























High Quality, Low cost precision lenses for EO/IR ISR Security / Surveillance /  
Industrial and scientific applications

LENS CATALOG

LWIR - MWIR - SWIR

## Zoom Lenses








MODEL		FOCAL LENGTH	F#	HFOV	FPA	WEIGHT	DIMENSIONS Ø X Length
M1		 <b>15-115mm</b> Continuous zoom	3.6	3.2° - 24°	640 x 512 x 10μ	170gr	41 x 66mm
M2		 <b>25-170mm</b> Continuous zoom	3.6	2.2° - 14.5°	640 x 512 x 10μ	270gr	63 x 110mm
M3		 <b>25-200mm</b> Continuous zoom	4.0	2.75°-21.7°	640 x 512 x 15μ	355gr	72.5 x 114mm
M4		 <b>15-230mm</b> Continuous zoom	3.6	1.6°-24.1°	640 x 512 x 10μ	280gr	78 x 88mm
M5		 <b>18-250mm</b> Continuous zoom	4.0	2.35°-31.7°	640 x 512 x 16μ	265gr	78.7 x 87mm
M6		 <b>20-340mm</b> continuous zoom	5.5	1.62°-27°	640 x 512 x 15μ	265gr	78 x 91mm
M7		 <b>18-275mm</b> Continuous zoom	5.5	2°-29.8°	640 x 512 x 15μ	265gr	63.5 x 72mm
M8		  <b>18-275mm</b> Continuous zoom	5.5	2°-29.8°	640 x 512 x 15μ	220gr	63.5 x 71mm
M9		<b>50/250mm</b> Dual FOV	4.0	2.2°-10.97°	640 x 512 x 15μ	1.5kg	93 x 115 x 146mm
M10		<b>20-300mm</b> Continuous zoom	4.0	1.83°-26.9°	640 x 512 x 15μ	950gr	92 x 144 x 140mm
M11		<b>15-330mm</b> Continuous zoom	4.0	1.7°-35.4°	640 x 512 x 15μ	850gr	96 x 123mm
M12		 <b>15-330mm</b> Continuous zoom	4.0	1.7°-35.4°	640 x 512 x 15μ	900gr	96 x 123mm

## Zoom Lenses

MODEL		FOCAL LENGTH	F#	HFOV	FPA	WEIGHT	DIMENSIONS Ø X Length
M13		18-430mm Continuous zoom	5.5	1.3°-29.8°	640 x 512 x 15μ	900gr	96 x 125mm
M14	 <span>+</span>	18-430mm Continuous zoom	5.5	1.3°-29.8°	640 x 512 x 15μ	950gr	96 x 125mm
M15		25-460mm Continuous zoom	4.0	1.2°-21.7°	640 x 512 x 15μ	2.4kg	135 x 192mm
M16		25-500mm Continuous zoom	5.5	1.1°-21.7°	640 x 512 x 15μ	900gr	103 x 116mm
M17		40-600mm Continuous zoom	4.0	0.92°-13.6°	640 x 512 x 15μ	3kg	165 x 169 x 212mm
M18		30-600mm Continuous zoom	5.5	0.92°-18.1°	640 x 512 x 15μ	1.7kg	135 x 196mm
M19		30-660mm Continuous zoom	4.0	0.85°-18.1°	640 x 512 x 15μ	2.8kg	188 x 219mm
M20		40-825mm continuous zoom	4.0	0.7°-13.7°	640 x 512 x 15μ	4.8kg	228 x 268mm
M21		40-860mm Continuous zoom	5.5	0.64°-13.6°	640 x 512 x 15μ	3kg	218 x 223mm
M22		45-1075mm Continuous zoom	5.5	0.51°-12.1°	640 x 512 x 15μ	4.9kg	228 x 272mm
M23		75-1450mm Continuous zoom	5.5	0.4°-7.85°	640 x 512 x 15μ	6.5kg	273 x 300mm
M24	 <span>HD</span>	20-300mm Continuous zoom	3.4-4.0	2.45°-35.4°	1280 x 1024 x 10μ	970gr	110 x 150 x 170mm
M25	 <span>HD</span>	18-330mm Continuous zoom	3.0-4.0	2.22°-39.1°	1280 x 1024 x 10μ	950gr	95 x 125mm

CUSTOM OPTIONS AVAILABLE / FULL VGA - HD CAMERA PAIRING CONFIGURATIONS AVAILABLE

## Zoom Lenses

MODEL		FOCAL LENGTH	F#	HFOV	FPA	WEIGHT	DIMENSIONS Ø X Length
M26		<span>HD</span> 18-400mm Continuous zoom	3.4-4.0	1.83°-39.1°	1280 x 1024 x 10μ	1.35kg	130 x 153mm
M27		<span>HD</span> 40-600mm Continuous zoom	4.0	1.22°-18.1°	1280 x 1024 x 10μ	3.5kg	173 x 176 x 256mm
M28		<span>HD</span> 40-660mm Continuous zoom	3.0-4.0	1.11°-24.1°	1280 x 1024 x 10μ	3kg	200 x 220mm
M29		<span>HD</span> 30-400mm Continuous zoom	3.0-4.0	2.75°-35.4°	1920 x 1536 x 10μ	1.25kg	120 x 230mm
M30		<span>HD</span> 40-800mm Continuous zoom	3.4-4.0	0.92°-18.1°	1280 x 1024 x 10μ	4.2kg	220 x 254mm
M31		<span>HD</span> 40-1000mm Continuous zoom	4.0	0.73°-18.1°	1280 x 1024 x 10μ	8kg	284.5 x 300mm
M32		<span>HD</span> 70-1200mm Continuous zoom	4.0	0.92°-15.6°	1920 x 1536 x 10μ	13.5kg	335 x 451mm



# LWIR UNCOOLED

## Zoom Lenses

XGA resolution Zero Boresight Light Weight






MODEL		FOCAL LENGTH	F#	HFOV	FPA	WEIGHT	DIMENSIONS Ø X Length
L1		22/66mm Dual FOV	1.25	9.45°-27.7°	640 x 480 x 17μ	350gr	78 x 58mm
L2		33/99mm Dual FOV	1.25	8.9°-26.2°	1280 x 1024 x 12μ	725gr	122 x 112mm
L3		45/135mm Dual FOV	1.1-1.6	4.62°-13.7°	640 x 480 x 17μ	1.6kg	99 x 110 x 142mm
L4		XGA 45/135mm Dual FOV	1.32-1.4	7.4°-21.8°	1024 x 768 x 17μ	1.5gr	130 x 168mm
L5		85-190mm Dual FOV	1.2	3.3°-7.3°	640 x 480 x 17μ	2.3kg	170 x 232mm
L6		⊕ ⚡ 18-60mm Continuous zoom	1.4	10.4°-33.6°	640 x 480 x 17μ	220gr	70 x 76mm
L7		⚡ XGA 24-90mm Continuous zoom	0.9	7.81°-28.7°	1024 x 768 x 12μ	1.2kg	113 x 120mm
L8		15-100mm Continuous zoom	1.4	6.23°-39.8°	640 x 480 x 17μ	1kg	115 x 119mm
L9		24-105mm Continuous zoom	1.1-1.55	5.95°-29.5°	640 x 480 x 17μ	1kg	85 x 130mm
L10		25-150mm Continuous zoom	1.4	4.15°-24.5°	640 x 480 x 17μ	1.2kg	116 x 153.7mm
L11		25-225mm Continuous zoom	1.5	2.8°-24.5°	640 x 480 x 17μ	3kg	188 x 208mm
L12		HD 40-300mm Continuous zoom	1.5	2.93°-21.7°	1280 x 1024 x 12μ	5.9kg	238 x 293mm

CUSTOM OPTIONS AVAILABLE / FULL VGA - HD CAMERA PAIRING CONFIGURATIONS AVAILABLE

# LWIR COOLED

## Zoom Lenses

XGA resolution Zero Boresight Light Weight

MODEL		FOCAL LENGTH	F#	HFOV	FPA	WEIGHT	DIMENSIONS Ø X Length
L13		60-180mm Continuous zoom	2.24	3.1°-9.15°	640 x 512 x 15µ	830gr	95 x 104mm
L14		60-240mm Continuous zoom	2.76	2.44°-9.75°	640 x 512 x 16µ	830gr	97 x 103mm
L15		15-300mm Continuous zoom	2.0	1.83°-35.4°	640 x 512 x 15µ	3kg	170 x 271mm
L16		60/110/360mm Triple FOV	2.24	1.55°/5°/9.15°	640 x 512 x 15µ	3.5kg	174 x 192mm
L17		30/60/180/400mm Four FOV	2.24	1.4°/3.1°/ 9.15°/18.1°	640 x 512 x 15µ	6.5kg	245 x 199 x 293mm



CUSTOM OPTIONS AVAILABLE / FULL VGA - HD CAMERA PAIRING CONFIGURATIONS AVAILABLE

# LWIR



## A-Thermalized optically no focus mechanism

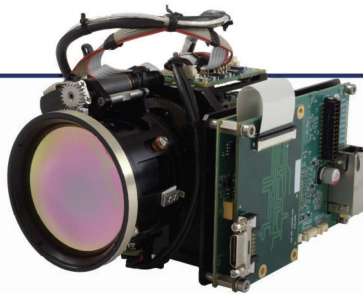
MODEL		FOCUS	FOCAL LENGTH	HFOV	F#	FPA	WEIGHT	DIMENSIONS Ø X Length
L18		Athermalized	4.2mm	152°	1.1	640 x 480 x 17μ	140gr	85 x 39mm
L19		Athermalized	8.5mm	106°	1.0	1024 x 768 x 17μ	170gr	45 x 65mm
L20		Athermalized	12mm	83°	1.0	1024x768x17μ	106gr	45 x 52.5mm
L21		Athermalized	15mm	32°	1.1	1024 x 768 x 17μ	135gr	46 x 65mm
L22		Athermalized	16mm	61.2°	1.1	1024 x 768 x 17μ	115gr	67 x 55mm
L23		Athermalized	17mm	35.5°	0.7	640 x 480 x 17μ	110gr	42 x 48mm
L24		Athermalized	19mm	52.1° or 46°	1.05	1024 x 768 x 17μ or 1280 x 1024 x 12μ	150gr	75 x 67mm
L25		Athermalized	19mm	52°	0.9	1024 x 768 x 17μ	280gr	58 x 70mm
L26		Athermalized	32mm	32°	1.05	1024 x 768 x 17μ	150gr	45 x 56.5mm
L27		Athermalized	35mm	17.7°	1.2	640 x 480 x 17μ	40gr	35 x 32mm
L28		Athermalized	45mm	13.8°	1.2	640 x 480 x 17μ	106gr	47 x 52mm
L29		Manual	90mm	6°	1.4	640 x 480 x 17μ	350gr	73 x 117mm

# SWIR & MULTISPECIAL

MODEL		FOCAL LENGTH	F#	WAVELENGTH	FPA	WEIGHT	DIMENSIONS Ø X Length
S1		 <b>12.5mm A-Thermalized</b>	1.2	0.6-1.7µ	640 x 512 x 15µ	120gr	30 x 81mm
S2		 <b>14mm A-Thermalized</b>	1.75	0.42-1.7µ	640 x 512 x 15µ	49gr	28 x 46mm
S3		  <b>800mm Mono focal 400/900mm Dual FOV</b>	<b>10 5.0/11</b>	0.4 – 0.7µ 0.7 – 1.7µ	1280 x 720 x 10µ	1.2kg	90 x 180mm
S4		 <b>300mm Motorized Focus</b>	4.5	0.9-1.8µ	1280 x 1024 x 10µ	800gr	89 x 272 x 103mm
S5		 <b>500mm Motorized Focus</b>	10	0.9-1.8µ	1280 x 1024 x 10µ	1.2kg	80 x 260 x 103mm
S6		 <b>75/250mm Dual FOV</b>	4.7	1-5µ	640 x 512 x 15µ	1.3kg	75 x 252mm
S7		<b>20-140mm Continuous zoom</b>	3.8	0.9-1.7µ	1280 x 720 x 10µ	1.4kg	109 x 187mm
S8		<b>30-300mm Continuous zoom</b>	2.85-4.5	0.9-1.7µ	640 x 512 x 15µ	2kg	88 x 267.6mm
S9		<b>15-300mm Continuous zoom</b>	2.8-4.3	0.9-1.7µ	640 x 512 x 15µ	2.5kg	95 x 294mm
S10		 <b>36-432mm Continuous zoom</b>	6.0	0.9-1.9µ	1280 x 1024 x 10µ	3.5kg	119 x 388mm
S11		 <b>50-500mm Continuous zoom</b>	5.0	0.9-1.9µ	1280 x 1024 x 10µ	3.7kg	115 x 470mm
S12		 <b>80-680mm Continuous zoom</b>	7.0	0.9-1.7µ	1280 x 1024 x 10µ	2.9kg	264 x 110.5 x 170mm
S13		 <b>100-1000mm Continuous zoom</b>	10	0.9-1.9µ	1280 x 1024 x 10µ	3.7kg	117 x 508mm
S14		  <b>VIS 400/1620 Dual FOV SWIR 500- 2500mm CZ</b>	4-16	0.4 – 0.9µ 0.9 – 1.7µ	1280 x 1024 x 10µ	13kg	186 x 559mm



# Plug and play SPI short / mid / long range advanced lenses meeting strict requirements



## Hardened / Coated Military grade optics with Advanced AI processing features

- Multiple 2-pt NUC Tables with Auto INTEGRATION CONTROL and NUC SELECTION
- BPR (Bad Pixel Detection and Replacement)
- Contrast Limited Histogram Equalization
- Local DRC Contrast Enhancement
- Sharpening and Convolution Kernels
- Spatial Noise Reduction and Median Filter
- Adaptive Temporal Filter without Blur
- Auto Integration Control and NUC Selection
- Image Statistics
- Autofocus
- Proprietary Detail Enhancement and Noise Reduction Algorithms
- Double Exposure Mode



[www.x20.org](http://www.x20.org)



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