

# MWIR Short Range 18x Zoom Thermal Camera

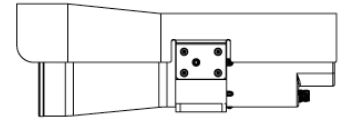
**The Short Range Continuous Zoom Thermal Camera** is the system of choice for all-weather security and surveillance. With outstanding target detection and recognition capabilities, the Short Range combines high-end performance with reliability and ease of use.

The Short Range delivers in day or night an extraordinarily clear thermal video with the convenience of a G5 designed and built continuous zoom infrared lens. Its horizontal field of view zooms smoothly from 32° to 1.8°. It enables man-sized target detection at ranges in excess of 10km in good conditions. The Short Range integrates advanced cooled detector technology that has a 640 x 512 focal plane array which operates in the 3–5µm MWIR spectral region — the best choice for marine and high humidity environments. An environmentally sealed dry nitrogen backfilled enclosure operability and stability over variable temperatures and diverse weather conditions. The Short Range camera is remotely controllable via serial interface and Graphical User Interface.

**Applications:** Vessel Traffic Surveillance, Border Protection, Critical Infrastructure Protection, Airport and Port Security

## \*Range Performance

- D = Detection** 50% Probability D / R / I
- R = Recognition** Target 2-degree delta T vs background
- I = Identification** Clear atmosphere / very low turbulence  
Actual range performance will vary based on a number of conditions, including user experience, display size/quality, weather/atmospheric conditions, etc.



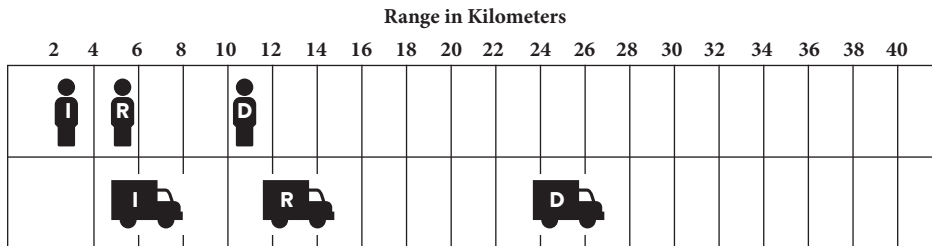
Side View



Rear View

## Short Range Thermal Imaging Camera

- 18X Continuous Optical Zoom
- Auto Focus
- f/4 High Sensitivity Zoom Lens
- Cooled 3–5µm MWIR Detector
- 640 x 512 pixels Focal Plane Array
- Multiple Command Protocols
- 2 Year Warranty
- Environmentally Sealed IP67
- G5 Image Processing
- Edge Enhancement



## MWIR Short Range 18x Thermal Camera

Part	200128
Video	PAL/NTSC/Digital Video Optional
Control	Control and command available via an RS-232/422 serial interface and PC Graphical User Interface
Power	6-32 VDC/ 20 Watts typical @ 25°C
Environmental	Unit sealed and dry nitrogen backfilled, rated IP67 Front Element Defroster Operating Temperature Range: -32° C to +65° C Meets MIL STD 810F
Mount	1/4-20 or 3/8-16 Tripod Interface
Weight	11.8 lbs (5.35 kg)
Length	15.3 in (39.05 cm)

## Cooled Sensor

Detector	640 x 512
Spectral Band	3-5µm
Warranty	2 Years

## Zoom Lens

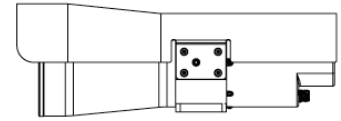
Spectral Range	3-5µm
Lens Type	f/4 18x Continuous Zoom
Lens Features	Motorized Remote Operation Auto and Manual Focus Adjust
Field of View	NFOV- 1.8° x 1.4° / WFOV- 32° x 24°

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# MWIR Mid-Range HD 10X Zoom Thermal Camera



Side View



Rear View

## The 10X Zoom HD Thermal Camera

is the system of choice for long range all-weather security and surveillance. With outstanding long range target detection and recognition capabilities, the Mid Range combines high-end performance with G5IR reliability and ease of use.

The Mid Range delivers extraordinarily clear long range thermal video images with the convenience of continuous zoom in all conditions day or night, or bad weather. Its horizontal field of view zooms smoothly from 13.3° to 1.3°. It enables man-sized target detection at ranges in excess of 18km in good conditions. The Mid-Range integrates advanced cooled photodetector technology that has a 1280 x 1024 focal plane array which operates in the 3–5µm MWIR spectral region — the best choice for marine and high humidity environments.

The G5IR's environmentally sealed dry nitrogen backfilled enclosure ensures operability and stability over variable temperatures and diverse weather conditions.

**Applications:** Vessel Traffic Surveillance, Border Protection, Critical Infrastructure Protection, Airport and Port Security



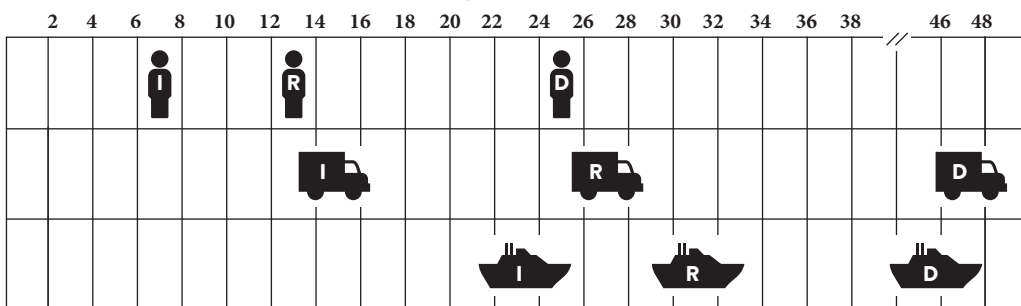
## \*Range Performance




- D = Detection** 50% Probability D / R / I
- R = Recognition** Target 8 degree delta T vs background
- I = Identification** Clear atmosphere / very low turbulence  
Actual range performance will vary based on a number of conditions, including user experience, display size/quality, weather/atmospheric conditions, etc.

## Mid- Range HD Thermal Imaging Camera

- 10x Continuous Optical Zoom
- Auto Focus
- f/4 High Sensitivity Zoom Lens
- Cooled 3-5µm MWIR Detector
- 1280 x 1024 10µ Pixel Focal Plane Array
- Multiple Command Protocols
- 2 Year Warranty
- Environmentally Sealed IP67
- G5 Image Processing
- Edge Enhancement
- HD SDI Digital Video Output

Range in Kilometers



-  = Target Size (1.8x0.5m)
-  = Target Size (2.3x2.3m)
-  = Target Size (3x6m)

## MWIR Mid-Range 10x Thermal Camera

Part	200132
Video	PAL/NTSC/Digital Video Optional
Control	Control and command available via an RS-232/422 Serial Interface and PC Graphical User Interface
Power	6-32 VDC / 20 Watts typical @ 25°C
Environmental	Unit sealed and dry nitrogen backfilled, rated IP67 Front Element Defroster Operating Temperature Range: -32° C to +65° C Meets MIL STD 810F
Mount	1/4-20 or 3/8-16 Tripod Interface
Weight	13.5 lbs (6.12 kg)
Length	18.8 in (47.94 cm)

## Cooled Sensor

Detector	1280 x 1024, 10µ pixels
Spectral Band	3-5µm
Warranty	2 Years

## Zoom Lens

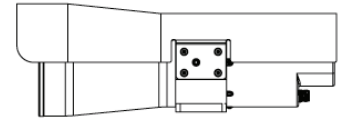
Spectral Range	3-5µm
Lens Type	f/4 10x Continuous Zoom
Lens Features	Motorized Remote Operation Auto and Manual Focus Adjust
Field of View	HNFOV- 1.3° / HWFOV-13.3° EFL NFOV 550mm

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# MWIR Long Range Plus HD 12X Zoom Thermal Camera



Side View



Rear View

## The LR+HD Continuous Zoom

**Thermal Camera** is the system of choice for long range all-weather security and surveillance. With outstanding target detection and recognition capabilities, the LR+HD combines high-end performance with reliability and ease of use.

The LR+HD delivers in day or night an extraordinarily clear thermal video with the convenience of continuous zoom from 9.8° to 0.8°. It enables man-sized target detection at ranges in excess of 25km in good conditions. The LR+HD integrates advanced cooled photodetector technology that has a 1280 x 1024 focal plane array which operates in the 3–5µm MWIR spectral region — the best choice for marine and high humidity environments. Environmentally sealed dry nitrogen backfilled enclosure ensures operability and stability over variable temperatures and diverse weather conditions. The LR+HD imager is remotely controllable via serial interface and Graphical User Interface.

**Applications:** Vessel Traffic Surveillance, Border Protection, Critical Infrastructure Protection, Airport and Port Security



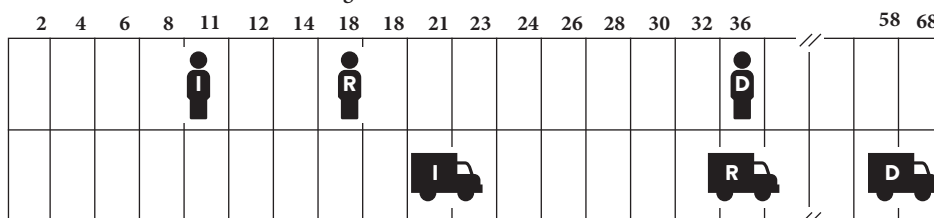
## \*Range Performance

- D = Detection** 50% Probability D / R / I
- R = Recognition** Target 2-degree delta T vs background
- I = Identification** Clear atmosphere / very low turbulence  
Actual range performance will vary based on a number of conditions, including user experience, display size/quality, weather/atmospheric conditions, etc.

## MWIR Long Range 12X HD Thermal Imaging Camera

- 12x Continuous Optical Zoom
- Auto Focus
- f/4 High Sensitivity Zoom Lens
- Cooled 3-5µm MWIR Detector
- 1280 x 1024 10µ pixel Focal Plane Array
- Multiple Command Protocols
- 2 Year Warranty
- Environmentally Sealed IP67
- G5 Image Processing
- Edge Enhancement
- HD SDI Digital Video Output
- Adaptive Temporal Noise Reduction
- Digital Zoom up to 8x
- Optional Turbulence Mitigation Software, Image Stabilization, and Super Resolution

Range in Kilometers



-  = Target Size (1.8x0.5)
-  = Target Size (2.3x2.3)

## MWIR Long Range+ 12x HD Thermal Camera

Part	200196
Video	HD-SDI, IP (optional)
Control	Control and communication available via RS 232/422
Power	6-32 VDC /20 Watts typical @25C
Environmental	Unit sealed and dry nitrogen backfilled, rated IP67 Front Element Defroster Operating Temperature Range: -32° C to +65° C Meets MIL STD 810F
Mount	1/4-20 or 3/8-16 Tripod Interface
Weight	35.2 lbs (13.5kg)
Length	24.5 in (62.2 cm)

## Cooled Sensor

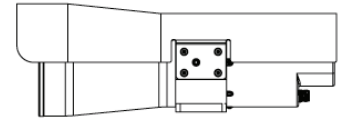
Detector	1280x1024
Spectral Band	3-5µm
Warranty	2 Years

## Zoom Lens

Spectral Range	3-5µm
Lens Type	f/4 12x Continuous Zoom
Lens Features	Motorized Remote Operation Auto and Manual Focus Adjust NFOV <i>efl</i> 900mm
Field of View	NFOV 0.8° x 0.65° / WFOV 9.8° x 7.9°

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# MWIR Long Range-HD 18X Zoom Thermal Camera



Side View



Rear View

## The LR-HD Continuous Zoom

**Thermal Camera** is the system of choice for long range all-weather security and surveillance. With outstanding target detection and recognition capabilities, the LR-HD combines high-end performance with reliability and ease of use.

The LR-HD delivers in day or night an extraordinarily clear thermal video with the convenience of continuous zoom from 16.6° to 0.9°. It enables man-sized target detection at ranges in excess of 25km in good conditions. The LR-HD integrates advanced cooled photodetector technology that has a 1280 x 1024 focal plane array which operates in the 3–5µm MWIR spectral region — the best choice for marine and high humidity environments. Environmentally sealed dry nitrogen backfilled enclosure ensures operability and stability over variable temperatures and diverse weather conditions. The LR-HD imager is remotely controllable via serial interface and Graphical User Interface.

**Applications:** Vessel Traffic Surveillance, Border Protection, Critical Infrastructure Protection, Airport and Port Security



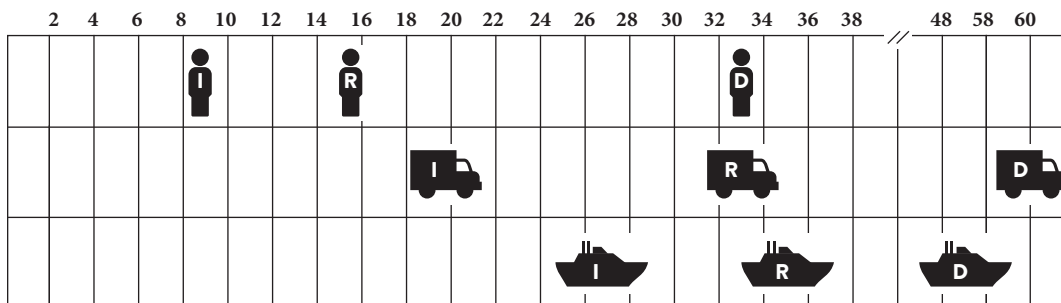
## \*Range Performance

<b>D = Detection</b>	50% Probability D / R / I
<b>R = Recognition</b>	Target 2-degree delta T vs background, 6-degree delta for boat target
<b>I = Identification</b>	Clear atmosphere / very low turbulence Actual range performance will vary based on a number of conditions, including user experience, display size/quality, weather/atmospheric conditions, etc.

## MWIR Long Range 18X HD Thermal Imaging Camera

- 18x Continuous Optical Zoom
- Auto Focus
- f/4 High Sensitivity Zoom Lens
- Cooled 3-5µ MWIR Detector
- 1280 x 1024 10µ pixel Focal Plane Array
- Multiple Command Protocols
- 2 Year Warranty
- Environmentally Sealed IP67
- G5 Image Processing
- Edge Enhancement
- HD SDI Digital Video Output
- Adaptive Temporal Noise Reduction
- Digital Zoom up to 8x
- Optional Turbulence Mitigation Software, Image Stabilization, and Super Resolution

Range in Kilometers



- = Target Size (1.8x0.5m)
- = Target Size (2.3x2.3m)
- = Target Size (3x6m)

## MWIR Long Range 18x HD Thermal Camera

Part	200124
Video	HD-SDI, IP (optional)
Control	Control and communication available via RS 232/422
Power	6-32 VDC /20 Watts typical @25C
Environmental	Unit sealed and dry nitrogen backfilled, rated IP67 Front Element Defroster Operating Temperature Range: -32° C to +65° C Meets MIL STD 810F
Mount	1/4-20 or 3/8-16 Tripod Interface
Weight	29.7 lbs (13.5kg)
Length	25.4 in (64.5 cm)

## Cooled Sensor

Detector	1280x1024
Spectral Band	3-5µm
Warranty	2 Years

## Zoom Lens

Spectral Range	3-5µm
Lens Type	f/4 18x Continuous Zoom
Lens Features	Motorized Remote Operation Auto and Manual Focus Adjust 18x Continuous Optical Zoom
Field of View	NFOV 0.9° x 0.7° / WFOV 16.6° x 13.3°

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# MWIR XTRA Long Range-HD 18X Zoom Thermal Camera

## The XLR-HD Continuous Zoom

**Thermal Camera** is the system of choice for long range all-weather security and surveillance. With outstanding target detection and recognition capabilities, the XLR-HD combines high-end performance with reliability and ease of use.

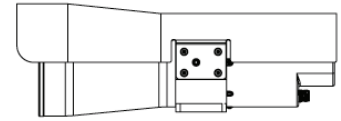
The XLR-HD delivers in day or night an extraordinarily clear thermal video with the convenience of continuous zoom from 13.5° to 0.7°. It enables man-sized target detection at ranges in excess 35km in good conditions. The XLR-HD integrates advanced cooled photodetector technology, has a 1280 x 1024 focal plane array, and operates in the 3-5 μm MWIR spectral region - the best choice for marine and high humidity environments.

The environmentally sealed enclosure insures operability and stability over variable temperatures and diverse weather conditions. The XLR-HD imager is remotely controllable via serial interface and Graphical User Interface.

**Applications:** Vessel Surveillance, Border Protection, Infrastructure Protection, Airport and Port Security

## \*Range Performance

<b>D = Detection</b>	50% Probability D / R / I
<b>R = Recognition</b>	Target 2-degree delta T vs background
<b>I = Identification</b>	Clear atmosphere / very low turbulence
	Actual range performance will vary based on a number of conditions, including user experience, display size/quality, weather/atmospheric conditions, etc.



Side View



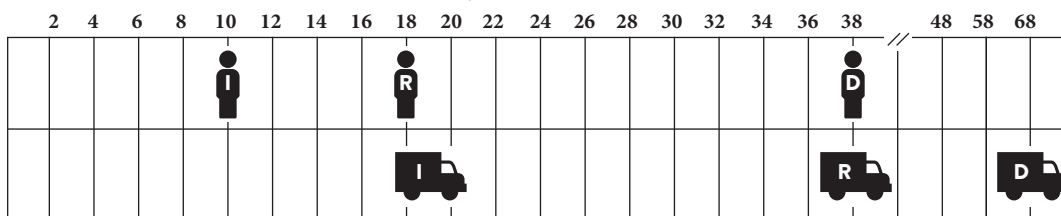
Rear View



## XLR HD Thermal Imaging Camera

- 18x Continuous Optical Zoom
- Auto Focus
- f/4 High Sensitivity Zoom Lens
- Cooled 3-5μ MWIR Detector
- 1280 x 1024 10μ Pixel Focal Plane Array
- Multiple Command Protocols
- 2 Year Warranty
- Environmentally Sealed IP67
- G5 Image Processing
- Edge Enhancement
- Local Area Contrast Enhancement
- HD SDI Digital Video Output
- Adaptive Temporal Noise Reduction
- Digital Zoom up to 8x
- Optional Turbulence Mitigation Software, Image Stabilization, and Super Resolution

Range in Kilometers



 = Target Size (1.8x0.5)  
 = Target Size (2.3x2.3)

## MWIR XLR 18X HD Thermal Camera

Part	200127
Video	HD-SDI, IP (optional)
Control	Control and communication available via RS 232/422
Power	6-32 VDC /20 Watts typical @25C
Environmental	Unit sealed and dry nitrogen backfilled, rated IP67
	Front Element Defroster
	Operating Temperature Range: -32° C to +65° C
	Meets MIL STD 810F
Mount	1/4-20 or 3/8-16 Tripod Interface
Weight	<34lbs. (15.5kg)
Length	<29in. L x <12.5in D max

## Cooled Sensor

Detector	1280 x 1024
Spectral Band	3-5μm
Warranty	2 Years

## Zoom Lens

Spectral Range	3-5μm
Lens Type	f/4 18x Continuous Zoom
Lens Features	Motorized Remote Operation Auto and Manual Focus Adjust 18x Continuous Optical Zoom
Field of View	NFOV 0.7° x 0.6° / WFOV 13.5° x 10.5°

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