ULIRVISION

# THERMAL NIGHT VISION SYSTEMS

Turn Night To Day | Excellent Images

2021V1.1

# ABOUT ULIRVISION


Zhejiang ULIRVISION Technology Co., Ltd.(ULIRVISION) is dedicated to researching, designing, manufacturing, integrating the IR and UV systems. Since the establishment in 2005, ULIRVISION has served its clients worldwide with cutting-edge technology in handheld thermal imaging cameras, thermal imaging cores, thermal night vision systems, thermal surveillance cameras and corona cameras. Innovative solutions are brought into power industry, electrical industry, automation application, firefighting, surveillance monitoring, and night vision areas through ULIRVISION.

ULIRVISION maintains its advantages in the industry with strong R&D team and advanced facilities. It invests about 8% of the total revenue into R&D annually, and it is committed to striving for meeting the new challenges. ULIRVISION is recognized by ISO9001:2008 certificate, SGS CE, RoHs, MIL standard certificate, and it has been granted more than 100 patents& 30 computer software copyrights.

It has seen dramatic growth in both domestic and international markets each year with average increase rate around 130% annually, which makes ULIRVISION pioneer in measurement and security solution providers. We have devoted and enthusiastic sales& technical staff to serve clients all over the world with their expertise around the clock.

## ULIRVISION Brand

UL ● UltravioLet

IR ● InfraRed

VISION ● Foresight and Foreknow

## ULIRVISION Culture

### ULIRVISION Positioning

Infrared-centric IntelliSense products and big data service providers

### ULIRVISION Vision

To be a top-ranking solution provider for IR & UV system with leading technology worldwide, to make the world more secure.

### ULIRVISION Mission

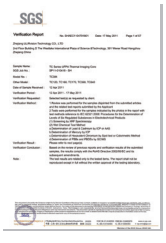
Help visionaries gain insight into the future.

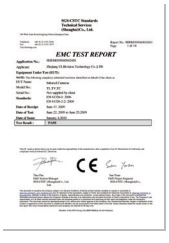
### ULIRVISION Values

Create value for customers;
Provide a platform for those who struggle;
Contribute to social progress.

## ULIRVISOIN Qualification Honor



# ULIRVISION Advantages

## Excellent R&D Team

30+ Copyright

100+ Patent

## Stand-alone Manufacture from DQA to MQA

Manufacture
Assembly
Testing

## Complete Solution Provider

## Internationalized Quality Control System

SGS CE DAS CE RoHS

Compliance Engineering

## A Global Brand with a Local Presence

North America
Middle East
India
Africa
South America
Russia
Europe
China
Singapore
Australia

## A Reliable Partner

Beijing 2008

THALES HIKVISION

## 360° Technical Support & Thorough Warranty Service

24 hrs / 365 days

## Completed Training System

PPT

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# Eagle30S

## Thermal Imaging Sights

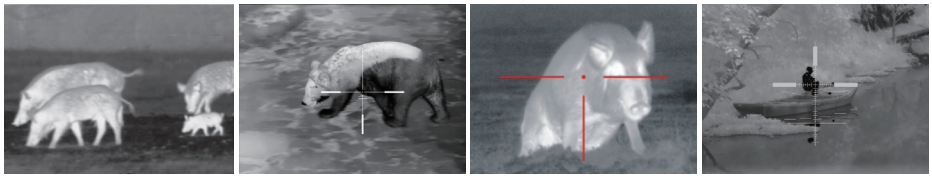
**Eagle30** is a thermal weapon sight which is widely used for law enforcement. It can detect heat of any targets against cooler background during day or night, especially in severe conditions such as total darkness, haze, dust, sleet, forest, grass, disguise and so on.

## Features

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

## Application Case

- Law enforcement
- Targeting systems
- Defense systems



## Standard Package

| standard package | |
|---|---|
| Eagle30S×1 | Transportation case×1 |
| CR123A×4 | User manual×1 |
| Composite output cable×1 | Certificate of approval×1 |
| Small Picatinny rail×1 | Warranty card×1 |
| Picatinny quick release interface×1 | Power adapter×1 |

# Technical Specifications

| Item | Eagle30S | | |
|---|---|---|---|
| **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 | ≥4h | | |
| **Environmental Parameters** | | | |
| Operating temperature range | -30℃～+60℃ | | |
| Storage temperature range | -40℃～+70℃ | | |
| 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 | DC 5V power adapter | | |

# Eagle30CC

## Thermal Imaging Sights

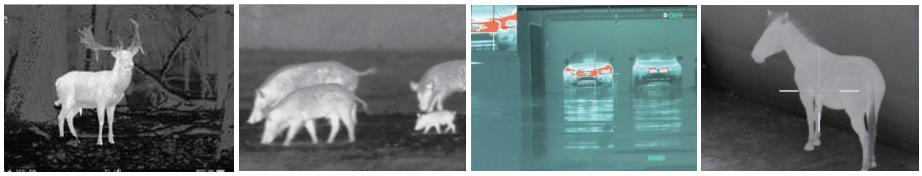
**Eagle30CC** is a thermal weapon sight which is widely used for law enforcement. It can detect heat of any targets against cooler background during day or night, especially in severe conditions such as total darkness, haze, dust, sleet, forest, grass, disguise and so on.

## Features

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

## Application Case

- Law enforcement
- Targeting systems
- Defense systems



## Standard Package

| standard package | |
|---|---|
| Eagle30CC×1 | Transportation case×1 |
| Composite output cable×1 | User manual×1 |
| Picatinny quick release interface×1 | Certificate of approval×1 |
| Laser ranging module×1 | Warranty card×1 |

# Technical Specifications

| Item | Eagle30CC | |
|---|---|---|
| **Detector Data** | | |
| Type | Uncooled FPA | |
| Material | aSi | |
| IR resolution | 384×288 | |
| Pixel pitch | 17μm | |
| Spectral range | 8～14μm | |
| NETD / Sensitivity | ≤70mK | |
| **Lens Data** | | |
| FOV | 10.6°×8.0° | 7.5°×5.5° |
| Focal distance | 35mm | 50mm |
| Recognition distance（vehicle） | 950m | 2200m |
| Recognition distance ( human ) | 320m | 420m |
| F | 1 | |
| Distance of exit pupil | 48mm | |
| Diopter | -5~+5 | |
| **Image Performance** | | |
| Display | 1024×768 OLED | |
| Frequency | 50Hz | |
| Zoom | 2X，4X | |
| Polarity / LUT mode | Black hot / White hot / Red 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 | |
| **Laser ranging** | | |
| The wavelength | 905nm | |
| Rangingdistance | 600m | |
| Precision | ±2m | |
| **Power System** | | |
| Battery type | non-removable, rechargeable lithium battery | |
| Operating time | ＞5h continous | |
| **Environmental Parameters** | | |
| Operating temperature range | -20℃～+50℃ | |
| Storage temperature range | -40℃～+70℃ | |
| 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, | |
| Option | DC 5V power adapter | |

# Eagle60S

## Infrared Thermal Sight

This product 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 and 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

## Standard Package

| standard package | |
|---|---|
| Thermal Imaging Core × 1 | Interface Cable × 1 |
| Warranty Card × 1 | Lens |
| Software CD × 1 | |

## Technical Specifications

| **Item** | **Eagle60S** | |
|---|---|---|
| Connector | Swallow tail | Picatinny |
| **Effective distance** | | |
| To standing person | ≥350m | |
| To vehicle | ≥1km | |
| **IR Detector** | | |
| Uncooled VOx | 640×512@17μm | |
| **NETD** | <45mk | |
| **MRTD** | ≤0.35k(at normal temperature) | |
| **Lens** | 34mm | |
| **Imaging range** | ≥350m | |
| **FOV** | ≥15°×12° | |
| **Weight** | 810±20g(including batteries) | |
| **Continuous working time** | ≥4h | |
| **Power supply** | RCR 18650 ×2 | |
| **Working temperature** | -40℃～+50℃ | |

# Eagle70CC

## Thermal Imaging Sights

**Eagle70CC** 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.

## Features

- High resolution, 640×480
- Shutterless technology
- 50Hz imaging in real time
- Compact and anti-shock design
- Photo & video recording

## Application Case

- Searching and rescue
- Targeting system
- Law enforcement

## Standard Package

| standard package | |
|---|---|
| Eagle70CC×1 | Transportation case×1 |
| Battery×4 | User manual×1 |
| Composite output cable×1 | Certificate of approval×1 |
| Picatinny quick release interface×1 | Warranty card×1 |

# Technical Specifications

| Item | Eagle70CC | | |
|---|---|---|---|
| **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 |
| Focus range | 3m～∞ | 5m～∞ | 8m～∞ |
| Recognition distance（Vehicle） | 950m | 1200m | 1600m |
| Recognition distance（Human） | 320m | 420m | 600m |
| F | F 1.0 | | |
| Eye relief | 48mm | | |
| Diopter | -6~+4 | | |
| **Image Performance** | | | |
| Display | 800×600 OLED | | |
| Image enhancement | IVE image enhancement algorithm | | |
| Frequency | 50Hz | | |
| Zoom | 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 | | |
| **Environmental Parameters** | | | |
| Operating temperature range | -20℃～+50℃（rechargeable battery） | | |
| Storage temperature range | -40℃～+70℃ | | |
| Encapsulation | IP67 | | |
| Vibration | MIL-STD-810F | | |
| Shock | 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 | DC12V power adapter | | |

# Venus35

## Helmet Night Vision Goggle

This product 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

## Standard Package

| standard package | |
|---|---|
| Thermal Imaging Core×1 | Interface Cable×1 |
| Warranty Card×1 | Lens |
| Software CD×1 | |

# Technical Specifications

| Item | Venus35 |
|---|---|
| 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 |

# Venus35D

## HelmetMonocular 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

## Standard Package

| standard package | |
|---|---|
| Thermal Imaging Core×1 | Interface Cable×1 |
| Warranty Card×1 | Lens |
| Software CD×1 | |

# Technical Specifications

| Item | Venus35D |
|---|---|
| **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 | 384×288, 17μm×17μm |
| Focus | F#1.1, 15mm |
| FOV | 24.6°× 18.5° |
| Magnification | E-zoom: 2X, 4X |
| Polarity | White hot, Black hot, Pseudo color |
| System performance | |
| MTBF | ≥500h |
| Power | CR2x2, 3.7V lithium battery (800mAh) or DC (5-12V) adapter |
| Fusion working time | 2h |
| Night vision working time | 60h |
| Working Temperature | -40℃~ +50℃ |
| IP Grade | IP67 |
| Dimensions | 160×68×101mm |
| Weight | ≤500g |

# Wolf30|Wolf60

## Thermal Imaging Binocular

**Wolf30|Wolf60** as 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.

## Features

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

## Application Case

- Law enforcement
- Scouting
- Searching and rescuing
- Hunting

## Standard Package

| standard package | |
|---|---|
| Wolf telescope×1 | Adapter×1 |
| Warranty card×1 | Battery Charger×1 |
| Battery×4 | Transportation case×1 |
| Composite output cable×1 | |

# Technical Specifications

| Item | Wolf30 | | Wolf60 | |
|---|---|---|---|---|
| **Detector Data** | | | | |
| Type | 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 | 50mm | 75mm | 50mm | 75mm |
| FOV | 7.5°×5.6° | 5.0°×3.7° | 12.4°×9.3° | 8.3°×6.2° |
| Recognition distance（Vehicle） | 1200m | 1600m | 1200m | 1600m |
| Recognition distance（Human） | 420m | 600m | 420m | 600m |
| F | F 1.0 | | | |
| Eye relief | 22mm | | | |
| Diopter | -5~+5 | | | |
| **Image Performance** | | | | |
| Display | 800×600 binocular OLED | | 1024×768 binocular OLED | |
| Polarity / LUT mode | Black hot / White hot | | | |
| Frequency | 50Hz | | | |
| Focus mode | Manual | | | |
| Noise reduction | Digital filtering | | | |
| Digital zoom | 2X, 4X | | 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） | |
| **Environmental Parameters** | | | | |
| Operating temperature range | -20℃～+50℃ | | | |
| Storage temperature range | -45℃～+70℃ | | | |
| Encapsulation | IP67 | | | |
| Vibration | MIL-STD-810F | | | |
| Shock | MIL-STD-810F | | | |
| **Physical Data** | | | | |
| Size | 183mm×138mm×76mm（without eyepiece） | | 195mm×140mm×90mm（without eyepiece） | |
| Weight | ≤1.2kg（with battery） | | ≤1.3kg（75mm lens with battery） | |
| **Packing** | | | | |
| Standard | Thermal imaging binocular, 4pcs batteries, Charger, Composite output cable, Warranty card, User manual, Certificate, Transport case | | | |

# Wolf80

## Uncooled Multi-functional Thermal Imager

This product 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.

## 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

## Application Case

- Military reconnaissance
- Maritime search & rescue
- Law enforcement
- Patrol border duty

## Standard Package

| standard package | |
|---|---|
| Thermal Imaging Core×1 | Interface Cable×1 |
| Warranty Card×1 | Lens |
| Software CD×1 | |

# Technical Specifications

| Item | Wolf80 |
|---|---|
| **Recognition Distance of Infrared** | |
| To the side of tank | ≥2km |
| FOV | ≥6°×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 | ≤2m |
| **Beidou positioning accuracy** | |
| Horizontal positioning | ≤10m (CEP) |
| Elevation positioning | ≤10m(PE) |
| Magneticazimuth angle accuracy | ≤0.5° |
| Focus range | 50m～∞ |
| **IR detector** | |
| Uncooled | 640×512 |
| Pixel pitch | 12μm |
| NETD | <40mK |
| F1fixed focus lens | 69mm |
| MRTD | 0.3K |
| **Weight** | |
| Device | ≤1.8kg(including batteries and lens cover) |
| Carrying weight | ≤2.5kg(including device, batteries, wristband, lens cover, backup batteries and carrying bag) |
| **Power supply** | |
| RCR | 18650 ×6 |
| Continuous working at normal temperature | ≥6h |
| **Environmental adaptability** | |
| Storage temp. | -55℃~+70℃ |
| Working temp. | -40℃~+60℃ |

# Wolf320|Wolf640

## Cooled Multifunctional Telescope

**Wolf320|Wolf640** are 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.

## 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

- Law enforcement
- Search and rescue
- Reconnaissance
- Patrol

## STANDARD PACKAGE

| Standard package | |
|---|---|
| Wolf320\|Wolf640 ×1 | Charger ×1 |
| 18650 ×8 | Warranty card ×1 |
| Control line ×1 | User manual ×1 |
| Transport case ×1 | |

# TECHNICAL SPECIFICATIONS

| Item | Wolf320 | Wolf640 |
|---|---|---|
| **Thermal imaging performance** | | |
| Type | MCT Cooled | |
| Resolution | 320×256 | 640×512 |
| Pixel pitch | 30um | 15um |
| Spectral range | 3～5μm | |
| NETD/Sensitivity | ≤20mK | ≤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 20m~5Km | 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×, 2×, 4× | 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℃～+60℃ | |
| Storage temperature range | -45℃～+70℃ | |
| Encapsulation | IP67 | |
| **Physical data** | | |
| Size (without eye mask) | 320mm×232mm×115mm | 300mm×240mm×115mm |
| Weight (with battery) | ≤4.0Kg | ≤3.6Kg |
| **Operating distance** | | |
| Detect human(1.7m×0.5m) | 4Km | 8Km |
| Recognize human(1.7m×0.5m) | 1.3Km | 2.5Km |
| Detect vehicle(2.3m×2.3m) | 9Km | 13Km |
| Recognize vehicle(2.3m×2.3m) | 3Km | 5Km |
| **Standard** | | |
| Standard | Infrared thermal imaging telescope, 8 batteries, charger, control line, warranty card, user manual, certificate, transportation box | |

# TC300PTZ|TC700PTZ

## Dual-Spectral Thermal Monitoring Systems

**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 and shipborne monitoring




## Standard Package

| standard package | |
|---|---|
| Thermal security camera × 1 | User manual × 1 |
| Intarface cable × 1 | Warranty card × 1 |

# Technical Specifications

| Item | TC300PTZ | | | 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 timing 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.no | F1.6-F4.4 | | | | | |
| **Pan & Tilt** | | | | | | |
| Horizontal range | 0°~360° | | | | | |
| Horizontal speed | Keyboard 100°/S, Manual0.5°~80°/S | | | | | |
| Vertical range | -15°~+90° | | | | | |
| Vertical speed | Keyboard 100°/S, Manual0.5°~80°/S | | | | | |
| Automatic flip function | 180°automatic flipping with continuous monitoring in the vertical direction | | | | | |
| Presets | 256presets, 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℃～+65℃，humidity<90% | | | | | |
| Storage temperature range | -40℃～+70℃ | | | | | |
| Encapsulation | IP67，TVS 3000Vlightning protection, surge protection, voltage transient protection, comply with EMC IV standard | | | | | |
| Vibration protection | Horizontal: 9G; Vertical: 15G | | | | | |
| Wind protection | 180km/h | | | | | |
| Window defrosting | Standard | | | | | |
| **Physical Data** | | | | | | |
| Size | Φ190mm×300mm | | | | | |
| Weight | ≤6kg | | | | | |
| **Packing** | | | | | | |
| Standard | Dual-Spectral Security Monitor System, User manual, Warranty card, Packing box | | | | | |

# TC900PTZ

## Dual-Spectral Thermal Shipborne Systems

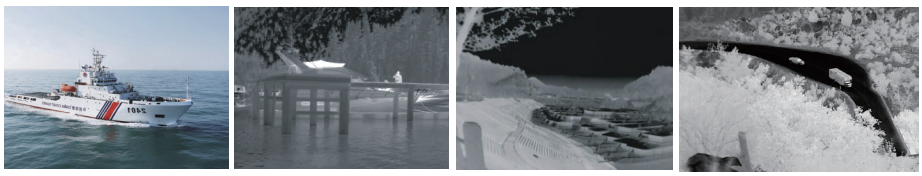
**TC900PTZ** is designed for maritime surveillance, featuring dual-channel with high IR resolution thermal camera and CCD high-definition visible video camera, and able to adapt to the bad weather at sea.

## Features

- High sensitivity cooled infrared, long-distance observation, clear image
- Infrared dual field of view, three field of 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



## Standard Package

| standard package | |
|---|---|
| Gimbal×1 | User manual ×1 |
| Cable×1 | Warranty card ×1 |

| optional item | |
|---|---|
| Ground station computer×1 | Video downlink×1 |
| Telemetry link×1 | |

# Technical Specifications

| Item | TC900PTZ |
|---|---|
| **Infrared performance** | |
| Type | Medium wave cooled infrared |
| Material | MCT |
| IR resolution | 640×512 |
| Pixel pitch | 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 | 15-330mm |
| FOV | WFOV: 36°×29° |
| | NFOV: 1.67°×1.33° |
| Focusing | Electric / Automatic |
| Recognition distance ( human ) ( 1.8×0.5m ) | 3.3Km |
| Recognition distance ( ship ) ( 2.3m×2.3m ) | 6.5Km |
| **CCD Video Camera** | |
| Resolution | 1920 x 1080 |
| CCD type | 200M 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 | Motor |
| Aperture | Auto |
| WDR | Yes |
| Fog-through | Support |
| **Laserillumination（Optional）** | |
| Laser power | 15W |
| Laser wavelength | 808nm |
| Irradiation distance | 2km |
| **Laser ranging（Optional）** | |
| Laser wavelength | 1550nm |
| Ranging distance （2.3m x 2.3m ship） | 8Km |
| Ranging accuracy | ±3m |
| **Pan & Tilt** | |
| Angle back function | PELCO-D |
| Pan angle | 0°~360° |
| Tilt angle | -120°~90° |
| Max Rotation angle speed ofboresight | Pan≥90°/s, tilt≥90°/s |
| Max Acceleration of angle | Pan≥100°/s2, tilt≥100°/s2 |
| Boresight stabilization accuracy | <0.1mrad（1 σ） |
| **System Features** | |
| Display device | 19-inch, 1280×1024 resolution, interface（include Time, Date, GPS, target position, etc.） |
| Control device | Remote joystick control |
| Video interface | RJ45, HD-SDI |
| Communication Interface | RS422 |
| Auto tracking | Support |
| **Power System** | |
| Working voltage | -DC: 24V±10% |
| Power consumption | ≤50W Normal, ≤300WPeak |
| **Environment Parameters** | |
| Operating temperature range | -30℃ ~ +60℃ |
| Storage temperature range | -40℃ ~ +70℃ |
| Encapsulation | IP66 |
| **Physical Data** | |
| Size | 574mm×408mm×408mm |
| Weight | 55kg |
| **Packing** | |
| Standard | Thermal imaging camera, User manual, Warranty card, Packing box |

# TC400PTZ|TC600PTZ

## IP Full High-Definition Thermal Security Monitoring Systems


**TC400PTZ | TC600PTZ** The series 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: waterways, airports, roads and highways, railroads

## Standard Package

| standard package | |
|---|---|
| Thermal security monitaing system × 1 | Certification × 1 |
| User Manual × 1 | Warranty card × 1 |

# Technical Specifications

| Item | TC400PTZ | | TC600PTZ |
|---|---|---|---|
| **Detector Data** | | | |
| Detector type | aSiUncooled FPA | | |
| 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°x 5.5° | 5°x 3.75° | 3.75°x 2.75° |
| FOV（640×512） | 12.4°x 9.3° | 8.3°x 6.5° | 6.3°x 4.5° |
| Focus mode | Electric / Auto | | |
| Recognition distance（human） | 420m | 600m | 820m |
| Recognition distance（vehicle） | 1200m | 1600m | 2100m |
| **Image Performance** | | | |
| Polarity / LUT mode | Black hot / White hot | | |
| Image enhancement | IVE image enhancement algorithm | | |
| Frequency | 50Hz | | |
| Mirroring | Horizontal/ Vertical / Horizontal+Vertical | | |
| Contrast / Brightness | Adjustable | | |
| **Visible light camera** | | | |
| Sensor | 1/2.8" Progressive Scan CMOS | | |
| Resolution | 1920（H） ×1080（V） | | |
| Lens Data | 4.5-135mm, 30X optical zoom | | |
| HFOV | 65.1-2.34°（Wide-Narrow） | | |
| Aperture | F1.6-F4.4 | | |
| Minimum illumination | Color: 0.05Lux @ （F1.6, AGC ON） B&W: 0.01Lux @ （F1.6, AGC ON） | | |
| Day-and-night switch | ICR Filter | | |
| Focusing | Auto Focus / One Focus / Manual Focus | | |
| **Pan & Tilt performance** | | | |
| Rotating angle | Pan: 0°~360°（Continuous rotation）; Tilt: +90°~-90° | | |
| Rotating speed | Pan: 0.01°~60°/S; Tilt: 0.01°~30°/S | | |
| Presetting amount | 200 | | |
| Cruise scanning | Support | | |
| Scan mode | Cruise scanning / Auto scanning | | |
| Real-time angle return | Support real-time 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 and configured through the IE explorer | | |
| Remote upgrade and maintenance | Support | | |
| Integration feature | In support of ONVIF / third-party protocol | | |
| **Interface** | | | |
| Control | RS485 | | |
| Control protocol | Pelco-D | | |
| Baud rate | 2400/4800/9600/19200bps | | |
| Network interface | RJ-45, 10/100Base-T | | |
| **Power System** | | | |
| Working voltage | AC: 24V（±20%）, 50/60HZ | | |
| Power consumption | ≤100W | | |
| **Environment Parameters** | | | |
| Operating temperature range | -25℃~+60℃(Wide temperature range with optional heating and fan) | | |
| Humidity | RH90% MAX(non-condense) | | |
| Encapsulation | IP66 | | |
| **Physical Data** | | | |
| Size | 282mm (L)x 419mm(W)x 316mm | | |
| Weight | ≤15Kg | | |

# TC800PTZ

## IP Thermal Security Monitoring Systems

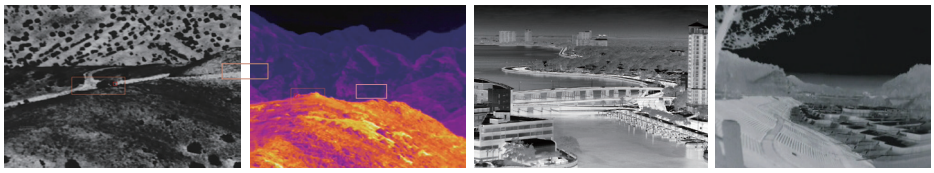
**TC800PTZ** as a high-performance, multi-sensor pan/tilt camera brings dual-channel with thermal and visible-light imaging together. It can achieve 24/7 continuous long-distance surveillance especially for harbor, coast, military base, etc.

## Features

- NETD≤50mK, Clear image under all black, smoke, camouflage and other harsh conditions
- 640×512,17μm Uncooled FPA
- Multiple lenses foroption :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, rescuing



## Standard Package

| standard package | |
|---|---|
| Thermal security montitoring system × 1 | Certification × 1 |
| User Manual × 1 | Warranty card × 1 |

# Technical Specifications

| Item | TC800PTZ | |
|---|---|---|
| **Detector Data** | | |
| Detector type | VOxUncooled 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 | 25mm~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 | DDEimage enhancement algorithm | |
| Frequency | 50Hz | |
| Amplification | 2X、4X | |
| Polarity/LUT mode | Black hot/White hot | |
| Resolution | Auto/Manual | |
| **CCD Video Camera** | | |
| Resolution | 1920×1080 | |
| CCD type | 200W 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 | Electric/auto | |
| Aperture | Auto | |
| WDR | Yes | |
| Fog-through | Support | |
| **Pan & Tilt** | | |
| Angle back function | PELCO-D | |
| Pan angle | 0°~ 360° | |
| Tilt angle | -45°～ +45° | |
| Pan speed | 0.1°~ 30° /s | |
| Tilt speed | 0.1°~ 15° /s | |
| Presetting amount | 80 | |
| Auto scanning | One line | |
| Auto cruise | One line | |
| Material | Aluminum alloy | |
| Sun shade | Yes | |
| Fan&Heater | Yes | |
| **Interfaces** | | |
| Format | Aviation plug | |
| Power interface | Yes | |
| Network interface | One RJ45 10M/100M self-adaption Ethernet port | |
| Video output | PAL/NTSC | |
| **Power System** | | |
| Working voltage | AC: 24V±10% | |
| Power consumption | ≤120W(Normal) | |
| | ≤200W(Heating) | |
| **Environment Parameters** | | |
| Operating temperature range | -30℃～+60℃ | |
| Storage temperature range | -40℃～+70℃ | |
| Encapsulation | IP66 | |
| **Physical Data** | | |
| Size | 680mm×450mm×650mm | |
| Weight | 50kg | |
| **Packing** | | |
| Standard | Thermal imaging camera, Warranty card, User manual, Transportation case | |
| Option | Laser range finder, Laser illumination | |

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