

Guardian 4HD

Long Range EO IR Gyro-Stabilized ISR System

The newly designed Guardian 4HD is a powerful medium to long range gyro-stabilized ISR camera system. Guardian's flexible payload configuration makes it a smart choice for a wide variety of platforms.

NVTS's Guardian 4HD precision gyro-stabilized camera system delivers high definition imaging, long range optics and precision targeting in a compact package.

Designed for in-theatre operations, the Guardian 4HD delivers superior detection, stabilization, crisp imagery and targeting data using our True HD Visible and Thermal Cameras.

IR Camera Features:

Image Enhancement: This standard feature works on both Thermal and HD Visible Cameras bringing out important visual details that otherwise would be "washed out" in a low contrast picture. Image Enhancement is essential in hazy & low visibility conditions.

Edge Sharpness: This Guardian feature sharpens objects edges and resolution within the video image for both Thermal and HD Visible Cameras, yielding a clearer and sharper video image.

Local AGC: This feature provides wide dynamic range of the video image for both HD Visible and Thermal camera. The Guardian's Local AGC feature is especially needed when the scenery has a wide range of gray levels, such as when the imagery includes sea and sky, sea and land, burning objects, etc.

Performance:

- Multi-axis high performance gyro-stabilization using advanced sensor technology providing steady imaging in extreme conditions.
- Dual on-board processors run a sophisticated Adaptive Kalman Filter (AKF) for superior static, dynamic inclination estimates, and inertial measurements.
- True HD Thermal /Visible Cameras enables razor sharp recognition at long ranges.
- On screen display enabling fast operator information assessments



Applications

- Shipboard ISR
- Situational Awareness
- Search and Rescue (SAR)
- Coastal and Border Patrol
- Force Protection
- Environmental Monitoring
- Remote Weapon Control
- Autonomous Surface Vehicles
- Armored Vehicle ISR
- Marine Mammal Detection

Options

- Auto-Tracking
- LED Spotlight
- Ruggedized Displays & Recorders
- Integrated Handheld Remote Display Controller
- Ruggedized PC Controller
- AI Analytics
- 4.5-20km LRF Options
- Laser Pointer
- GPS, INS and Moving Map Interface
- Digital Video Recorder



Guardian 4HD *Performance Specifications*

Thermal Imager:

Sensor Type:	640 x 512 Bnn (InAsSb) technology (optional 1280 x1024 HD) (Optional HD LWIR)
Wave Length:	3-5µm (8-14um LWIR options)
Pixel Pitch:	10µm HD, 15µm VGA, 12um LWIR
Lens STD :	15-300mm MWIR 15um 20x zoom /AF
FOV:	Wide: 35.1°(H) Narrow: 1.8°(H)

Color HD Visible:

FOV:	Wide: 63.7° Narrow: 2.3°
Resolution:	Full HD 2.1MP 1080P
Minimum Illumination DSS:	Color: 0.35 lux
Image Sensor:	1/2.8" type CMOS
Zoom:	30X Optical
Focal Length:	F = 4.3mm -129mm
Focusing:	Autofocus
Picture Quality:	Visibility Enhancement and de-fog

Dimensions & Weight:

Weight:	10-15kg depending on payload
Diameter:	Gimbal: 33cm (13 in), Base: 35.6cm (14 in)
Height:	43.2cm (17 in)

Laser Range Finder:

Class 1:	Eye-Safe
Wave Length:	1535 nm
Absolute Range:	8 to 20km options
Range Accuracy:	± 5 meters

Laser Pointer:

Nominal Wavelength:	852nm
Power:	30mW nominal
Optional Power:	150mW
Classification:	Class 3B

Environmental:

Operating Temperature:	-40°C to +60°C
Standards:	Tested to MIL-STD 810G MIL-STD-461

Electrical/Mechanical:

Voltage:	24VDC
Stabilization:	3 Axis MEMS Gyro
Pan Angle:	360°
Elevation:	+70° to -60°
Interface Options:	RS232, 432, HD-SDI (NTSC & PAL) GigE, H265,



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Night Vision Technology Solutions, LLC / 5 Clinton Ave. / Jamestown, RI 02835 U.S.A.
T. +1- 401-560-0807 / www.nvtsglobal.com

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