

G5 MWIR CAMERA FAMILY

PRODUCT CATALOG

Cooled continuous-zoom thermal imaging from 300mm to 1200mm

SHORT-RANGE
300 mm

MID-RANGE
550 mm

LONG-RANGE
785 / 900 mm

XTRA LONG-RANGE
1000 / 1200 mm



G5 300
SHORT RANGE



G5 550
MID RANGE



G5 785
LONG RANGE



G5 900
LONG RANGE



G5 1000
XTRA LONG RANGE



G5 1200
XTRA LONG RANGE

ONE ARCHITECTURE. SIX REACH CLASSES.

Surveillance | CUAS | Maritime | Border | Critical Infrastructure

THE G5 ADVANTAGE

The G5 MWIR camera family combines cooled 3-5 μm detectors, fast f/4 continuous-zoom optics, autofocus and mission-focused image processing in rugged sealed housings. The lineup scales from short-range 300 mm systems through XTRA long-range 1200 mm platforms while retaining a common control and integration philosophy.

01

FILTERED DETECTOR ARCHITECTURE

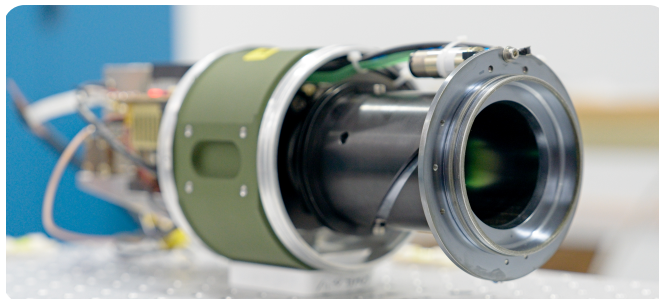
Proprietary bandpass filtering, spectrally matched optics and coatings, and 100% cold-shield efficiency improve contrast and usable signal.



02

FAST CONTINUOUS-ZOOM OPTICS

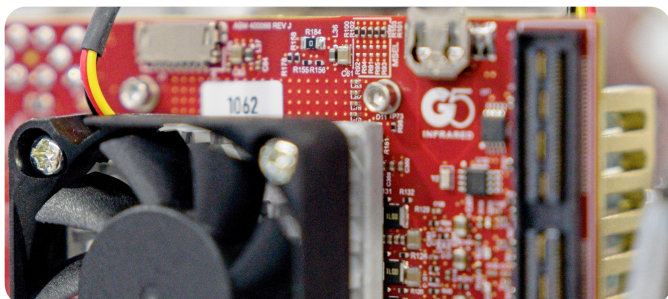
Fast f/4 optics with continuous autofocus maintain sharp imagery across the field of view and through the full zoom range.



03

MISSION-FOCUSED PROCESSING

ATCOM video processing delivers turbulence mitigation and image stabilization, while 50,000-hour extended-life coolers exceed industry standards to keep systems imaging longer..



04

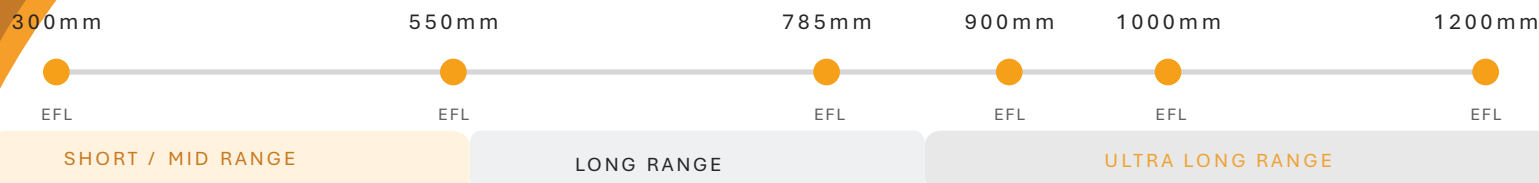
RUGGED SYSTEM INTEGRATION

Sealed and nitrogen-backfilled housings, IP67 environmental protection, MIL-STD-810F rating and flexible RS232/422 and IP communications.



PRODUCT SELECTION GUIDE

Select by reach, detector format and wide-to-narrow field-of-view requirements.



Model	Detector	EFL	Zoom	HFOV W-N	Rate	Length	Weight
300 SD Ge	640 x 512 / 15 um	17-300 mm	18x	32 deg - 1.8 deg	30 Hz	15.3 in	<11.8 lb
300 SD Ge Alt	640 x 512 / 15 um	37.5-300 mm	8x	14.7 deg - 1.8 deg	30 Hz	15.3 in	<11.8 lb
550 HD	1280 x 1024 / 10 um	55-550 mm	10x	13 deg - 1.3 deg	30 Hz	18.8 in	13.5 lb
550 SD	640 x 512 / 15 um	30-550 mm	18x	32 deg - 1.8 deg	30 Hz	15.3 in	11.8 lb
785 HD	1280 x 1024 / 10 um	52-785 mm	15x	14 deg - 0.9 deg	30 Hz	25.4 in	<29.7 lb
785 SD	640 x 512 / 15 um	45-785 mm	18x	12.5 deg - 0.7 deg	30 Hz	25.4 in	<29.7 lb
900 HD	1280 x 1024 / 10 um	75-900 mm	12x	9.8 deg - 0.8 deg	30 Hz	24.5 in	<35.2 lb
1000 HD	1280 x 1024 / 10 um	70-1000 mm	15x	10.5 deg - 0.7 deg	30 Hz	29 in	<34 lb
1200 HD	1280 x 1024 / 10 um	100-1200 mm	12x	>7.3 deg - <0.6 deg	30 Hz	37 in	<55 lb

MISSION FIT

- CUAS and continuous-duty autonomous systems
- Coastal and maritime surveillance
- Border and perimeter protection
- Critical infrastructure security
- Airfield, port and remote-site coverage

G5 300 MWIR

Short-Range Zoom Thermal Camera

PRODUCT HIGHLIGHTS

The G5 300 MWIR family pairs a continuous optical zoom lens with a cooled 3-5 μ m detector to deliver exceptional long-range performance in demanding environments. Proprietary bandpass filtering enhances contrast and signal quality, producing cleaner, more usable pixels for today's AI-driven algorithms and machine vision.

Fast f/4 optics with continuous autofocus maintain sharp, high-contrast imagery across the full field of view, while advanced image processing ensures clear, actionable video in dynamic conditions. Rugged, IP67-sealed construction and flexible system interfaces make it a reliable solution for mission-critical surveillance and security applications.

WHAT SETS G5 APART

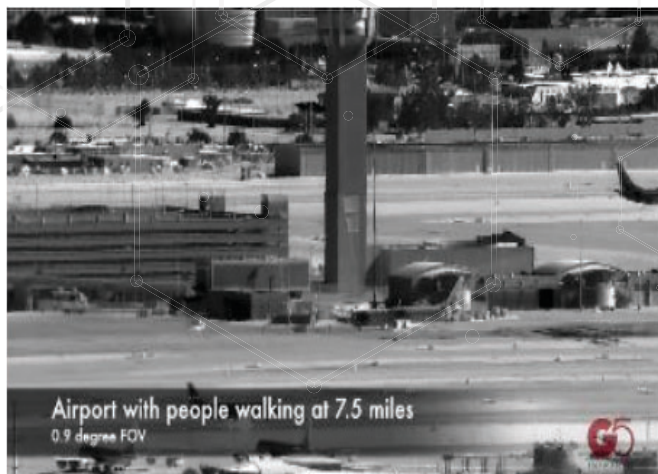
- Custom filtered detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- ROI-aware AGC and deep protocol control

G5 ADVANTAGE

- Long-life cooler 50,000 hr MTBF
- Custom band-pass filter detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- Adaptive ROI driven AGC and deep protocol control

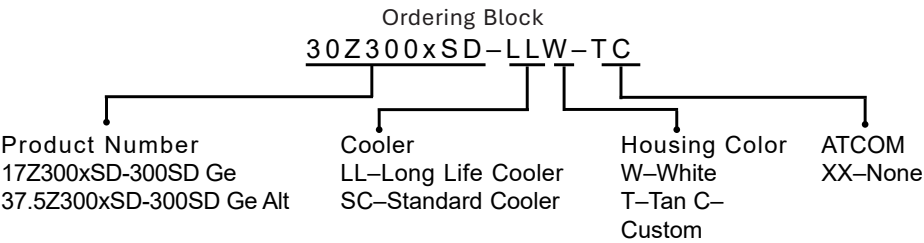
MISSION FIT

- CUAS and other continuous duty autonomous systems
- Coastal and maritime surveillance
- Border and perimeter protection
- Critical infrastructure security
- Airfield, port, and remote site coverage



Specifications

Model	300SD Ge	300SD Ge Alt
Overview		
Part Number	17z300	37z300
Warranty	2 years	
Sensor Specifications		
Detector Type	Cooled XBn	
Spectral Band	3-5μm	
Resolution	640x512	
Pixel Pitch	15μm	
Frame Rate	30Hz	
NETD	Temporal: <30mK at 20C Spatial: <20mk	
Cooler MTBF	20,000 Hour Standard	
Lens Specifications		
Focal Length	17mm - 300mm	37.5mm - 300mm
Lens Type	18x	8x
F-number	f/4	
Focus	Auto and Manual Focus Adjust	
FOV (Horizontal)	NFOV 1.8° WFOV 32°	NFOV 1.8° WFOV 14.7°
Connections & Communications		
Communication	RS232/422 IP	
Outputs	PAL/NTSC/Digital Video Optional	
Electrical & Mechanical		
Input Voltage	6-32 VDC/20 Watts Typical @ 25C	
Mount	1/4-20 or 3/8-16 Tripod interface	
Length	15.3 in (38.86cm)	
Weight	<11.8lbs (5.35kg)	
Environmental & Approvals		
Sealing	Unit sealed and nitrogen backfilled at factory	
Operating Temperature Range	-32°C to +65°C	
Storage Temperature Range	-40°C to +65°C	
Defroster	Front Element	
Environmental Rating	IP67 MIL STD 810F	
Image Processing		
AGC Modes	AGC Normal Linear Off; Manual Gain and level bias controls; edge enhancement and adaptive temporal noise reduction	
ROI-Driven AGC	7 User selectable ROI regions for AGC and ATCOM workflows	
G5 Blade	Bounding-Limited Adaptive Display Engine (BLADE) confines AGC to mission-relevant regions—eliminating background washout and preserving contrast where it matters.	



G5 550 MWIR

Mid-Range Zoom Thermal Camera

PRODUCT HIGHLIGHTS

The G5 550 MWIR family pairs a continuous optical zoom lens with a cooled 3-5 μ m detector to deliver exceptional long-range performance in demanding environments. Proprietary bandpass filtering enhances contrast and signal quality, producing cleaner, more usable pixels for today's AI-driven algorithms and machine vision.

Fast f/4 optics with continuous autofocus maintain sharp, high-contrast imagery across the full field of view, while advanced image processing ensures clear, actionable video in dynamic conditions. Rugged, IP67-sealed construction and flexible system interfaces make it a reliable solution for mission-critical surveillance and security applications.

WHAT SETS G5 APART

- Custom filtered detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- ROI-aware AGC and deep protocol control

MISSION FIT

- CUAS and other continuous duty autonomous systems
- Coastal and maritime surveillance
- Border and perimeter protection
- Critical infrastructure security
- Airfield, port, and remote site coverage

G5 ADVANTAGE

- Long-life cooler 50,000 hr MTBF
- Custom band-pass filter detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- Adaptive ROI driven AGC and deep protocol control
- ATCOM/Orin supported on HD models

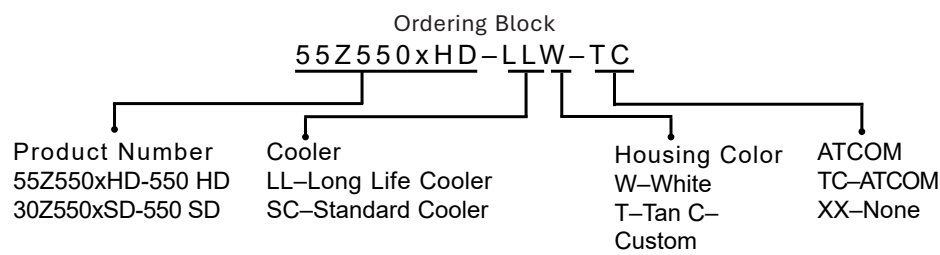


Unprocessed ATCOM

Processed ATCOM Turbulence and LACE

Specifications

Model	550 HD	550 SD
Overview		
Part Number	55Z550xHD	30Z550xSD
Warranty	2 years	
Sensor Specifications		
Detector Type	Cooled XBn	
Spectral Band	3-5µm	
Resolution	1280x1024	640x512
Pixel Pitch	10µm	15µm
Frame Rate	30Hz	
NETD	Temporal: <30mK at 20C Spatial: <20mk	
Cooler MTBF	20,000 Hour Standard 50,000 Hour Optional	
Lens Specifications		
Focal Length	55mm - 550mm	30mm - 550mm
Lens Type	Mid-Range 10x	Mid-Range 18x
F-number	f/4	
Focus	Auto and Manual Focus Adjust	
FOV (Horizontal)	NFOV 1.3, WFOV 13	NFOV 1.8, WFOV 32
Connections & Communications		
Communication	RS232/422 IP	
Outputs	PAL/NTSC/Digital Video optional	
Electrical & Mechanical		
Input Voltage	6-32 VDC/20 Watts Typical @25C	
Mount	1/4-20 or 3/8-16 Tripod interface	
Length	15.3” Standard Cooler 18.8” Long Life Cooler	
Weight	11.8lbs Standard Cooler 13.5lbs Long Life Cooler	
Environmental & Approvals		
Sealing	Unit sealed and nitrogen backfilled at factory	
Operating Temperature Range	-32°C to +65°C	
Storage Temperature Range	-40°C to +65°C	
Defroster	Front Element	
Environmental Rating	IP67 MIL STD 810F	
Image Processing		
ATCOM	Turbulence Mitigation Stabilization Super Resolution Local Area Contrast Enhancement	N/A
AGC Modes	AGC Normal Linear Off; Manual Gain and level bias controls; edge enhancement and adaptive temporal noise reduction	
ROI-Driven AGC	7 User selectable ROI regions for AGC and ATCOM workflows	
G5 Blade	Bounding-Limited Adaptive Display Engine (BLADE) confines AGC to mission-relevant regions—eliminating background washout and preserving contrast where it matters	



G5 785 MWIR

Long Range Zoom Thermal Camera

PRODUCT HIGHLIGHTS

The G5 785 MWIR family pairs a continuous optical zoom lens with a cooled 3-5 μ m detector to deliver exceptional long-range performance in demanding environments. Proprietary bandpass filtering enhances contrast and signal quality, producing cleaner, more usable pixels for today's AI-driven algorithms and machine vision.

Fast f/4 optics with continuous autofocus maintain sharp, high-contrast imagery across the full field of view, while advanced image processing ensures clear, actionable video in dynamic conditions. Rugged, IP67-sealed construction and flexible system interfaces make it a reliable solution for mission-critical surveillance and security applications.

WHAT SETS G5 APART

- Custom filtered detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- ROI-aware AGC and deep protocol control

MISSION FIT

- CUAS and other continuous duty autonomous systems
- Coastal and maritime surveillance
- Border and perimeter protection
- Critical infrastructure security
- Airfield, port, and remote site coverage

G5 ADVANTAGE

- Long-life cooler 50,000 hr MTBF
- Custom band-pass filter detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- Adaptive ROI driven AGC and deep protocol control
- ATCOM/Orin supported on HD models

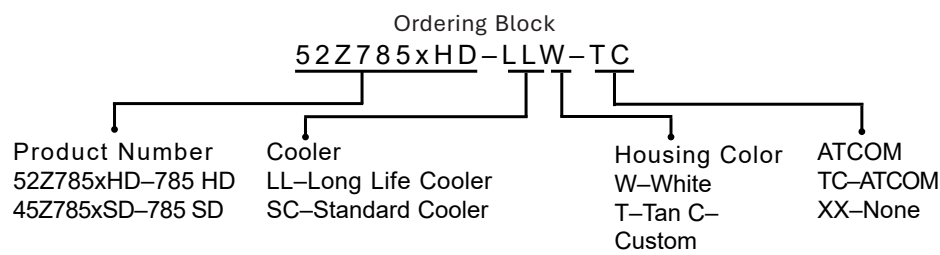


Unprocessed ATCOM

Processed ATCOM Turbulence and LACE

Specifications

Model	785 HD	785 SD
Overview		
Part Number	52Z785xHD	45Z785xSD
Warranty	2 years	
Sensor Specifications		
Detector Type	Cooled XBn	
Spectral Band	3-5µm	
Resolution	1280x1024	640x512
Pixel Pitch	10µm	15µm
Frame Rate	30Hz	
NETD	Temporal: <30mK at 20C Spatial: <20mk	
Cooler MTBF	20,000 Hour Standard 50,000 Hour Optional	
Lens Specifications		
Focal Length	52mm - 785mm	45mm - 785mm
Lens Type	Long Range HD 15x	Long Range 18x
F-number	f/4	
Focus	Auto and Manual Focus Adjust	
FOV (Horizontal)	NFOV 0.9° WFOV 14°	NFOV 0.7° WFOV 12.5°
Connections & Communications		
Communication	RS232/422 IP	
Outputs	PAL/NTSC/Digital Video optional	
Electrical & Mechanical		
Input Voltage	6-32 VDC/20 Watts Typical @25C	
Mount	1/4-20 or 3/8-16 Tripod interface	
Length	25.4 in (64.5cm)	
Weight	<29.7lbs (13.5kg)	
Environmental & Approvals		
Sealing	Unit sealed and nitrogen backfilled at factory	
Operating Temperature Range	-32°C to +65°C	
Storage Temperature Range	-40°C to +65°C	
Defroster	Front Element	
Environmental Rating	IP67 MIL STD 810F	
Image Processing		
ATCOM	Turbulence Mitigation Stabilization Super Resolution Local Area Contrast Enhancement	N/A
AGC Modes	AGC Normal Linear Off; Manual Gain and level bias controls; edge enhancement and adaptive temporal noise reduction	
ROI-Driven AGC	7 User selectable ROI regions for AGC and ATCOM workflows	
G5 Blade	Bounding-Limited Adaptive Display Engine (BLADE) confines AGC to mission-relevant regions—eliminating background washout and preserving contrast where it matters	



G5 900 MWIR

Long Range Zoom Thermal Camera

PRODUCT HIGHLIGHTS

The G5 900 MWIR family pairs a continuous optical zoom lens with a cooled 3-5 μ m detector to deliver exceptional long-range performance in demanding environments. Proprietary bandpass filtering enhances contrast and signal quality, producing cleaner, more usable pixels for today's AI-driven algorithms and machine vision.

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WHAT SETS G5 APART

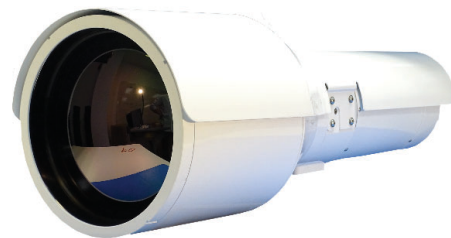
- Custom filtered detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- ROI-aware AGC and deep protocol control

MISSION FIT

- CUAS and other continuous duty autonomous systems
- Coastal and maritime surveillance
- Border and perimeter protection
- Critical infrastructure security
- Airfield, port, and remote site coverage

G5 ADVANTAGE

- Long-life cooler 50,000 hr MTBF
- Custom band-pass filter detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- Adaptive ROI driven AGC and deep protocol control
- ATCOM/Orin supported on HD models

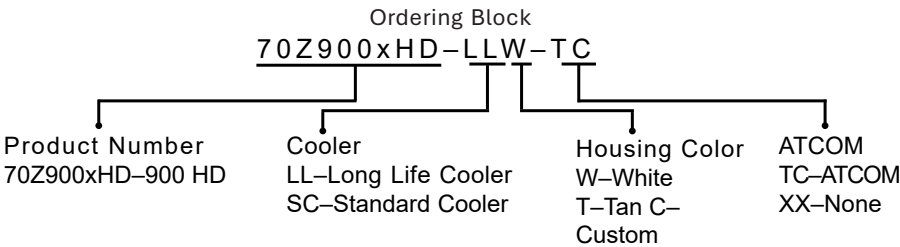


Unprocessed ATCOM

Processed ATCOM Turbulence and LACE

Specifications

Model	900 HD
Overview	
Part Number	75Z900xHD
Warranty	2 years
Sensor Specifications	
Detector Type	Cooled XBn
Spectral Band	3-5µm
Resolution	1280x1024
Pixel Pitch	10µm
Frame Rate	30Hz
NETD	Temporal: <30mK at 20C Spatial: <20mk
Cooler MTBF	20,000 Hour Standard 50,000 Hour Optional
Lens Specifications	
Focal Length	75mm - 900mm
Lens Type	Long Range HD 12x
F-number	f/4
Focus	Auto and Manual Focus Adjust
FOV (Horizontal)	NFOV 0.8° WFOV 9.8°
Connections & Communications	
Communication	RS232/422 IP
Outputs	PAL/NTSC/Digital Video optional
Electrical & Mechanical	
Input Voltage	6-32 VDC/20 Watts Typical @25C
Mount	1/4-20 or 3/8-16 Tripod interface
Length	24.5in (62.2cm)
Weight	<35.2lbs (13.5kg)
Environmental & Approvals	
Sealing	Unit sealed and nitrogen backfilled at factory
Operating Temperature Range	-32°C to +65°C
Storage Temperature Range	-40°C to +65°C
Defroster	Front Element
Environmental Rating	IP67 MIL STD 810F
Image Processing	
ATCOM	Turbulence Mitigation Stabilization Super Resolution Local Area Contrast Enhancement
AGC Modes	AGC Normal Linear Off; Manual Gain and level bias controls; edge enhancement and adaptive temporal noise reduction
ROI-Driven AGC	7 User selectable ROI regions for AGC and ATCOM workflows
G5 Blade	Bounding-Limited Adaptive Display Engine (BLADE) confines AGC to mission-relevant regions—eliminating background washout and preserving contrast where it matters



G5 1000 MWIR

Long Range Zoom Thermal Camera

PRODUCT HIGHLIGHTS

The G5 1000 MWIR family pairs a continuous optical zoom lens with a cooled 3-5 μ m detector to deliver exceptional long-range performance in demanding environments. Proprietary bandpass filtering enhances contrast and signal quality, producing cleaner, more usable pixels for today's AI-driven algorithms and machine vision.

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WHAT SETS G5 APART

- Custom filtered detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- ROI-aware AGC and deep protocol control

MISSION FIT

- CUAS and other continuous duty autonomous systems
- Coastal and maritime surveillance
- Border and perimeter protection
- Critical infrastructure security
- Airfield, port, and remote site coverage

G5 ADVANTAGE

- Long-life cooler 50,000 hr MTBF
- Custom band-pass filter detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- Adaptive ROI driven AGC and deep protocol control
- ATCOM/Orin supported on HD models

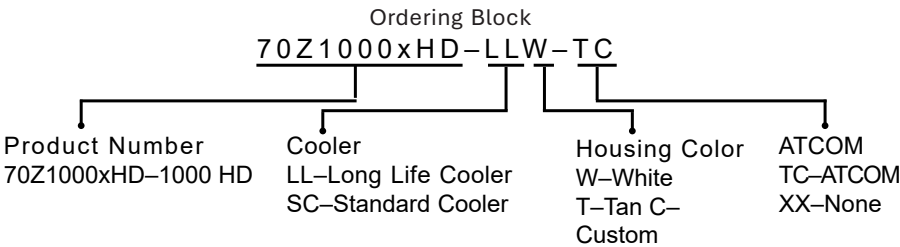


Unprocessed ATCOM

Processed ATCOM Turbulence and LACE

Specifications

Model	1000HD
Overview	
Part Number	70Z1000HD
Warranty	2 years
Sensor Specifications	
Detector Type	Cooled XBn
Spectral Band	3-5µm
Resolution	1280x1024
Pixel Pitch	10µm
Frame Rate	30Hz
NETD	Temporal: <30mK at 20C Spatial: <20mk
Cooler MTBF	20,000 Hour Standard 50,000 Hour Optional
Lens Specifications	
Focal Length	70mm - 1000mm
Lens Type	XTRA Long Range HD 15x
F-number	f/4
Focus	Auto and Manual Focus Adjust
FOV (Horizontal)	NFOV 0.7° WFOV 10.5°
Connections & Communications	
Communication	RS232/422 IP
Outputs	PAL/NTSC/Digital Video optional
Electrical & Mechanical	
Input Voltage	6-32 VDC/20 Watts Typical @25C
Mount	1/4-20 or 3/8-16 Tripod interface
Length	29in (74cm)
Weight	<34lbs (15.5kg)
Environmental & Approvals	
Sealing	Unit sealed and nitrogen backfilled at factory
Operating Temperature Range	-32°C to +65°C
Storage Temperature Range	-40°C to +65°C
Defroster	Front Element
Environmental Rating	IP67 MIL STD 810F
Image Processing	
ATCOM	Turbulence Mitigation Stabilization Super Resolution Local Area Contrast Enhancement
AGC Modes	AGC Normal Linear Off; Manual Gain and level bias controls; edge enhancement and adaptive temporal noise reduction
ROI-Driven AGC	7 User selectable ROI regions for AGC and ATCOM workflows
G5 Blade	Bounding-Limited Adaptive Display Engine (BLADE) confines AGC to mission-relevant regions—eliminating background washout and preserving contrast where it matters



G5 1200 MWIR

Long Range Zoom Thermal Camera

PRODUCT HIGHLIGHTS

The G5 1200 MWIR family pairs a continuous optical zoom lens with a cooled 3-5 μ m detector to deliver exceptional long-range performance in demanding environments. Proprietary bandpass filtering enhances contrast and signal quality, producing cleaner, more usable pixels for today's AI-driven algorithms and machine vision.

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WHAT SETS G5 APART

- Custom filtered detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- ROI-aware AGC and deep protocol control

MISSION FIT

- CUAS and other continuous duty autonomous systems
- Coastal and maritime surveillance
- Border and perimeter protection
- Critical infrastructure security
- Airfield, port, and remote site coverage

G5 ADVANTAGE

- Long-life cooler 50,000 hr MTBF
- Custom band-pass filter detector architecture
- Spectrally matched optics and coatings
- 100% cold shield efficiency
- Adaptive ROI driven AGC and deep protocol control
- ATCOM/Orin supported on HD models

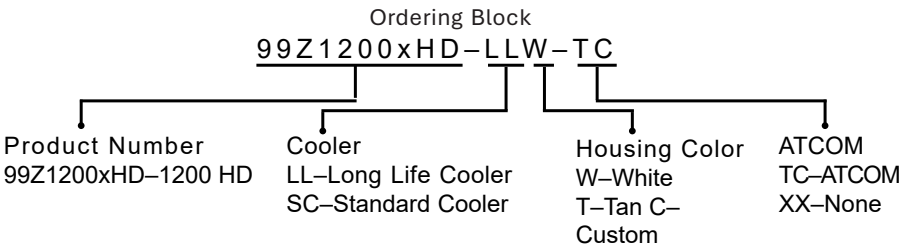


Unprocessed ATCOM

Processed ATCOM Turbulence and LACE

Specifications

Model	1200HD
Overview	
Part Number	99Z1200HD
Warranty	2 years
Sensor Specifications	
Detector Type	Cooled XBn
Spectral Band	3-5µm
Resolution	1280x1024
Pixel Pitch	10µm
Frame Rate	30Hz 60Hz
NETD	Temporal: <30mK at 20C Spatial: <20mk
Cooler MTBF	20,000 Hour Standard 50,000 Hour Optional
Lens Specifications	
Focal Length	100mm - 1200mm
Lens Type	XTRA Long Range HD 12x
F-number	f/4
Focus	Auto and Manual Focus Adjust
FOV (Horizontal)	NFOV <0.6° WFOV >7.3°
Connections & Communications	
Communication	RS232/422 IP
Outputs	PAL/NTSC/Digital Video optional
Electrical & Mechanical	
Input Voltage	6-32 VDC/20 Watts Typical @25C
Mount	1/4-20 or 3/8-16 Tripod interface
Length	37in (94cm)
Weight	<55lbs (25kg)
Environmental & Approvals	
Sealing	Unit sealed and nitrogen backfilled at factory
Operating Temperature Range	-32°C to +65°C
Storage Temperature Range	-40°C to +65°C
Defroster	Front Element
Environmental Rating	IP67 MIL STD 810F
Image Processing	
ATCOM	Turbulence Mitigation Stabilization Super Resolution Local Area Contrast Enhancement
AGC Modes	AGC Normal Linear Off; Manual Gain and level bias controls; edge enhancement and adaptive temporal noise reduction
ROI-Driven AGC	7 User selectable ROI regions for AGC and ATCOM workflows
G5 Blade	Bounding-Limited Adaptive Display Engine (BLADE) confines AGC to mission-relevant regions—eliminating background washout and preserving contrast where it matters



ONE G5 ARCHITECTURE. SIX REACH CLASSES.

From compact 300 mm systems to 1200 mm XTRA long-range platforms.



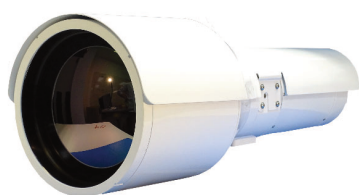
G5 300 MWIR



G5 550 MWIR



G5 785 MWIR



G5 900 MWIR



G5 1000 MWIR



G5 1200 MWIR

G5 INFRARED

A LightPath Technologies Company

Specifications and configuration availability are subject to change. Consult LightPath for the latest controlled data.