



NIGHT HAWK HT

- See objects in complete darkness and adverse weather conditions
- Long-range optics available (man-size target detection >20 km and vehicle detection >40 km)
- Combines high performance with low weight and small size.
- Continuous 360° panning
- Fully network enabled for integration into existing IP surveillance networks
- Supports most protocols used in commercial and military applications
- Ruggedized system designed for harsh environments

ADVANCED EO
SYSTEMS, INC.

PVP

The Night Hawk HT (High Torque) is a high-performance pan & tilt system well suited for day/night surveillance and perimeter security applications that require greater payloads and higher torque. With multiple lens and sensor combinations available, the Night Hawk HT can be customized to meet almost any mission requirement.

Short Range Configuration (5km)

Infrared:

Short Range Uncooled IR Flir Tau With 25-225mm Ophir Lens

System Type:	Uncooled LWIR Thermal Imager
Tau 2 640:	640 x 512 VOx Microbolometer
Tau 2 336:	336 x 256 VOx Microbolometer
Tau 2 324:	324 x 256 VOx Microbolometer
Pixel Size:	17 μ m (Tau 2 640, 336); 25 μ m (Tau 2 324)
Spectral Band:	7.5 - 13.5 μ m
Performance:	<50 mK @ f/1.0



Visual:

Sony FCB-EH3410 Block Camera

Lens:	28x optical zoom f=3.5mm (wide) to 98.0mm (tele) F1.35 to F3.7
Camera Resolutions:	HD - 720p/59.94, 720p/50, 720p/29.97, 720p/25 SD - NTSC/PAL
Recommended Illumination:	100 lx to 100,000 lx
Image Sensor Type:	1/4-type Exmor CMOS
Effective Pixels:	Approx. 1.43 Megapixels
Image Size(H x V):	1280 x 720, 720 x 480, 720 x 576



Medium Range Configuration (10km)

Infrared:

Wide Area Long Range Surveillance Sensor

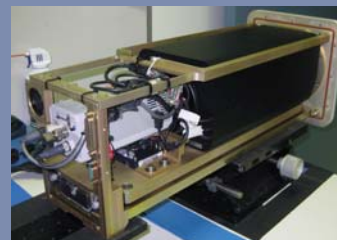
Lens:	70-700 mm Continuous Zoom
Wide FOV:	70mm (10.4°x 7.8°)
Narrow FOV:	700mm (1.0°x0.8°)
Sensor Type:	MWIR InSb reticulated
Sensor Size:	640x512 pixels, 20 μ m pitch
Spectral Band:	3.6-5.0 μ m with CO ² notch
System Control:	RS-422 Serial Interface



Visual:

Hitachi KP-D5010 Low Light Camera with Pentax Auto Focus OH 12-1680mm Zoom Lens

Lens Focal Length:	12-660 mm (30.5-1680mm)
Max Aperture:	1:4.0 (Wide) - 1:7.2 (Tele) (2.5x Extender in use 1:10.0 - 1:18.2)
Iris Range:	F4.0-360
Camera Resolutions:	NTSC/ PAL
Min. Illumination:	0.03 lx (Color), 0.004 lx (BW), 0.0002 lx (Color sensup), 0.00003 lx (BW sensup)
Image Sensor Type:	1/2 CCD
Effective Pixels:	NTSC: 768 (H) x 494(V) / PAL: 752 (H) x 582 (V)



Long Range Configuration (20km)

Infrared:

Wide Area Long Range Surveillance Sensor

Lens:	200-1200 mm Continuous Zoom
Wide FOV:	200mm (3.7°x 3.0°)
Narrow FOV:	1200mm (0.6°x0.5°)
Sensor Type:	MWIR InSb reticulated
Sensor Size:	640x512 pixels, 20µm pitch
Spectral Band:	3.6-5.0µm with CO ² notch
System Control:	RS-422 Serial Interface



Visual:

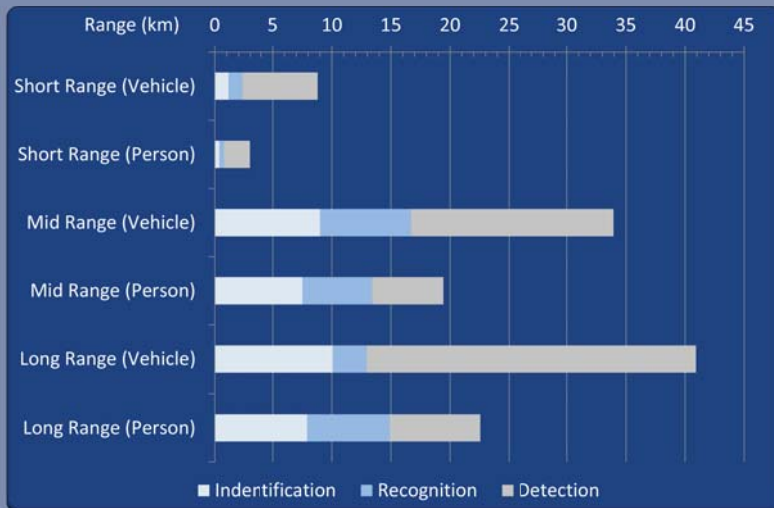
Hitachi KP-DE500 EMCCD Low Light Camera with Pentax Auto Focus OH 12-1680mm Zoom Lens

Lens Focal Length:	12-660 mm (30.5-1680mm)
Max Aperture:	1:4.0 (Wide) - 1:7.2 (Tele) (2.5x Extender in use 1:10.0 - 1:18.2)
Iris Range:	F4.0-360
Camera Resolutions:	NTSC/ PAL
Min. Illumination:	0.0009 lx (Color in full motion, maximum sensitivity setup) 0.00005 lx (BW in full motion, maximum sensitivity setup)
Image Sensor Type:	1/2 interline EM-CCD
Effective Pixels:	658 (H) x 489 (V)

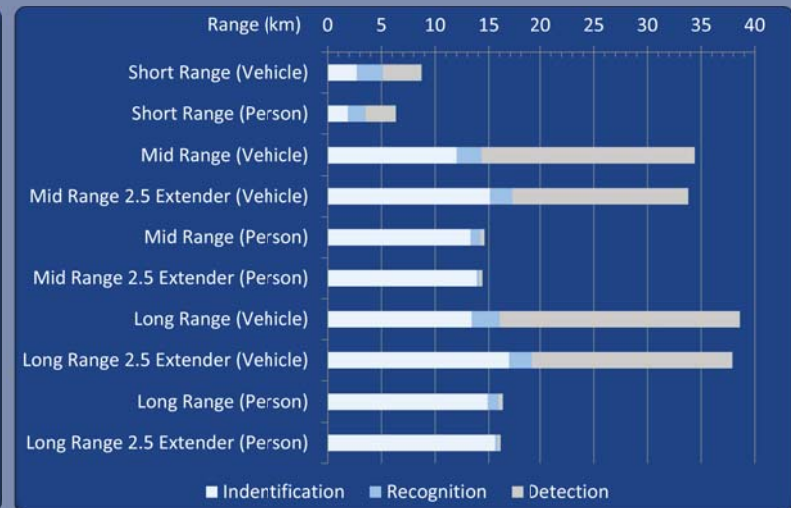


Assessment Comparison

IR Comparison



Visible Comparison



Options

- 10km Laser Pointer 830nm eye safe at aperture
- 3km Laser Zoom Imaging Illuminator 808nm
- 5km, 10km, and 20km eye safe Laser Range Finders
- Optional Gimbals are available providing greater accuracies of 0.0006 degrees, and may also be optionally gyro-stabalized.

Night Hawk HT

SPECIFICATIONS

Weight	80 lbs.
Payload	175 lbs.
Position	360°continuous az. rotation 180°elevation rotation
Velocity	<0.001 to 100 deg/sec in azimuth <0.001 to 60 deg/sec in elevation
Acceleration	100 deg/sec ² in azimuth 60 deg/sec ² in elevation
Position Control	Closed loop servo
Position Accuracy	0.05 degrees
Motors	Geared servo
Azimuth Slip Ring	Dual Stage, 32 @ 2 Amps
Power	28VDC, 110 or 220 VAC with external power supply. Internal filtering of 28VDC input and conversion to 48V for motor drivers
Max Current	Up to 10 Amps per axis at max payload/max sight line rate
Environment	Outdoor/Marine to MIL-STD-810 •Humidity, Salt Fog, Solar loading, Blowing Sand/Dust, and Blowing Rain •Temperature: -50°C to +75°C •Relative Humidity: 100%, validated with a complete immersion test on all units •Vibration: 3grms 50-500 Hz



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