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NIGHT-VISION

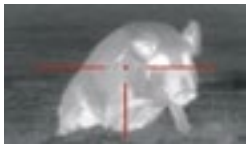
NV-E30S, Thermal Imaging Sights

NV-E30S is a thermal weapon sight which is widely used for law enforcement. It can detect heat of any targets against cooler background during day or night, especially in severe conditions such as total darkness, haze, dust, sleet, forest. grass, disguise and so on.

Features:

- Pixel pitch 17 μm, NETD≤70mK
- 50Hz instant imaging, 3s start-up
- 35, 50 & 75mm lenses for option
- AMOLED SVGA 800 x 600
- Polarity control (black hot/whrte hot).

Application Case: Law enforcement • Targeting systems • Defense systems.



Standard package

Model	NV-E30S		
Detector Data			
Type	Uncooled FPA		
Material	aSi		
IR resolution	384×288		
Pixel pitch	17μm		
Spectral range	8~14μm		
NETD/Sensitivity	≤70mK		
Lens Data			
FOV/Focal distance	10.6°×8.0°/35mm	7.5°×5.5°/50mm	5.0°×3.75°/75mm
Recognition distance (Vehicle)	950m	1200m	1600m
Recognition distance (Human)	320m	420m	600m
F	F 1.0		
Eye relief	50mm		
Diopter	-5 ~ +5		
Image Performance			
Display	800×600 OLED		
Frequency	50Hz		
Zoom	2X		
Polarity/LUT mode	Black hot/White hot		
Reticle color	White/Black/Red/Green (optional)		
Reticle type	5 reticle types (customizable)		
Startup time	3s		
Contrast/Brightness	Auto/Manual		
Interfaces			
Format	Waterproof aviation plug		
Picatinny rail	MIL-STD 1913		
Video output	PAL		
Power System			
Battery type	2pcs CR123A battery		
Operating time	≥4hour		
Environment Parameters			
Operating temperature range	-30°C ~ +60°C		
Storage temperature range	-40°C ~ +70°C		
Encapsulation	IP67		
Vibration	MIL-STD-810F		
Shock	MIL-STD-810F		
Physical Data			
Size (without eyepiece)	156mm×61mm×66mm (with 35mm lens)		
	186mm×70mm×70mm (with 50mm lens)		
	210mm×86mm×86mm (with 75mm lens)		
Weight (with battery)	560g (with 35mm lens)		
	720g (with 50mm lens)		
	880g (with 75mm lens)		
Packing			
Standard	Thermal imaging sight, 4pcs CR123A batteries, Picatinny rail, Picatinny quick release interface, Composite output cable, Warranty card, User manual, Certificate, Transport case		
Option	5V power adapter		

NIGHT VISION Thermal Night Vision Systems

NV-E30CC, Thermal Imaging Sights

NV-E30CC is a thermal weapon sight which is widely used for law enforcement. It can detect heat of any targets against cooler background during day or night, especially in severe conditions such as total darkness, haze, dust, sleet, forest, grass, disguise and so on.

Application Case:
Law enforcement • Targeting systems • Defense systems.

Features: Pixel pitch 17 μm, NETD≤70mK • 50Hz instant imaging, 3s start-up • 35, 50 & 75mm lenses for option • PIP function • AMOLED 1024×768 • Color mode: black hot/white hot/red hotm • LRF: 600m, ±2m.

Model	NV-E30CC	
Detector Data		
Type	Uncooled FPA	
Material	αSi	
IR resolution	384×288	
Pixel pitch	17μm	
Spectral range	8~14μm	
NETD/Sensitivity	≤70mK	
Lens Data		
FOV/Focal distance	10.6°×8.0°/35mm	7.5°×5.5°/50mm
Recognition distance (Vehicle)	950m	1200m
Recognition distance (Human)	320m	420m
F	F 1.0	
Distance of exit pupil	48mm	
Diopter	-5 ~ +5	
Image Performance		
Display	1024×768 OLED	
Frequency	50Hz	
Amplification	2X, 4X	
Polarity/LUT mode	Black hot/White hot/Red hot	
Pip	Yes	
Reticle color	White/Black with reverse	
Reticle type	5 reticle types (customizable)	
Startup time	3s	
Contrast/Brightness	Auto/Manual	
Laser Ranging		
Wavelength	905nm	
Ranging distance	600m	
Ranging accuracy	±2m	
Interfaces		
Format	Waterproof aviation plug (with power,video,RS232)	
Picatinny rail	MIL-STD 1913	
Video output	PAL	
Power System		
Battery type	Non-removable, rechargeable lithium battery	
Operating time	≥5h continuous	
Environment Parameters		
Operating temperature range	-20°C ~ +50°C (-30°C ~ +60°C optional)	
Storage temperature range	-40°C ~ +70°C	
Encapsulation	IP66	
Shock & Vibration	MIL-STD-810F	
Physical Data		
Size (without eyepiece)	200mm×115mm×78mm(with 35mm lens)	220mm×115mm×78mm(with 50mm lens)
Weight (with battery)	900g (with 35mm lens)	1000g (with 50mm lens)
Packing		
Standard	Thermal imaging sights, Combination cables, Picatinny rail, Warranty card, User manual, Certificate, Transport case	
Option	DC 5V power adapter	

NV-E60S, Thermal Imaging Sights

NV-E60S is a small infrared sighting device which using optical a thermal design. It adapts to 5.6mm automatic rifle and other guns with Picatinny interface, and provide clear infrared images and assist aiming and shooting. The product has the characteristics of small size, light weight, simple installation, and convenient operation.

Features:

- Compact and convenient. easy to install and remove
- Excellent imaging quality. highlighting more details
- Special coating & structure design of optical lens, quickly find the target
- Available in all black environment, suitable for harsh weather environment
- Ergonomically designed elastic rubber eye mask to prevent light leakage and improve concealment.

Application Case:

- Field hunting
- Law enforcement
- Counter terrorism assault.

Model	NV-E60S
Connector	Swallow tail / Picatinny
Effective distance	
To standing person	≥350m
To vehicle	≥1km
IR Detector	
Uncooled VOx	640 X 512@17 μm
NETD	<45mk
MRTD	≤0.35k (at normal temperature)
Lens	34mm
Imaging range	≥350m
FOV	≥15° X 12°
Weight	810 ± 20g (including batteries)
Continuous working time	≥4h
Power supply	RCR 18650 x 2
Working temperature	- 40°C ~ +50°C

NIGHT VISION Thermal Night Vision Systems

NV-E70CC, Thermal Imaging Sights

NV-E70CC is the thermal weapon sight with high resolution which is widely used for law enforcement. With shutterless technology, it can continuously detect heat of any targets against cooler background during day or night, especially in severe conditions such as total darkness, haze, dust, sleet, forest, grass, etc.

Application Case:
- Searching & rescue
- Targeting systems
- Law enforcement.

Features:
- High resolution, 640X480
- Shutterless technology
- 50Hz imaging in real time
- Compact & anti-shock design
- Photo & video recording.

Standard package

Model	NV-E70CC		
Detector Data			
Type	Uncooled FPA		
Material	aSi		
IR resolution	640×480		
Pixel pitch	17μm		
Spectral range	8~14μm		
NETD/Sensitivity	≤60mK		
Lens Data			
FOV/Focal distance	17.6°×13.2°/35mm	12.4°×9.3°/50mm	8.3°×6.5°/75mm
R	3m ~ ∞	5m ~ ∞	8m ~ ∞
Recognition distance (Vehicle)	950m	1200m	1600m
Recognition distance (Human)	320m	420m	600m
F	F 1.0		
Distance of exit pupil	48mm		
Diopter	-6 ~ +4		
Image Performance			
Display	800×600 OLED		
Image enhancement	IVE image enhancement algorithm		
Frequency	50Hz		
Amplification	2X, 4X		
Polarity/LUT mode	Black hot/White hot		
Reticle color	White/Black		
Reticle type	6 reticle types		
Startup time	4s		
Contrast/Brightness	Manual		
Interfaces			
USB	Yes		
Picatinny rail	MIL-STD 1913		
Video output	PAL		
Storage card	32G		
Power System			
Battery type	2pcs 18650 lithium battery		
Operating time	≥6h		
Environment Parameters			
Operating temperature range	-20°C ~ +50°C		
Storage temperature range	-40°C ~ +70°C		
Encapsulation	IP67		
Shock & Vibration	MIL-STD-810F		
Physical Data			
Size (without eyepiece)	187mm×87mm×77mm	213mm×87mm×77mm	252mm×99mm×87.5mm
Weight (with battery)	<900g	<1kg	<1.2kg
Packing			
Standard	Thermal imaging sight, 4pcs batteries, Charger, Picatinny quick release interface, Composite output cable, Warranty card, User manual, Certificate, Transport case		
Option	DC 12V power adapter		

NV-V35, Helmet Night Vision Goggle

NV-V35 is a light-wear observation equipment. It mainly composed of the host, bonnet, Helmet connection mechanism and other components. It can be used in low light conditions, and can maximum the concealment of the troops. The product has the characteristics of comfortable observation, humanized function, and low cost, low power consumption and so on.

Features:

- Light and easy to wear
- Compact device, lightweight and smart
- Lens adopts new coating technology, high light transmittance
- Use the new generation image intensifier, high-definition imaging
- Rainproof design.

Application Case: Military reconnaissance • Border defense duty • Counter terrorism assault • Target search.

Model	NV-V35
Recognition Distance to human	2.5 Gen
Image Intensifier	40° ±2°
Field of View (FOV)	F#1.2, 26mm
Focus Range	280mm ~ ∞
Ratio	48-56 lp/mm
Diopter Adjust	7mm
Weight	18mm
Continuous Working Time	- 4 ~ +4
Reliability	MTBF ≥ 3000h

NV-V35D, Helmet Monocular Fusion Camera

This product has the functions of night vision, infrared, and fusion modes to display. It helps user to collect abundant information of the observed scene and greatly improves the efficiency field tasks. It can be widely used in industry, scientific research. reconnaissance and security.
This product is mainly used for individual reconnaissance, which can work all day, especially in the night, fog and other low visibility environment to provide users with clear images to find hidden targets.

Features:

- Greater situational awareness due to improved threat detection under most battlefield environments; compatible with traditional weapon system ranges
- Expanded viewing capability from high-light conditions to total darkness (no light) and through battlefield obscurants, increasing system capability for urban operations
- Improved wearing comfort due to better weight balance resulting in less fatigue
- Easy-to-use controls
- Non-exit pupil forming eyepiece allows the soldier to maintain full field of view even as helmet shifts during vigorous physical movements.

Application Case: Military reconnaissance • Target search • Law enforcement patrol.

Model	NV-V35D
Night vision	
Image Intensifier	2.5 Gen
FOV	40° ±2°
Focus	F#1.2, 26mm
Focusing Range	280mm ~ ∞
Resolution	48-56 lp/mm
Exit Pupil	7mm
Eye-Relief	18mm
Diopter	- 4 ~ +4
Infrared	
Sensor	384 x 288, 17μm x 17μm
Focus	F#1.1, 15mm
FOV	24.6° x 18.5°
Magnification	E-zoom: 2X, 4X
Polarity	White hot. Black hot, Pseudo color
System perfonnance	
MTBF	≥500h
Power	CR2x2, 3.7V lithium battery (800mAh) or DC (5-12V) adapter
Fusion/Night vision, working time	2h / 60h
Working Temperature	-40°C ~ +50°C
IP Grade	IP67
Dimensions / Weight	160x68x101mm / ≤500g

NIGHT VISION Thermal Imaging Binoculars

NV-W30/W60, Thermal Imaging Binoculars

NV-W30/W60 are high-quality thermal binoculars, can detect people, weapons and animals in any harsh environment. They have been widely used in the night observation and surveillance for soldiers, commanders, armed policemen and other law enforcers.

Application Case:
Law enforcement • Scouting • Searching & rescuing • Hunting.

Features: Built-in SD card for recording videos and images • OLED display, 1024×768 • Electronic compass integrated • Proximity sensor to prevent the eyepiece from leaking light.

Standard package

Model	NV-W30		NV-W60	
Detector Data				
Type	Uncooled FPA			
Material	aSi			
IR resolution	384×288		640x480	
Pixel pitch	17μm			
Spectral range	8~14μm			
NETD/Sensitivity	≤70mK		≤60mK	
Lens Data				
FOV/Focal distance	7.5°×5.6°/50mm	5.0°×3.7°/75mm	12.4°×9.3°/50mm	8.3°×6.2°/75mm
Recognition distance (Vehicle)	1200m	1600m	1200m	1600m
Recognition distance (Human)	420m	600m	420m	600m
Eye relief	22mm			
Diopter	-5 ~ +5			
Image Performance				
Display	800 x 600 binocular OLED		1024×768 binocular OLED	
Frequency	50Hz			
Focus mode	Manual			
Polarity/LUT mode	Black hot/White hot			
Noise reduction	Digital filtering			
Digital zoom	2X, 4X			
Image enhancement	Manual			
Startup time	4s			
Contrast/Brightness	Manual			
Compass	No		Yes	
Interfaces				
Format	Composite aviation plug			
Power interface	Yes			
Video output	PAL			
Storage card	32G			
Power System				
Battery type	2pcs 18650 lithium batteries			
Operating time	≥6h continuous (normal temperature)		≥4.5h continuous (normal temperature)	
Environment Parameters				
Operating temperature range	-20°C ~ +50°C			
Storage temperature range	-45°C ~ +70°C			
Encapsulation	IP67			
Shock & Vibration	MIL-STD-810F			
Physical Data				
Size	183mm x 138rnrn x 76rnrn (without eyepiece)		195mm x 140rnrn x 90rnm (without eyepiece)	
Weight	≤1.2kg (with battely)		≤1.3kg (75rmn lens with battery)	
Packing				
Standard	Thermal imaging binocular. 4pcs batteries, Charger. Composite output cable, Warranty card, User manual, Certificate, Transport case			

NV-W80, Uncooled Multi-functional Thermal Imager

NV-W80 is a multifunctional handheld device. The product integrates many functions, such as uncooled infrared imaging, visible imaging, laser ranging, positioning and orientation, storage and playback, to provide abundant battlefield characteristics of multi-function reconnaissance. The product has the characteristics of small size, light weight and easy to carry.

Application Case: Military reconnaissance • Maritime search & rescue • Law enforcement • Patrol border duty.

Features: Laser ranging + Beidou Positioning + electronic compass, can quickly and accurately locate the target • Military quality for 24/7 use in harsh environments • Ultra wide visual angle design, shocking field of vision, and quickly capture targets • High definition fog penetration visible light camera, more convenient for on-site forensics video recording • Lightweight. easy to operate.

Model	NV-W80
Recognition Distance of Infrared	
To the side of tank	≥2km
FOV	≥5°×4.5°
Recognition Distance of Visible Light	
To the side of tank	≥6km
FOV	≥3°×2.2°
Through-fog	≥1.5
Laser Range Finding	
Minimum Range	≤50m
Maximum Range	≥6km
Ranging Error	≥2km
Beidou positioning accuracy	
Horizontal positioning	≤10m (CEP)
Elevation positioning	≤10m (PE)
Magneticazlmuth angle accuracy	≤0.5°
Focus range	50m ~ ∞
IR detector	
Uncooled	640 X 512
Pixel pitch	12μm
NETD	<40mK
F1 fixed focus lens	69mm
MRTD	0.3K
Weight	
Device	≤1.8kg (including batteries and lens cover)
Carrying weight	≤2.5kg (includ1ng device, batteries, wristband, lens cover, backup batteries and carrying bag)
Power supply	
RCR	18650 X 6
Continuous working at normal temp.	≥6h
Environmental adaptability	
Storage temp.	-55°C ~ +70°C
Working temp.	-40°C ~ +60°C

NIGHT VISION Cooled Multifunctional

NV-W640, Uncooled Multi-functional Thermal Imager

NV-W640 is composed of cooled infrared thermal imaging components, high-definition visible light, GPS, electronic compass and eye-safe laser ranging module. Equipped with 8X infrared continuous zoom lens and 20X visible light continuous zoom lens, the imaging quality is excellent; the design is compact and lightweight, and the HMI is friendly. The telescope can easily measure and locate the target, greatly improve the effectiveness of 24h reconnaissance and provide rich reconnaissance information

NV-W640

Features:

- High resolution infrared+high definition visible light, work all day, anti-strong light interference, strong concealment
- GPS+electronic compass+eye-safe laser rangefinder, accurately locate the target
- High-definition binocular OLED, 1280×1024
- Built-in WIFI module, wireless video transmission and control
- Friendly HMI, easy operation.

Application Case:

- Military reconnaissance
- Target search
- Law enforcement
- Patrol border port security.

Model	NV-W640
Thermal imaging performance	
Type	MCT Cooled
Resolution	640×512
Pixel pitch	15μm
Spectral range	3 ~ 5μm
NETD/Sensitivity	≤25mK
Focal distance	30mm ~ 240mm continuous zoom
FOV	18.2° × 14.6° ~ 2.3° × 1.8° (±5%)
Focusing	Electric focus/auto focus
Visible light performance	
Resolution	1920×1080
Focal distance	5mm ~ 100mm continuous zoom
FOV (HFOV)	51.0° ~ 2.7°
Minimum illumination	0.001Lux
Positioning function	
GPS	Accuracy, ±5m
Electronic compass	Accuracy, pan: ±0.5°, tilt: ±0.3°
Laser Ranging	Wavelength 1.54um (eye safety) / Range: 50m~10Km / Accuracy, ±3m
Target point	≤30m (8Km)
Image function	
Display	Binocular OLED, 1280×1024, adjustable diopter
Image enhancement	DDE, image filtering
Polarity/LUT mode	Black hot/White hot
Contrast/Brightness	Auto/Manual adjustable
Electronic Zoom	1×-4× continuous zoom
Storage	Built-in 32GB storage
WIFI	Built-in WIFI, video transmission and control
Interface	
Power interface	Yes
Video output	PAL
Communication Interface	RS232
Data interface	USB2.0
Power System	
Battery type	Rechargeable lithium battery
Operating time	>6h continuous (normal temperature)
External power	DC:12V~32V
Environment Parameters	
Operating temperature range	-40°C ~ +60°C
Storage temperature range	-45°C ~ +70°C
Encapsulation	IP67
Physical data	
Size (without eye mask)	300mm×240mm×115mm
Weight (with battery)	≤3.6Kg
Operating distance	
Detect human (1.7m×0.5m)	8Km
Detect vehicle (2.3m×2.3m)	13Km
Recognize human (1.7m×0.5m)	2.5Km
Recognize vehiclec (2.3m×2.3m)	5Km
Standard	Infrared thermal imaging telescope, 8 batteries, charger, control line, warranty card, user manual, certificate, transportation box

NV-S30, Driver's Vision Enhancer

NV-S30 is designed for enhancing the driver's visual ability and extending recognition distance in total darkness, smoke, rain and snow. It can significantly reduce the hazards of night time driving, and can be integrated into both commercial and military vehicles.

Features: Shutterless technology • Auto de-icing, defrosting functions • IP67 encapsulation • Low power consumption • 50Hz instant imaging.

Application Case: Visual enhancement for armed vehicles • Visual enhancement for civil vehicles.

Model	NV-S30
Detector Data	
Type	Uncooled FPA
IR resolution	384×288
Pixel pitch	17μm
Spectral range	8 ~ 14μm
NETD/Sensitivity	≤60mK
Lens Data	
FOV	36.1°×27.1°
Focal distance	10mm
Focus	Athermal
Recognition distance (vehicle)	230m
Recognition distance (human)	78m
F	F 1.0
Image Performance	
Image enhancement	IVE image enhancement algorithm
Noise reduction	Digital filtering
Frequency	50Hz
Startup time	5s
Contrast/brightness	Auto
Interface	
Power interface	Yes
Video output	PAL
Power System	
Working voltage	DC: 7V ~ 32V
Power consumption	<1W (stable state) / <6.5W start window heating (<4°C)
Over & Under voltage protection	Yes
Surge suppression	DC: 80V, 20ms
Environment Parameters	
Operating temperature range	-40°C ~ +60°C
Storage temperature range	-45°C ~ +65°C
Humidity	40°C/95%RH (Non-condense)
Salt spray / Vibration / Shock	GJB150.11A-2009 / GJB150.18A-2009 / GJB150.16A-2009
Encapsulation	IP67
Displayer (Optional)	
Size	7"TFT LCD
Resolution ratio	800(H) × 480(V)
Operating	-20°C ~ +70°C
Encapsulation	IP68
Physical Data	
Size	62mm×64mm×83.5mm
Weight	<380g

NIGHT VISION Vehicle Fusion Camera

NV-S30D, Vehicle Fusion Camera

This product is an infrared thermal imager for vehicle. Through the fusion of thermal images and visible light images, it assists drivers to drive safety at night without turning on lights or weak light. Drivers can detect and monitor the road and its nearby persons, animals and other objects. timely response to potential hazards.

Features:

- Dual light fusion, pedestrian automatic recognition. warning of possible collision danger
- Suitable for all black outdoor and harsh environment conditions
- Completely avoid glare interference of opposite vel1ci les, grasp real-time road conditions and avoid accidents.

Application Case:

- Special anti-terrorism vehicle
- Maintenance public
- Security
- Military
- Armed police vehicle
- Long-distance freight Trailer.

Model	NV-S30D
Recognition distance	
To human	≥100m
To vehicle	≥200m
IR detector	384 x 288, 17μm
Visible light sensor	Low illuminance CMOS, 1280 x 960
FOV	≥36° x 27° (H x V)
Lens Data	
FOV	36.1°×27.1°
NETD	<40mK
MATD	450mk (normal temperature)
Lens	Fixed focus athermal lens
Focus	
IR	9.7mm
Visible light camera	6.45mm
Power consumption	≤150W
Power supply	DC 9V~32V
Weight	
Camera	600g
Display	1.2kg
System Installation time	≤30min
MTBF	≥1500h
Working temperature	
Camera	-40°C ~ +60°C
Display	-20°C ~ +60°C

NV-TC300PTZ/NV-TC700PTZ, Thermal Security Camera

NV-TC300PTZ/TC700PTZ bring thermal and visible-light imaging together in one system that provide video and control over both IP and analog networks. With professional ship-mounted design and anti-shocking devices, they can be used in ships and vehicles with sharper thermal images that provide greater scene detail from long distance.

Features: Designed specifically for vehicle and ship, with damping design • 50Hz instant imaging, 3s start-up • IVE technology • Anti-shock, anti-corruption, IP67 • Compact structure, integrated design.

Application Case:
- Surveillance monitoring
- Vehicle & shipborne monitoring.

Model	NV-TC300PTZ			NV-TC700PTZ		
Detector Data						
Type	Uncooled FPA					
Material	aSi					
IR resolution	384 × 288			640 × 480		
Pixel pitch	17μm					
Spectral range	8~14μm					
Frequency	50Hz					
NETD/Sensitivity	≤70mK			≤60mK		
Lens Data						
Type	Athermal					
FOV/Focal distance	19.4°×17.4°/19mm	15°×11°/25mm	10°×8°/35mm	31°×24°/19mm	25°×18°/25mm	17.6°×13.2°/35mm
Recognition distance (Vehicle)	500m	710m	950m	500m	710m	950m
Recognition distance (Human)	160m	220m	320m	160m	220m	320m
F	F 1.0					
Image Performance						
Correction	Auto correction					
Image enhancement	IVE image enhancement algorithm					
Frequency	50Hz					
Zoom	2X, 4X					
Polarity/LUT mode	Black hot /white hot					
Startup time	3s					
Contrast/Brightness	Auto/Manual					
CCD Video Camera						
Resolution	1920×1080					
Sensor type	1/2.8" Progressive Scan Cmos					
Focal distance	4.7-94mm					
HFOV	61.4-2.9° (Wide-Narrow)					
Zoom	20X optical, 12X digital					
Minimum illumination	0.01Lux					
Day & Night	ICR cut filter with auto switch					
F	F1.6-F4.4					
Pan & Tilt						
Horizontal range	0°~360°					
Horizontal speed	Keyboard 100°/S, Manual 0.5°~80°/S					
Vertical range	-15° ~ +90°					
Vertical speed	Keyboard 100°/S, Manual 0.5°~80°/S					
Automatic flip function	180° automatic flipping with continuous monitoring in the vertical direction					
Presets	256 presets, accuracy <0.05°					
Cruise scan	6 strips, each can set 16 presets, preset time adjustable					
Pan & Tilt data	The pan & tilt's horizontal and pitch angle data can be obtained through instructions, and can be queried through the network or through RS485.					
Mobile phone monitoring	Mobile phone monitoring available (iPhone,Windows Mobile,BlackBerry,Symbian,Android)					
Interface						
Video output	RJ45, PAL					
Network protocol	Support ONVIF/RTSP/FTP/PPPOE/DHCP/DDNS/NTP/UPnP					
Control	RS485					
Communication protocol	Support PELCO-D/P					
Baud rate	2400/4800/9600 bps automatic identification					
Power System						
Working voltage	DC: +12V ~ +24V					
Power consumption	<50W (include heating)					
Environment Parameters						
Operating temperature range	-40°C ~ +65°C, humidity<90%					
Storage temperature range	-40°C ~ +70°C					

NIGHT VISION Thermal Security Camera

NV-TC900PTZ, EO/IR Camera System

NV-TC900PTZ is designed for maritime surveillance, featuring dual-channel with high IR resolution thermal camera and CCD high-definition visible video camera, and able to adapt to the bad weather at sea.

Features:

- High sensitivity cooled infrared, long-distance observation, clear image
- Infrared triple view, duel view or continuous zoom lens is optional
- HD fog penetrating telephoto lens, auto focus
- Laser ranging, laser lighting module are optional
- Radar tracking& returning reminding
- Target tracking function is optional
- Designed for the marine environment, excellent sealing.

Application Case:

- Maritime surveillance
- Marine patrol
- Navy force.

Model	NV-TC900PTZ	
Infrared performance		
Type	Medium wave cooled infrared	
Material	MCT	
IR resolution	320 × 256	640 × 512
Pixel pitch	30μm	15μm
Spectral range	3~5μm	
NETD/Sensitivity	≤20mK	
Image enhancement	DDE	
Polarity/LUT mode	Black hot/White hot	
Contrast/Brightness	Auto/Motor	
Lens Data		
Focal distance	60/240mm	15-330mm
FOV	WFOV: 9.2°×7.2°	WFOV: 36°×29°
	NFOV: 2.3°×1.8°	NFOV: 1.67°×1.33°
Focusing	Electric / Automatic	
Recognition distance (ship)	4.0km	6.5km
Recognition distance (Human)	2.0km	3.3km
CCD Video Camera		
Correction	Auto correction	
Image enhancement	IVE image enhancement algorithm	
Frequency	50Hz	
Zoom	2X, 4X	
Polarity/LUT mode	Black hot /white hot	
Startup time	3s	
Contrast/Brightness	Auto/Manual	
CCD Video Camera		
Resolution	1920×1080	
CCD type	2M 1/1.8" CMOS star-level super low-lux gun type digital camera	
Lens	15.6mm~500mm(32X)	
FOV	0.44°~23.12° (wide angle~telescoping)	
Illuminance	Color: 0.002Lux@(F1.2, AGCON) / B/W: 0.0002Lux@(F1.2, AGCON)	
Focus / Aperture	Motor / Auto	
WDR	Yes	
Fog-through	Support	
Laser illumination (Optional)		
Laser power / Laser wavelength	15W / 808nm	
Irradiation distance	2km	
Laser ranging (Optional)		
Laser wavelength	1550nm	
Ranging distance (2.3m x 2.3m ship)	5Km / 8Km	
Ranging accuracy	±3m	
Power System		
Working voltage	DC: 24V±10%	
Power consumption	≤50W Normal, ≤300W Peak	
Environmental Parameters		
Operating temperature range	-30°C ~ +60°C	
Storage temperature range	-40°C ~ +70°C	
Encapsulation	IP66	
Physical Data		
Size / Weight	574mm×408mm×408mm / 55kg	

NV-TC400/NV-TC600, IP Thermal Security Cameras

NV-TC400/TC600 Equipped with uncooled infrared detectors, it can provide clear images in no-light indoor. Multiple lenses are optional. IP network is powerful, and it supports PoE power supply. It can be used in various security monitoring areas such as ports, terminals, airports, borders, & coastal defense.

Features: Shutterless technology • Support Onvif protocol • Support PoE • Multiple lenses for option • IP66 encapsulation.

Application Case:

- Surveillance for critical facilities: warehouse, prison. port, residence, airport, nuclear plant, public aera, etc
- Firefightings: forest, manufacture. public area, building
- Border and coastal control.

Model	NV-TC400	NV-TC600
Detector Data		
Type	aSi Uncooled FPA	
Material	aSi	
IR resolution	384 × 288	640 × 480
Pixel pitch	17μm	
Spectral range	8~14μm	
NETD/Sensitivity	≤70mK	≤60mK
Lens Data		
Focal distance	9mm / 13mm / 19mm / 25mm / 35mm	
FOV (384×288)	42.5°x32° / 28°x21.3° / 19.4°×14.7° / 15°×11° / 10.6°×8°	
FOV (640x512)	69.2°x51.6° / 46.4°x35.2° / 31°x24° / 25°x18° / 17.6°x13.2°	
Focus mode	Athermal	
Recognition distance (Vehicle)	220m / 340m / 500m / 710m / 950m	
Recognition distance (Human)	71m / 112 / 160m / 220m / 320m	
Image Performance		
Mirroring	Support	
Image enhancement	Yes	
Frequency	50Hz	
Polarity/LUT mode	Black hot /white hot	
Image gain	Auto/Manual	
Contrast/Brightness	Adjustable	
Network Features		
Network protocol	IPv4/v6, RTSP/RTP/RTCP, TCP/UDP, HTTP, DHCP, DNS, FTP, DDNS, PPPOE, SMTP, SIP	
Storage communication protocol	CIFS, NFS	
WEB management	Embedded Web service, which can be viewed & configured through the IE explorer	
Remote upgrade and maintenance	Support	
Integration feature	In support of ONVIF/third-party protocol	
Interface		
Network interface	RJ-45, 10/100 Base-T	
Audio interface	1 audio input and 1 audio output	
Alarm interface	2 alarm input and 2 alarm output	
Analog video output	BNC, 750hm	
PTZ control interface	RS485	
SD card interface	Micro SD, SDHC card (Max32G)	
System Function		
Intelligent alarm	Motion detection alarm, I/O alarm, disk alarm	
Storage method	Local storage, NAS storage, SD card storage	
Privacy masking	Five areas can be set and the area size can be adjusted	
Character display	Time, date, channel number, channel name, and user-defined content	
Security	Password protection; in support of multi-level user group management; permission customization; one-button reset	
Power System		
Working voltage	DC: 12V/PoE	
Power consumption	5W	
Environment Parameters		
Operating temperature range	-20°C ~ +50°C	
Humidity	RH90% MAX	
Encapsulation	IP66	
Physical data		
Size	Ø110mm x 388mm	
Weight	1900g (with 13mm lens)	
Installation mode	Wall-mounting mode/ceiling mode	

NIGHT VISION Thermal Security Camera

NV-TC400PTZ/NV-TC600PTZ, IP Full High-Definition Thermal Security Monitoring Systems

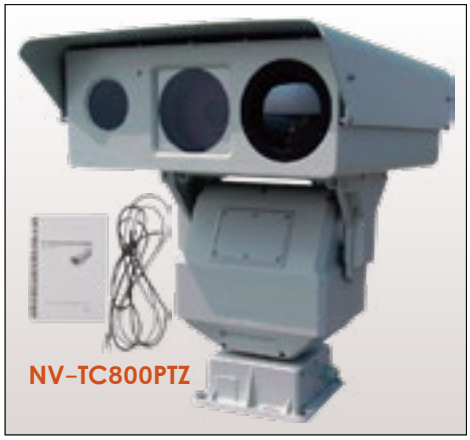
NV-TC400PTZ/TC600PTZ are of high-performance, multi-sensor pan/tilt cameras bring dual-channel with thermal and visible-light imaging together. Their precision pan/tilt mechanism gives you accurate pointing control while providing sharp image and video for critical facilities.

Features: Dual-channel: thermal and visible-light camera • Multiple lenses for option • Support Onvif protocol • Support Pelco-D protocol • High precision 360° pan/tilt.

Application Case:

- Government: military bases, maritime, country borders, law enforcement
- Infrastructures: power grid, nuclear power, mining, oil & gas facilities, chemical facilities, water utilities
- Transportation: wateways. airports. roads and highways, railroads.

Model	NV-TC400PTZ	NV-TC600PTZ
Detector Data		
Type / Material	aSi Uncooled FPA / aSi	
IR resolution	384 × 288	640 × 480
Pixel pitch	17μm	
Spectral range	8~14μm	
NETD/Sensitivity	≤70mK	≤60mK
Lens Data		
Focal distance	50mm / 75mm / 100mm	
FOV (384×288)	7.5°×5.5° / 5°×3.75° / 3.75°×2.75°	
FOV (640x512)	12.4°x9.3° / 8.3°x6.5° / 6.3°x4.5°	
Focus mode	Electric/Auto	
Recognition distance (Vehicle)	1200m / 1600m / 2100m	
Recognition distance (Human)	420m / 600m / 820m	
Image Performance		
Mirroring	Horizontal / Vertical / Horizornal+Vertical	
Image enhancement	IVE Image enhancement algorithm	
Frequency / Polarity/LUT mode	50Hz / Black hot/white hot	
Contrast/Brightness	Adjustable	
Visible Light Camera		
Sensor	1/2.8" Progresive Scan CMOS	
Resolution	1920(H) X 1080(V)	
Lens Data	4.5-135mm, 30X optical zoom	
HFOV	65.1-2.34° (Wide-Narrow)	
Aperture	F 1.6+4.4	
Mtnunurn illurrnnation	Color: 0.05Lux @ (F 1.6, AGC ON) B&W: 0.01Lux @ (F1.6, AGC ON)	
Day-and-night switch	ICR Filler	
Focusing	Auto Focus / One Focus / Manual Focus	
Pan & Tilt performance		
Rotating angle / Rotating speed	Pan: 0° -360° (Continuous rotation): Tilt: +90° ~ 90° / Pan: 0.01° ~ 60° /S: Tilt: 0.01° ~ 30° /S	
Preseting amount	200	
Cruise scanning, Scan mode	Support, Cruise scanning/Auto scanning	
Real-tIme angle return	Support real-lime angle return or query angle return function	
Network Features		
Network protocol	IPv4/v6, RTSP/RTP/RTCP, TCP/UDP, HTTP, DHCP, DNS, FTP, DDNS. SIP	
Storage Communication protocol	CIFS, NFS	
Networktransmission control	Embedded network bandwidth self-adaptive flow control technology	
WEB management	Embedded Web service, which can be viewed & configured through the IE explorer	
Remote upgrade and maintenance	Support	
Integration fearure	In support of ONVIF / third·party protocol	
Interface		
Control / Control prolocol	RS435 / Pelco-D	
Baud rate	2400/4800/9600/19200bps	
Network interface	RJ-45, 10/100 Base-T	
Power System		
Working voltage / Power consumption	AC: 24V (± 20%), 50/60Hz / ≤100W	
Environment Parameters		
Operating temp. range	-25°C ~ +60°C (wide temp. range with optional heating & fan)	
Humidity / Encapsulation	RH90% Max. (non-condense) / IP66	
Size / Weight	282mm(L) x 419mm(W) x 316mm / ≤15kg	

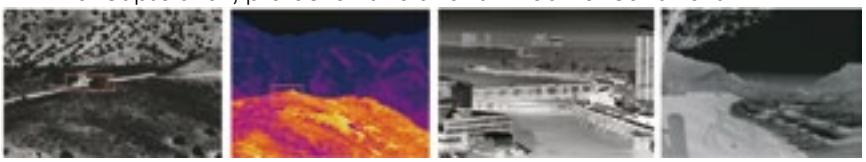


NV-TC800PTZ, IP Thermal Imaging Video Camera

NV-TC800PTZ as a high-performance, multi-sensor pan/tilt camera brings dual-channel with thermal and visible-light imaging together. It can achieve 24/7 continuous long-distance surveillance especially for harbor, coast, military base, etc.

Features:

- NETD ≤50mk, Clear image under all black, smoke, camouflage and other harsh conditions
- 640×512,17μm Uncooled FPA
- Multiple lenses for option: 30mm~150mm, 25mm~225mm and more.
- RS485 remote control, support PELCO-D
- IP66 encapsulation, protection shield for all-weather conditions.



Application Case:

• Border control • Surveillance for harbor, coast, military base etc. • Electrical Inspection, resuing.

Model	NV-TC800PTZ	
Detector Data		
Detector type	VOx Uncooled FPA	
IR resolution	640 × 512	
Pixel pitch	17μm	
Spectral range	8~14μm	
NETD/Sensitivity	≤50mK	
Lens Data		
Lens type	Continuous zoom	
Focal distance	30mm~150mm	25~225mm
FOV	WFOV: 20°×15°	WFOV: 24.6°×18.4°
	NFOV: 4.2°×3°	NFOV: 2.8°×2.1°
Focusing	Electric/Auto	
Detection distance (human)	4.2Km	6.0Km
Recognition distance (Human)	1.2Km	1.8Km
Detection distance (Vehicle)	8.5Km	9.9Km
Recognition distance (Vehicle)	2.9Km	3.8Km
Image Performance		
Image enhancement	DDE image enhancement algorithm	
Frequency / Polarity/LUT mode	50Hz / Black hot/white hot	
Amplification / Contrast/Brightness	2X, 4X / Auto/Manual	
CCD Video Camera		
Resolution	1920(H) X 1080(V)	
CCD type	2M 1/1.8" CMOS star level super low-lux gun type digital camera	
Lens Data	15.6~500mm(32x)(20~750mm, 20~1000mm optional)	
FOV	0.44°~ 23.12° (Wide-Narrow)	
Illuminance	Color: 0.002Lux@ (F1.2, AGCON)	B&W: 0.0002Lux@ (F1.2, AGCON)
Focus / Aperture	Electric/auto / Auto	
WDR / Fog-through	Yes / Support	
Pan & Tilt		
Angle back function	PELCO-D	
Pan angle / Tilt angle	0° ~ 360° / -45° ~ +45°	
Pan speed / Tilt speed	0.1°~ 30°/s / 0.1°~ 15°/s	
Presetting amount	80	
Auto scanning / Auto cruise	One line	
Material	Aluminum alloy	
Sun shade / Fan & Heater	Yes	
Interface		
Format / Power interface	Aviation plug / Yes	
Network interface / Control	One RJ45 10M/100M self-adaption Ethernet port / RS485	
Power System		
Working voltage	AC: 24V±10%	
Power consumption	≤120W (Normal)	≤200W (Heating)
Environment Parameters		
Operating temperature range	-30°C ~ +60°C	
Storage temperature range	-40°C ~ +70°C	
Encapsulation	IP66	
Physical data		
Size / Weight	680×450×650mm / 50kg	
Packing		
Standard / Option	Thermal imaging camera, Warranty card, User manual, Transportation case / Laser range finder, Laser illumination	

NIGHT VISION Two-axis Gimbal System

NV-EO145

NV-EO145, Two-axis Gimbal System

NV-EO145 gimbal system is a professional dual camera system designed for aerial surveillance, facility inspection, search&rescue and other tasks. System is specially designed for aerial operation for UAV.

Features:

- Small volume, light weight, 145mm diameter, 2kg weight
- High precise two-axis gyro-stabilization platform, avoid various vibration of moving carrier. Eliminate image blur and shake.
- 640×480 high resolution thermal imager, have excellent night vision
- 30X continuous focus, 1920 ×1080 high clear visible light camera, high imaging quality, high definition scene can be shown
- Auto/manual tracking.

Application Case: Aerial application • Power inspection • Defense application • Searching and secure.

Model	NV-EO145
Platform Performance	
Gimbal size	145mm(W) × 230mm(H)
Weight	2kg
Angle range (Course)	300° (360° Panoramic)
Angle range (Pitch)	-100° ~ +100°
Angular velocity	≥60°/s
Stabilized precision	≤0.5mrad (RMS)
Tracking accuracy	±2 pixel
Image Performance	
IR resolution	640×480
Pixel pitch	17μm
Lens FOV	12.4° × 9.5°
Lens focal distance	50mm
Amplification	2X, 4X
Frequency	30Hz
Polarity/LUT mode	Black hot/White hot/Pseudo-color
CCD Camera Performance	
Lens FOV	2.3° ~ 63.7°
Lens focus distance	4.3 ~ 129mm
Resolution	1920 × 1080
Zoom	30X optical zoom, 12X digital zoom
Focus	Auto
Interface	
Video output	HD-SDI
Control	RS422
Power System	
Working voltage	DC: 12V±20%
Power consumption	≤25W (average, max. ≤50W)
Environment Parameters	
Operating temperature range	-35°C ~ +55°C
Storage temperature range	-40°C ~ +65°C
Humidity	5% ~ 95% (non-condensing)
Packing	
Standard	Thermal imaging nacelle, Software package, Warranty card, Connectors

NV-EO188, Two-axis Gimbal System

NV-EO188 photoelectric platform is developed for the photoelectric load of domestic small helicopters or large rotorcraft UAV. It mainly investigates and monitors aircraft, vehicles or pedestrians. Through visible light imaging and infrared imaging, it can conduct long-range, large-scale and long-term reconnaissance surveillance of important targets in key areas. The main application are disaster assessment & warning, environmental monitoring, power inspection, terrorism prevention, customs and other tasks.

Features:

- High precise two-axis gyro-stabilization platform, avoid various vibration of moving carrier. Eliminate image blur and shake.
- 640×512 high resolution thermal imager, have excellent night vision
- 30X continuous zoom, 1920 ×1080 high clear visible light camera
- 4 km LRF, ranging accuracy ± 3 m
- Auto/manual tracking
- Load customization and reloading.

Application Case: Environmental monitoring • Power inspection • Terrorism prevention • Customs anti-smuggling.

Model	NV-EO188
Platform Performance	
Gimbal size	188mm(W) × 350mm(H)
Weight	5kg
Angle range (Course)	360° x n
Angle range (Pitch)	+20° ~ -100°
Angular velocity	≥60°/s
Stabilized precision	100μrad (RMS)
Tracking accuracy	1mrad (condition 2°, RMS 1Hz disturbance)
Image Performance	
IR resolution	640×512
Pixel pitch	17μm
Lens FOV	WFOV24.5° X 19.5°, NFOV7.5° X 6°
Lens focal distance	25/80mm
Amplification	2X, 4X
Frequency	30Hz
Polarity/LUT mode	Black hot/White hot
CCD Camera Performance	
Lens FOV	2.3° ~ 63.7°
Lens focus distance	4.3 ~ 129mm
Resolution	1920 × 1080
Zoom	30X optical zoom
Focus	Auto
Laser ranging	
Laser wavelength	1550nm
Ranging distance	≥4Km
Ranging accuracy	±3m
Interface	
Video output	HD-SDI
Control	RS422
Power System	
Working voltage	DC: 24V
Power consumption	45W Average, 100W Peak
Environment Parameters	
Operating temperature range	-30°C ~ +55°C
Storage temperature range	-40°C ~ +60°C
Humidity	95 ± 3%
Packing	
Standard	Task equipment, Equipment box, Connecting cables & connectors, Random devices and files

NIGHT VISION Two-axis Gimbal System

NV-EO350

NV-EO350, Two-axis Gimbal System

NV-EO350 optical stability pod is used for aircraft carriers, such as large and medium-sized manned aircraft or UAV. The 2-axis 4-frame gyro-stabilized platform and high-precision IMU can ensure the pod's high stability and precise target location capability. Users can collocate different loads according to different requirements, such as visible light camera, cooling infrared camera, laser detector and other payloads. It can realize day and night reconnaissance, identification and weapon guidance of targets, and has functions such as scanning, searching, tracking, ranging, GEO tracking and target positioning.

Features:

- 20X optical zoom, long focal length visible light camera
- 640×512, third gear, cooled infrared camera
- 15Km Laser range finder
- IMU(Inertial measurement unit)
- Long-focus image stabilization
- Two-axis four-frame servo-stabilized pod
- Auto/manual tracking
- GEO tracking.

Application Case: Day and night investigation • Weapon guidance • Terrorism prevention • Searching and secure.

Model	NV-EO350
Platform Performance	
Gimbal size	Ø350 x 485mm
Weight	≤45kg
Angle range (Course)	360° x n
Angle range (Pitch)	-100° ~ +20°
Angular velocity	Pan: 60°/s, Tilt: 40°/s
Stabilized precision	20μrad (RMS)
Tracking accuracy	1mrad (condition 2°, RMS 1Hz disturbance)
Image Performance	
IR resolution	640×512
Detector type	Cooled medium wave MCT detector
Pixel pitch	15μm
Lens focal distance	15-280mm
Lens FOV	35.4° x 28.7° ~ 1.97° x 1.57°
Frequency	50Hz
Polarity/LUT mode	Black hot/White hot
CCD Camera Performance	
Detector function	Ranging / Mapping
Wavelength	1064nm
Ranging	15KM
Accuracy	±2
Irradiation energy	≥80MJ
Irradiation distance	≥10KM
Interface	
Video output	HD-SDI
Control	RS422
Power System	
Working voltage	DC: 28V
Power consumption	≤350W
Environment Parameters	
Operating temperature range	-40°C ~ +50°C
Storage temperature range	-55°C ~ +70°C
Humidity	95 ± 3%
Packing	
Standard	Pod, Lifting device, GPS antenna (without feeder), Shock absorber, Cable (with electromagnetic shielding)

NV-26, Thermal Imager/Low Light-level Fused Night Vision

NV-26 is a fused night vision monocular, can be both head mounted and handheld, which combines low light-level night vision with thermal technologies, users can get clear images by both systems simultaneously; NV-26 greatly expands the performance and functionality of the existing low light-level NVD however its detection range is relatively close. Thermal imager is sensitive to heat source and capable of detecting the targets that are not easy founded by NVD, it gets further detection distance, penetrability to rain, fog and smoke, can detect the people that hide in bushes as well.

Model	NV-26
Low light level	
Magnification	1x
FOV	40° ±2°
Focal Length	26mm F/1.2
Resolution	57 ~ 62lp/mm
Exit pupil Diameter	7mm
Eye Relief	18mm
Diopter	-4 ~ +2
Voltage	5 ~ 10V
Thermal	
Resolution	384x288
FOV	24.6° x18.5°
Focal Length	15mm F/0.9
E-Zoom	2x/4x
Display	800x600
Polarity	White/Black/Pseudo color
Voltage	5 ~ 12V
Fusion System Parameters	
Magnification	1x
Objective Lens/Eyepiece	Manual Focus
N.W.	≤ 500g
Battery Type	2Pcs 3.7V CR123A (Lithium Battery 800mAh)/DC(5-12v) Adaptor
Duration of Fused system	2hrs
Duration of Low light-level night vision	60hrs
Operating Temperature	-20°C ~ +55°C
IP Rating	IP67
Dimension	160x68x101mm
MTBF	≥ 500hrs