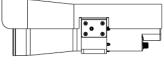
MWIR Short Range 18x Zoom Thermal Camera

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 ensures 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



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

*Range Performance

D = Detection 50% Probability D / R / I

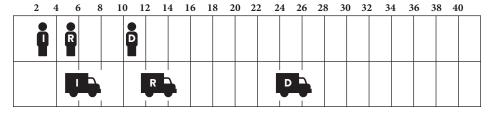
R = Recognition Target 2-degree delta T vs background

L = 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.

Range in Kilometers





= Target Size (1.8x0.5)



= Target Size (2.3x2.3)

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

 $\begin{array}{ll} \text{Detector} & 640 \text{ x } 512 \\ \text{Spectral Band} & 3\text{-}5\mu\text{m} \\ \text{Warranty} & 2 \text{ Years} \end{array}$

Zoom Lens

Spectral Range 3-5µm

 $\begin{array}{ll} \hbox{Lens Type} & f/4\ 18 \hbox{x Continuous Zoom} \\ \hbox{Lens Featurs} & \hbox{Motorized Remote Operation} \end{array}$

Auto and Manual Focus Adjust

Field of View NFOV- 1.8° x 1.4° / WFOV- 32° x 24°

Specifications subject to change without notice. Copyright 2022 G5 Infrared, LLC. 04172020

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MWIR Mid-Range 18X Zoom Thermal Camera

The 18X Zoom Thermal Camera

is the system of choice for long range all-weather security and surveillance. With outstanding very 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 18° to 1.0°. 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 640 x 512 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. The Mid Range imager is remotely controllable via serial interface and intuitive Graphical User Interface.

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

*Range Performance

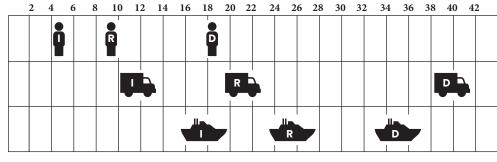
D = **Detection** 50% Probability D / R / I

R = **Recognition** Target 2 degree delta T vs background

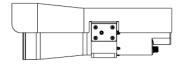
I = Identification Clear atmosphere / very low turbulence

Actual range performance will vary based on a number of conditions, including user experience, display size/quality, weather/atmospheric conditions, etc.

Range in Kilometers







Side View



Door View

Mid- Range Thermal Imaging Camera

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



= Target Size (1.8x0.5m)



= Target Size (2.3x2.3m)



= Target Size (3.6x3.6m)

MWIR Mid-Range 18x Thermal Camera

Part 200102

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

Zoom Lens

Spectral Range 3-5μm

Lens Typef/4 18x Continuous ZoomLens FeatursMotorized Remote Operation

Auto and Manual Focus Adjust

Field of View NFOV- 1.0° x 0.75° / WFOV- 18.0° x 13.7°

MWIR Mid-Range HD 10X Zoom Thermal Camera

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 1240 x 1024 focal plane array which operates in the 3–5 μ m 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.

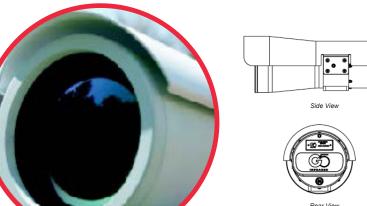
Applications: Vessel Traffic Surveillance, Border Protection, Critical Infrastructure Protection, Airport and Port Security

*Range Performance

D = Detection 50% Probability D / R / I

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 3-5µ 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

Range in Kilometers

	2	4	6	6	5 1	0	12 1	14 I	6 1	18 2	20	22	24	26	28	30) 32	2 34	¥ 3	6 3	8	// —	6 4	8	
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= 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, 10u pixels

Spectral Band 3-5µm Warranty 2 Years

Zoom Lens

Spectral Range 3-5µm

Field of View

Lens Type f/4 10x Continuous Zoom
Lens Featurs Motorized Remote Operation

Auto and Manual Focus Adjust HNFOV- 1.3° / HWFOV-13.3°

EFL NFOV 550mm

EFL NFOV 550mm

MWIR Long Range - SD 18X Zoom Thermal Camera

The LR-SD 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-SD combines high end performance with reliability and ease of use. The LR-SD delivers in day or night an extraordinarily clear thermal video with the convenience of a continuous zoom.

Its horizontal field of view zooms smoothly from 12.5° to 0.7°. It enables man-sized target detection at ranges in excess of 25km in good conditions. The LR- D integrates advanced cooled photodetector technology that has a 640 x 512 which operates in the 3–5 μ m 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-SD imager is remotely controllable via serial interface and Graphical User Interface.

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

Target 2 degree delta T vs background

Clear atmosphere / very low turbulence

50% Probability D / R / I

Long Range SD

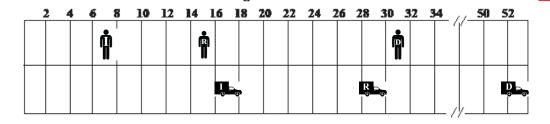
Thermal Imaging Camera

Side View

Featuring:

- 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
- Optional Local Area Contrast Enhancement
- SD SDI Digital Video Output
- Adaptive temporal noise reduction
- Digital Zoom up to 8x
- Optional Turbulence Mitigation
- Optional IP video and control (H.264)
- Optional Electronic Image Stablization

experience, display size/quality, weather/atmospheric conditions, etc.



Range in Kilometers

Actual range performance will vary based on a number of conditions, including user



MWIR Long Range 18x SD Thermal Camera

Part 200107

*Range Performance

D = Detection

R = Recognition

I = Identification

Video PAL/NTSC/SD-SDI, IP (optional)

Control Control and command available via RS-232/422

serial interface, IP (optional)
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 29.7 lbs (13.5 kg)

Length 25.4 in (64.5 cm)

Cooled Sensor

 $\begin{array}{ll} Detector & 640 \times 512 \\ Spectral \, Band & 3-5 \mu m \\ Warranty & 2 \, \text{-Years} \end{array}$

Zoom Lens

Spectral Range Lens Type Lens Features

Field of View

3-5μm

f/4 18x Continuous Zoom

Motorized remote operation

Auto and manual focus adjust

18x Continuous Optical Zoom

NFOV - 0.7° x .5° WFOV -12.5° x 9.5°

MWIR Long Range Plus HD 12X Zoom Thermal Camera

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

MWIR Long Range 12X HD Thermal Imaging Camera

Side Viev

Rear Viev

- 12x 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 Performance

D = Detection 50% Probability D / R / I

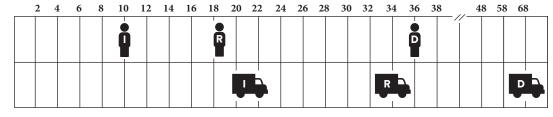
R = Recognition Target 2-degree delta T vs background

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.

Range in Kilometers







= 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

 $\begin{array}{ll} Detector & 1280x1024 \\ Spectral \, Band & 3-5 \mu m \\ Warranty & 2 \, Years \end{array}$

Zoom Lens

Spectral Range 3-5μn

 $\begin{array}{lll} \text{Lens Type} & f/4\ 12x\ \text{Continuous\ Zoom} \\ \text{Lens Featurs} & \text{Motorized\ Remote\ Operation} \\ \text{Auto\ and\ Manual\ Focus\ Adjust} \end{array}$

NFOV efl 900mm

Field of View NFOV 0.8° x 0.65° / WFOV 9.8° x 7.9°

MWIR Long Range-HD 18X Zoom Thermal Camera

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



Rear Viev

Side Viev

- 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 Performance

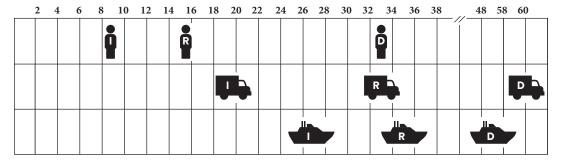
D = Detection 50% Probability D / R / I

R = Recognition Target 2-degree delta T vs background, 6-degree delta for boat target

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.

Range in Kilometers





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

 $\begin{array}{ll} \mbox{Lens Type} & f/4 \ 18 \mbox{Continuous Zoom} \\ \mbox{Lens Featurs} & \mbox{Motorized Remote Operation} \end{array}$

Auto and Manual Focus Adjust 18x Continuous Optical Zoom

Field of View NFOV 0.9° x 0.7° / WFOV 16.6° x 13.3°

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

D = Detection 50% Probability D / R / I

R = Recognition Target 2-degree delta T vs background

L = 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

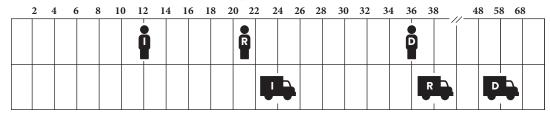


Rear View

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 (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

 $\begin{array}{ll} \text{Detector} & 1280 \text{ x } 1024 \\ \text{Spectral Band} & 3\text{-}5\mu\text{m} \\ \text{Warranty} & 2 \text{ Years} \end{array}$

Zoom Lens

Spectral Range 3-5µm

Lens Type f/4 18x Continuous Zoom
Lens Featurs 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°

MWIR Long Range-HD 15X Zoom Thermal Camera

CUAS Version This version of our LR HD Camera system has been modified to withstand the continous zoom and focus operation required by the CUAS mission profile. The zoom and focus mechanisms have been modified to withstand 100% duty cycles while maintaining superior performance.

The LR-HD delivers in day or night an extraordinarily clear thermal video in good conditions. 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 3-5um 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 Drone dectection and tracking

*Range Performance

D = Detection 50% Probability D / R / I

R = Recognition Target 2-degree delta T vs background, 6-degree delta for boat target

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

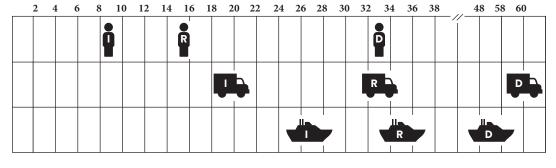


Rear View

MWIR Long Range 15X HD Thermal Imaging Camera

- 15x 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









MWIR Long Range 15x HD Thermal Camera

Part 20224

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 / 10,000 hrs of camera operation on zoom mechanism

Zoom Lens

Spectral Range 3-5µm

Lens Type f/4 15x Continuous Zoom Lens Featurs Motorized Remote Operation

Auto Focus

Field of View NFOV .9° x .7° / WFOV 14° x 11°