

# SupIR-X 15–300mm f/4

High-Definition MWIR Zoom Lens for SXGA 10 $\mu$ m Detectors  
Optimized for ISR & Security Applications (PN 680519)

NEW



## FROM GREAT TO GROUNDBREAKING: THE NEW 15–300mm FOR 10 $\mu$ m SXGA

The SupIR-X 15–300mm f/4 is a next-generation, high-performance continuous zoom lens, specifically designed for SXGA 10 $\mu$ m detectors.

It is engineered to meet the demanding requirements of ISR and security systems, delivering true high-definition MWIR imaging.

Its compact, rugged design ensures reliable performance in harsh environments, while compatibility with multiple extenders enables extended reach up to 1200mm.

With high spatial resolution, low edge distortion across the full zoom range, and an integrated mechanical shutter for reliable NUC, this lens is ideally suited for demanding air, land, and sea ISR applications.

## Extender compatibility

The SupIR-X 15–300mm f/4 is fully compatible with the following existing extenders:

Extender	Effective focal length	Detection Range (Vehicle NATO TARGET)
1.4x zoom extender	21–420mm	16.5km
2.0x zoom extender	30–600mm	20.6km
2.3x zoom extender	35–690mm	23.5km
3.0x zoom extender	45–900mm	24.5km
4.0x zoom extender	60–1200mm	26.3km



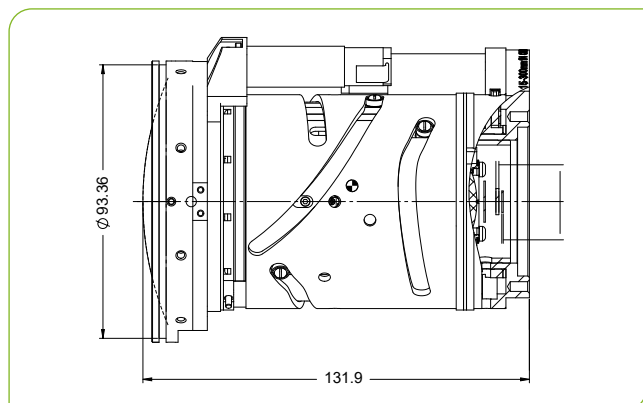
## KEY PRODUCT FEATURES

- Designed and optimized for 10 $\mu$ m SXGA (1280×1024) MWIR detectors supporting 3.6–4.2 $\mu$ m and 3.6–4.9 $\mu$ m spectral bands
- High spatial resolution and low distortion at the edges across full zoom range
- Integrated physical shutter for mechanical NUC (non-uniformity correction)
- Supports both 19.4mm and 20.5mm CSH (cold shield height) interfaces
- Extended back focal length (27.3mm in air) for system integration
- Fully compatible with existing extender series up to 1200mm focal length (FL)
- Optimized line-of-sight stability and boresight retention



Assumptions: detector 10 $\mu$  pixel pitch | 3.6 $\mu$ –4.9 $\mu$  spectral band | 23mK NETD | 30Hz frame rate | 0.2km<sup>-1</sup> atmospheric attenuation coefficient | 50% detection probability | 1.7x0.46m human size | 2.3x2.3m vehicle size

## TYPICAL ICD



### WFOV (15mm)

HFOV	640x480	1280x1024
15μ	34.7°	
10μ		45°

### NFOV (300mm)

HFOV	640x480	1280x1024
15μ	1.8°	
10μ		2.4°

Property	Value	
<b>Optical</b>	<b>WFOV</b>	<b>NFOV</b>
Focal Length	15mm	300mm
F#	4.0	
Average Transmission (3.6-4.9μm and 3.6-4.2μm)	92% (HD)	
Minimum Focusing Range	5m	50m
Cold Stop to FPA Distance	19.4mm-20.5mm	
<b>Cold Shield Height (CSH)</b>	<b>CSH 19.4</b>	<b>CSH 20.5</b>
Cold Stop CA	4.9mm	5.126mm
Back Focal Length (BFL)	28.4mm in air	28.2mm in air
Back Working Distance (BWD)	10.5	10.3
NUC	By integrated shutter or defocus	
<b>Mechanical</b>		
Focus Mechanism	Motorized	
Focus Time (minimum range to ∞)	≤1sec.	
Zoom Mechanism	Motorized	
Zoom Time (NFOV to WFOV)	≤8 sec. at -32°C; ≤5 sec. at T ≤ 20°C (at max. speed)	
Weight	1003gr	
Max. Dimensions	Ø93.36mm x 131.9mm	
<b>Electrical</b>		
Lens Control	Designated lens controller	
Supply Voltage	12V	
Current Consumption	0.5A average, 1.0A peak at T = -32°C; 0.2A average, 1.0A peak at T 20°C	
Communication Protocol	RS422	
<b>Environmental</b>		
Operation Temperature	-32°C to +80°C	
Storage Temperature	-54°C to +85°C	
Sealing	IP67 front element only	
<b>Configurations</b>		
680519-001	High Durability	
680519-002	Hard Carbon	

