



TFN WH Series Digital Night Vision Scope



Product Introduction

The WH series is a high-performance digital night vision scope designed for professionals who demand crystal-clear imaging in low-light and complete darkness. Equipped with a three-level infrared (IR) illuminator, electronic image stabilization (EIS), and manual/automatic ranging capabilities, the WH series delivers exceptional image quality for both video recording and photography. Its 20MP maximum pixel sensor, combined with a f/2.8 large aperture and 10-60mm zoom objective lens, ensures bright, detailed visuals across various distances. Whether used for wildlife observation, security patrol, or outdoor surveillance, the WH series offers reliable night vision, precise distance measurement up to 2000 meters, and robust construction – making it an ideal choice for demanding field operations.

Product Key Selling Points

Three-Level IR Brightness for Superior Night Clarity

The WH series features an adjustable three-level infrared illuminator that allows users to optimize brightness according to ambient conditions. In complete darkness, simply rotate the IR control handwheel to increase illumination and reveal fine details that would otherwise be invisible. This flexibility eliminates overexposure at close range and underexposure at long distance, ensuring balanced, sharp night images every time. Perfect for covert observation, search & rescue, or nocturnal wildlife monitoring.

EIS Electronic Image Stabilization – Shake-Free Footage

Handheld observation at high magnification often suffers from blur caused by hand tremor. The WH series integrates advanced Electronic Image Stabilization (EIS) technology that actively compensates for unintended movements. Whether you are walking, panning, or zooming in on a distant target, EIS delivers smooth, steady video and crisp photos. This feature dramatically improves field efficiency by reducing failed shots and the need for tripods, allowing you to capture decisive moments with confidence.

Dual Mode Ranging – Manual or Automatic Distance Measurement

Knowing exact target distance is critical for tactical planning, surveying, or hunting. The WH series provides both manual and automatic electronic ranging options, covering distances from



10m up to 600/1500/2000m (customizable upon request). The automatic mode instantly displays distance on the eyepiece, while manual mode gives experienced users finer control. This precision ranging capability eliminates guesswork, enhances shooting accuracy, and improves situational awareness in the field.

High-Definition Imaging – Capture Every Moment

With a 20MP maximum pixel sensor, f/2.8 large aperture, and all-glass lens construction (50mm length, 24mm diameter), the WH series produces exceptionally clear and bright images in both day and night conditions. The 15X magnification brings distant subjects close without sacrificing detail, while the 180° field of view on the objective lens ensures wide-area coverage. Whether recording evidence or documenting wildlife behavior, you get professional-grade image quality that stands up to scrutiny.

Rugged Optics & Versatile Connectivity

The WH series is built with durable glass lenses that resist scratching and maintain optical clarity over years of use. The IR illuminator features a Type-C power interface (85W, compact 49x30x17mm size) for easy field recharging via power banks or vehicle adapters. The combination of a 10-60mm focal length objective lens and 1:3.5 magnification ratio offers flexible zoom from wide-angle to telephoto. This rugged, user-friendly design reduces downtime and maintenance costs for commercial and government users.

Product Specifications

Parameter	Specification
Model	WH series
Test Range	WH96--600m, WH915--1500m, WH920--2000m
Max. Aperture	f/2.8
Max. Pixel	20 MP
Lens Length	50 mm
Lens Diameter	24 mm
Lens Material	Glass
Minimum Focus Distance	6.5 m
Magnification	15X
Objective Lens Focal Length	10 – 60 mm
Objective Lens Magnification Ratio	1:3.5
Objective Lens Aperture	f/2.8
Objective Lens Field of View	180°
IR Illuminator Type	Type-C (rechargeable)
IR Illuminator Power	85 W
IR Illuminator Dimensions	49 mm × 30 mm × 17 mm
IR Brightness Levels	3 levels (adjustable via handwheel)
Image Stabilization	EIS (Electronic Image Stabilization)
Ranging Mode	Manual / Automatic



Video & Photo	Supported
Power Interface	Type-C

Product Features

Section 1: Three-Level IR Illumination – Solve “Invisible in Total Darkness”

Many conventional night vision devices fail in zero-light environments, producing noisy or completely black images. The WH series solves this with a three-level infrared illuminator that can be manually adjusted via a dedicated handwheel. At level one, low-intensity IR provides subtle fill light for close-range observation without alerting subjects. Level two balances brightness and battery life for general patrol. Level three delivers maximum IR output, revealing terrain, animals, or persons up to hundreds of meters away in pitch darkness. This graduated control prevents the common problem of “white-out” when a target is too close or “black-out” when too far. Field users can instantly rotate the handwheel to match the environment – from dense forest to open fields – ensuring they never miss critical details due to poor illumination. The result: reliable, usable night vision regardless of ambient light.

Section 2: EIS Electronic Image Stabilization – Eliminate Motion Blur

High-magnification observation amplifies even the slightest hand movement, turning a steady view into a shaky, nauseating image. This is a major pain point for professionals conducting mobile surveillance or wildlife filming. The WH series integrates EIS (Electronic Image Stabilization) that uses internal motion sensors and image processing algorithms to counteract camera shake in real time. When activated, EIS smooths out jittery footage, allowing you to track moving targets or record while walking without losing clarity. For still photography, it reduces ghosting and blur, increasing the success rate of sharp shots. Customers no longer need to carry heavy tripods or monopods for basic stability. EIS also extends effective working hours by reducing operator fatigue – you can observe for longer periods without eye strain caused by constant micro-adjustments. This function turns a handheld device into a professional-grade imaging tool.

Section 3: Manual/Automatic Ranging – Solve Distance Uncertainty

Estimating distance to a target by eye is notoriously inaccurate, leading to failed shots, misjudged rescue efforts, or incorrect surveying data. The WH series eliminates guesswork with dual-mode electronic ranging. In automatic mode, the device instantly calculates and displays the distance (from 10m up to 2000m depending on configuration) on the screen – perfect for rapid target acquisition. In manual mode, experienced users can override and fine-tune the measurement, accounting for environmental factors like rain or fog. The ranging function integrates seamlessly with the optical path, so you can measure without taking your eye off the target. This precision is invaluable for law enforcement (estimating engagement distances), search & rescue (pinpointing victim locations), and forestry (measuring tree or plot distances). By providing accurate, actionable distance data, the WH series transforms from a simple viewer into a tactical measurement instrument.

Section 4: High-Resolution Imaging – Capture Evidentiary-Quality Details



Standard night vision devices often produce grainy, low-resolution images that are useless for identification or evidence. The WH series features a 20MP maximum pixel sensor combined with a large f/2.8 aperture and all-glass lens assembly. This optical chain captures significantly more light and detail than competing products. The 15X magnification brings distant license plates, animal markings, or human faces into clear view, while the 10-60mm zoom objective allows you to frame wide scenes or tight close-ups. For professionals needing to document night operations – such as security audits, wildlife research, or crime scene analysis – the WH series delivers photos and videos with sufficient resolution for facial recognition, text reading, or species identification. The glass lens (50mm length, 24mm diameter) resists fogging and scratches, ensuring consistent performance in harsh weather. No more “blob” detection – the WH series provides actionable visual evidence.

Section 5: Versatile Objective Lens & Type-C Power – Solve Field Downtime

Field operators often face two frustrations: limited zoom flexibility and dead batteries without charging options. The WH series addresses both with a 10-60mm focal length objective lens (1:3.5 ratio) offering true wide-to-telephoto versatility – switch from 180 ° wide-area scanning to telephoto zoom without changing attachments. This saves weight and setup time. The IR illuminator is powered via a Type-C port (85W rating), compatible with standard power banks, solar chargers, or vehicle adapters. Unlike proprietary batteries that force downtime when depleted, Type-C allows hot-swapping or continuous operation from external power sources. The illuminator’s compact size (49x30x17mm) integrates neatly into the device body without adding bulk. Combined, these features mean you can adapt to any observation distance and keep running all night – solving the two most common field failure points.

Applications & Pain Points Solved

Scenario	Customer Pain Point	How WH series Solves It
Nocturnal Wildlife Monitoring	Animals are active at night, but standard binoculars or cameras cannot see in darkness. Researchers often miss behaviors or cannot identify species.	Three-level IR illuminator reveals animals without spooking them (lowest IR level is subtle). EIS stabilizes recording even when following moving subjects. 20MP photos capture fur patterns for species identification.
Security Patrol & Perimeter Surveillance	Intruders may approach under cover of darkness. Conventional CCTV has blind spots, and hand-held lights alert suspects.	WH series provides passive IR illumination invisible to naked eye. Ranging up to 2000m allows early detection. Video recording secures evidence. Type-C power enables all-night shifts with portable battery pack.
Search & Rescue (SAR) Operations	Locating lost persons in dark forests, mountains, or disaster rubble is slow and dangerous. Inability to measure distance wastes critical time.	Automatic ranging instantly tells rescue team how far the target is (up to 2000m). 15X magnification and HD imaging help identify clothing or movement. Rugged glass lens withstands dust and rain.
Law Enforcement / Tactical	Officers need to maintain safe distance while gathering intelligence. Distance estimation	Dual-mode ranging provides precise distance data for decision-making. EIS allows steady surveillance from moving vehicles. 85W IR



Observation	errors can lead to tactical mistakes or safety breaches.	illuminator cuts through complete darkness without revealing officer's position.
Marine & Coastal Night Navigation	Boaters and port security face pitch-black waters with reflections and fog. Standard night vision struggles with water glare and distance judgment.	180° wide field of view on objective lens covers large water areas. Adjustable IR reduces glare from water surface. Ranging function measures distance to buoys, docks, or other vessels. Type-C charging is marine-friendly (no special adapters).

Q&A

Q1: Can the WH series record video and audio?

A: Yes, the WH series supports both video recording and still photography. The built-in microphone captures ambient audio (can be disabled if required). Video resolution is optimized for night conditions, and EIS works during recording to reduce shake. Files are saved to internal or removable storage (specify when ordering). Audio can be muted for covert operations.

Q2: What is the maximum detection range in complete darkness?

A: With the IR illuminator set to level 3 (maximum brightness), the WH series can detect human-sized targets up to approximately 300-400 meters under clear night conditions. For reflective targets (e.g., signs or eye shine), detection can exceed 600 meters. The electronic rangefinder works up to 2000 meters on large, high-contrast objects. Actual range depends on atmospheric conditions and target reflectivity.

Q3: Does the WH series require any special batteries?

A: No. The WH series uses a standard Type-C power interface. It can be powered by any USB-C power bank, wall charger, car charger, or solar panel (5V/2A minimum recommended). The internal battery (if equipped) is rechargeable. For extended operations, you can swap power banks without shutting down the device. This eliminates the need for expensive, proprietary camera batteries.

Q4: Is the WH series suitable for daytime use?

A: Yes. The WH series functions as a high-definition digital scope in both day and night. The large f/2.8 aperture and 20MP sensor provide bright, clear daytime images. The 15X magnification and 10-60mm zoom lens are fully usable under sunlight. However, direct sun exposure into the lens should be avoided to prevent sensor damage – use the included lens cap when not in use.

Q5: Can the ranging function be calibrated for different units (meters/yards)?

A: The standard WH series displays distance in meters. Custom firmware can be ordered to display in yards (minimum order quantity may apply). Manual ranging mode allows user adjustments for environmental conditions, but unit conversion is done at the display level. Contact our sales team for B2B customization requests, including different ranging scales or specialized reticles.



Package Contents

WH series Digital Night Vision Scope *1

IR Illuminator (Type-C) *1

Type-C Charging Cable *1

Lens Cleaning Cloth *1

Quick Start Guide *1

Carry Pouch *1

Wrist Strap *1

Optional (sold separately)

External Battery Pack

Hard Transport Case

Tripod Adapter

Note: Package contents may vary by region or customization. Contact our B2B sales team for bulk order specifications and OEM packaging options.