBps	19MBps	26MBps	26MBps	26MBps	26MBps						

EL GRAYSCALE (ABOVE 30FPS)

EI200	EI320 (native)	EI400	EI800	EI1600 (native)	EI3200	EI4000	EI6400
6.1	6.7	6.3	6.3	6.3	6.3	6.3	6.6
8	7.4	7.3	6.7	7.8	7.1	6.9	6.5
14.1 Stops	14.1 Stops	13.6 Stops	13.0 Stops	14.1 Stops	13.4 Stops	13.2 Stops	13.1 Stops
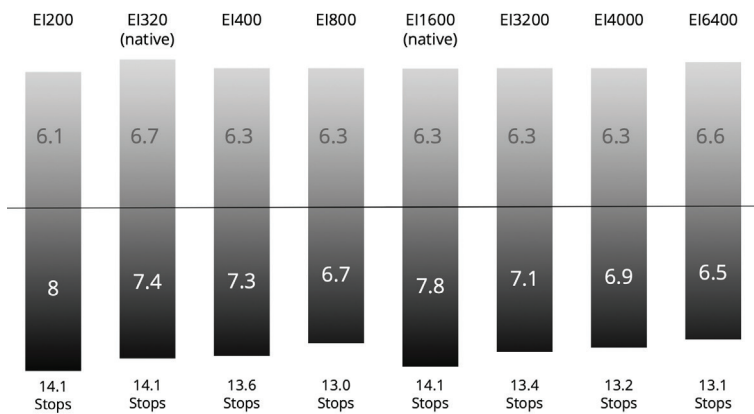
EL GRAYSCALE (BELOW 30FPS)

EI 200	EI 400	EI 800 (native)	EI 1600	EI 3200	EI 4000 (native)	EI 6400
5.1	6.1	7.1	7.1	7.1	7.1	7.1
9	8.6	7.6	7	6.4	7.4	6.9
14.1 Stops	14.7 Stops	14.7 Stops	14.1 Stops	13.5 Stops	14.5 Stops	14.0 Stops