

# **T-HDF-HD-FB** Fusion Binoculars



## T-HDF-HD-FB Fusion Binoculars

The T-HDF is an HD fusion binocular telescope with four optical channels catering to fulltime observation day and night, rangefinding, and geo-location. The product is lightweight and portable, providing users with unprecedented situational awareness.Light Weight, the product has a battery life of up to 8 hours.



Thermal Mode



Low Light Mode

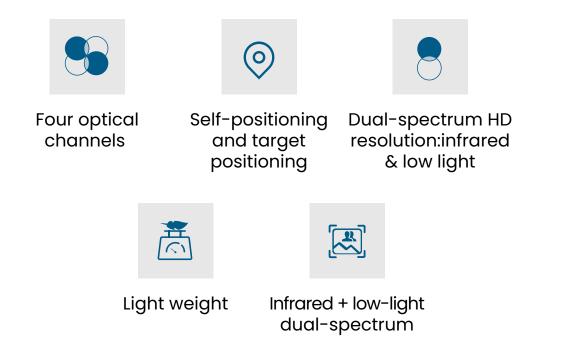


dual-spectrum Mode





#### **PRODUCT HIGHLIGHTS**



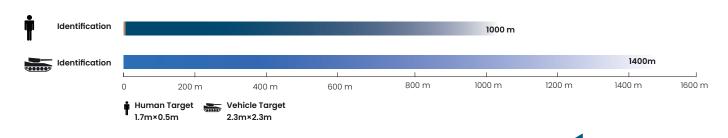




## **SPECIFICATIONS**

Resolution         10/24/7/88           Pikel Pitch         12/2/m           Fov         15.5×11.6°           For         Resolution           Resolution         15.5×11.6°           Evel Pitch         12.80×960           For         12.80×960           For         12.80×960           For         12.80×960           For         12.80×960           For         12.80×960           For         12.80×960           Mainum         50mm, FL0           Low light         50mm, FL0           Maximum measuring range         3.0km           Maximum measuring range         3.0km           Accuracy         9.8%           Distance measuring frequency         1.14z           Rangefinding logic         1.14z           Nocation mode         Galielo+Q2SS           Distance measuring frequency         1.14z           Magnetic azimuth measurement range         0.36%           Magnetic azimuth measurement accuracy         1.0°           Magnetic azimuth measurement accuracy         1.0°           Inclination angle measurement accuracy         1.0°           Magnetic azimuth measurement accuracy         1.0°	Product	T-HDF	
Infrared FOV 15.5°×11.6° Focal Length 45.5°×11.6° Focal Length 1200×960 Focal Length 1200×960 FoCV 17.4×13.1° FoCV 17.4×13.1° FoCA Length 50mm, FL0 Low tight FoC 117.4×13.1° Focal Length 50mm, FL0 Low tight 650mm, FL0 Low tight 750mm, FL0 L	Infrared	Resolution	1024×768
FOV         Instantion           Focal length         45mm, Fill           Resolution         1220,m           Focal length         020,m           Focal length         000,m           Low light         Focal length           Iow light         600 length           Iow light         600 length           Iow light         600 llux           Wavelength         1535nm           Iow light         600 llux           Wavelength         1535nm           Maximum measuring range         3.0km           Accuracy         2m           Distance measuring frequency         Hz           Rangefinding logic         1-3 sets           Location mode         BPOFPS-6IONASS+           Goldien-QZSS         6dillen-QZSS           Horizontal location accuracy (CEP)         10m           Data update rate         11/2           Magnetic azimuth measurement range         -90°-490°           Pitch angle measurement accuracy         1.0°           Inclination angle measurement		Pixel Pitch	12µm
Resolution         1280×980           Low light         Pixel Pitch         12.0µm           FoV         T7.4**13.1°         50mm, F1.0           Low light         50mm, F1.0         0.001lux           Wavelength         1835mm         1835mm           Maximum measuring range         3.0km         3.0km           Accuracy         9.8%         1835mm           Distance measuring range         3.0km         3.0km           Accuracy         9.8%         1.3           Distance measuring frequency         1.12         1.12           Rangefinding logic         13 sets         1.12           Location mode         BD+GPS+GLONASS+         Galilieo+QZSS           Horizontal location accuracy (CEP)         5m         10m           Data update rate         1.12         1.12           Magnetic azimuth measurement range         0-360°         1.12           Data update rate         1.12         1.0°           Magnetic azimuth measurement range         -80°+40°         1.12           Compass         Pitch angle measurement range         -90°+40°           Inclination angle measurement range         -180°+180°         1.0°           Inclination angle measurement racuracy         1.0		FOV	15.5°×11.6°
Pixel Pich         12.0µm           Low Light         FOV         17.4*x13.1°           Food Length         50mm, FL0           Low Illumination Capability         <0.001lux		Focal Length	45mm, Fl.1
Low Light Fov         Fov         T/A*x13.P           Focal Length Low Illumination Capability         50mm, FL0           Low Illumination Capability         <0.001lux	Low Light	Resolution	1280×960
Focal Length         50mm, FL0           Low Illumination Capability         <0.001lux		Pixel Pitch	12.0µm
Identify         <0.00llux		FOV	17.4°×13.1°
Wavelength1535nmLaser RangefindingMinimum measuring range10mRangefindingAccuracy98%Distance measuring accuracy2mDistance measuring frequency1HzRangefinding logic1-3 setsLocationcuracion accuracy (CEP)Maximum consurement range0-360°Data update rate1HzMagnetic azimuth measurement range0-360°Magnetic azimuth measurement range-90°-+90°Pitch angle measurement range-90°-+90°Pitch angle measurement range-180°-+180°Inclination angle measurement range1.0°Novelength830nmLaser PointerStorageResolution0.5mW (optional)Security levelClass 1Bistory25HzNordie1024x768FPS25HzStorage64GEvering Time-4-+4Weight12kgBattery3×18650Working Time8hPower Supply5-12V DCUSB√Analog video√KEY√Corpating Time-4-+55°CStorage Temperature-4-0*Pover Supply5-12V DCUSB√Andog video√Resolution-55°C+70°C		Focal Length	50mm, F1.0
Loser RangefindingMinimum measuring range10mRangefindingAccuracy3.0kmAccuracy98%3.0kmDistance measuring accuracy2mDistance measuring frequency1.HzRangefinding logic1-3 setsLocationLocation accuracy (CEP)Horizontal location accuracy (PE)10mData update rate1.HzMagnetic azimuth measurement range0-360°Magnetic azimuth measurement range-90°-+90°Pitch angle measurement range-90°-+90°Pitch angle measurement range-180°-+180°Inclination angle measurement range-180°-+180°Inclination angle measurement range1.0°NavelengthClass ILoser PointerResolutionPointerStorageStorage64GEyepiece Diopter-4-+44Weight1.2kgBattery38650Working Time8hVorage-4-+44Weight1.2kgBatteryStorageVorage-4-+4Weight1.2kgBattery3.818650Working Time8hPower Supply5-12V DCUSB/Analog video/KEY/Operating Temperature-4-0*-c+55°CStorage Temperature-55°C-r+70°C		Low Illumination Capability	<0.001lux
Laser Rangefinding         Maximum measuring range         3.0km           Rangefinding         Accuracy         98%           Distance measuring frequency         1Hz           Rangefinding logic         1-3 sets           Location         BD+GPS+GLONASS+           Gallied+QZSS         Gallied+QZSS           Horizontal location accuracy (CEP)         5m           Elevation location accuracy (PE)         10m           Data update rate         1Hz           Magnetic azimuth measurement range         0-360°           Magnetic azimuth measurement accuracy         1.0°           Pitch angle measurement range         -90°-+90°           Pitch angle measurement range         -90°-+90°           Pitch angle measurement range         -90°-+90°           Pitch angle measurement range         -180°-+180°           Inclination angle measurement accuracy         1.0°           May         830nm           Energy         0.5mW (optional)           Security level         Class I           Pointer         64G           Eyspice Diopter         -4-+4           Weight         1.2kg           Battery         3×18650           Working Time         8h           Power S		Wavelength	1535nm
Location Rangefinding         Accuracy         98%           Distance measuring accuracy         2m           Distance measuring frequency         1Hz           Rangefinding logic         1-3 sets           Location         BD+GPS+GLONASS+ Gallieo+QZSS           Horizontal location accuracy (CEP)         5m           Elevation location accuracy (CEP)         10m           Data update rate         1Hz           Magnetic azimuth measurement range         0-360°           Composs         Pitch angle measurement range         -90°-+90°           Pitch angle measurement range         -90°-+90°           Inclination angle measurement range         1.0°           Energy         0.5mW (optional)           Security level         Class 1           Energy         25Hz           Storage         644G           Eyepiece Diopter         -4-+4           Weight         1.2kg           Battery <td< td=""><td>Minimum measuring range</td><td>10m</td></td<>		Minimum measuring range	10m
Distance measuring accuracy         2m           Distance measuring frequency         Hz           Rangefinding logic         1-3 sets           Location         BD+GPS+GLONASS+ Galileo+QZSS           Horizontal location accuracy (CEP)         5m           Elevation location accuracy (PE)         10m           Data update rate         1Hz           Magnetic azimuth measurement range         0-360°           Magnetic azimuth measurement range         -90°+90°           Compass         10°           Pitch angle measurement range         -90°+90°           Inclination angle measurement range         -90°+90°           Inclination angle measurement range         10°           Inclination angle measurement range         10°           Inclination angle measurement accuracy         1.0°           Energy         0.5mW (optional)           Security level         Class I           Energy         0.5mW (optional)           Battery         3×18650           Working Time         8h           Power Supply         5-12V DC		Maximum measuring range	3.0km
Distance measuring accuracy         2m           Distance measuring frequency         Hz           Rangefinding logic         1-3 sets           Location         BD+GPS+GLONASS+ Galileo+QZSS           Horizontal location accuracy (CEP)         5m           Elevation location accuracy (PE)         10m           Data update rate         1Hz           Magnetic azimuth measurement range         0-360°           Magnetic azimuth measurement range         -90°+90°           Compass         10°           Pitch angle measurement range         -90°+90°           Inclination angle measurement range         -90°+90°           Inclination angle measurement range         10°           Inclination angle measurement range         10°           Inclination angle measurement accuracy         1.0°           Energy         0.5mW (optional)           Security level         Class I           Energy         0.5mW (optional)           Battery         3×18650           Working Time         8h           Power Supply         5-12V DC		Accuracy	98%
Rangefinding logic1-3 setsLocationLocation modeBD+GPS+GLONASS+ Galileo+QZSSModuleHorizontal location accuracy (CEP)5mElevation location accuracy (PE)10mData update rate0-360°Magnetic azimuth measurement range0-90°-+90°Pitch angle measurement range-90°-+90°Pitch angle measurement range-90°-+180°Inclination angle measurement range1.0°Inclination angle measurement range1.0°PointerSecurity levelSecurity level0.5mW (optional)DisplaySecurity levelFPS25HzStorage644GEverone1.2kgBattery3×18650Working Time8hPower Supply5-12V DCUSB√Analog video√RS232√Correne-740°C+55°CEnvironmenting-40°C+55°CStorage Temperature-40°C+55°C		Distance measuring accuracy	2m
Location ModuleLocation modeBD+GPS+GLONASS+ Galileo+Q2SSHorizontal location accuracy (CEP)5mElevation location accuracy (PE)10mData update rate0~360°Magnetic azimuth measurement range0~360°Pitch angle measurement accuracy1.0°Pitch angle measurement accuracy1.0°Inclination angle measurement accuracy0.5mW (optional)Security levelClass IEnergy0.5mW (optional)Sorage64GEypeice Diopter-4-+4Weight1.2kgBattery3×18650Working Time8hWorking Time8hMorking Time√RS232√KEY√Pointer-40°<-+55°C		Distance measuring frequency	1Hz
Location ModuleLocation modeBD+GPS+GLONASS+ Galileo+Q2SSHorizontal location accuracy (CEP)5mElevation location accuracy (PE)10mData update rate0~360°Magnetic azimuth measurement range0~360°Pitch angle measurement accuracy1.0°Pitch angle measurement accuracy1.0°Inclination angle measurement accuracy0.5mW (optional)Security levelClass IEnergy0.5mW (optional)Sorage64GEypeice Diopter-4-+4Weight1.2kgBattery3×18650Working Time8hWorking Time8hMorking Time√RS232√KEY√Pointer-40°<-+55°C		Rangefinding logic	1~3 sets
Location Module         Horizontal location accuracy (CEP)         5m           Elevation location accuracy (PE)         10m           Data update rate         0~360°           Magnetic azimuth measurement range         0~360°           Magnetic azimuth measurement accuracy         1.0°           Pitch angle measurement range         -90°-+90°           Inclination angle measurement range         -90°-+90°           Inclination angle measurement range         -180°-+180°           Inclination angle measurement accuracy         1.0°           Inclination angle measurement accuracy         1.0°           Vavelength         830nm           Energy         0.5mW (optional)           Security level         Class I           Resolution         1024×768           FPS         25Hz           Storage         64G           Eyepiece Diopter         -4-+44           Weight         1.2kg           Battery         3×18650           Working Time         8h           Power Supply         5-12V DC           USB         √           KEY         √           Coperating Temperature         -40°c-+55°c           Storage Temperature         -55°c'-+70°c'C </td <td rowspan="4"></td> <td></td> <td></td>			
Module         Elevation location accuracy (PE)         I0m           Data update rate         IHz           Magnetic azimuth measurement range         0-360°           Magnetic azimuth measurement accuracy         1.0°           Pitch angle measurement accuracy         1.0°           Pitch angle measurement accuracy         1.0°           Inclination angle measurement accuracy         1.0°           Energy         0.5mW (optional)           Battery         3×18650           Working Time         8h <tr< td=""><td>Horizontal location accuracy (CEP)</td><td>-</td></tr<>		Horizontal location accuracy (CEP)	-
Digital Magnetic azimuth measurement range0-360°Digital Magnetic CompassMagnetic azimuth measurement accuracy1.0°Pitch angle measurement range-90°-+90°Pitch angle measurement accuracy1.0°Inclination angle measurement range-180°-+180°Inclination angle measurement accuracy1.0°Inclination angle measurement accuracy1.0°Vavelength830nmEnergy0.5mW (optional)Security levelClass 1PointerResolutionStorage64GEyepiece Diopter-4-+4Weight1.2kgBattery3×18650Working Time8hPower Supply5-12V DCUSB-Analog video-KEY-Corrage Temperature-EnvironmentOperating TemperatureEnvironmentOperating TemperatureEnvironmentStorage TemperatureEnvironmentStorage TemperatureEnvironment-40°C-+55°CStorage Temperature-40°C-+55°C		Elevation location accuracy (PE)	10m
Digital Magnetic azimuth measurement accuracy1.0°Magnetic MagneticPitch angle measurement range $-90^\circ -+90^\circ$ Pitch angle measurement accuracy1.0°Inclination angle measurement range $-180^\circ -+180^\circ$ Inclination angle measurement accuracy1.0°Inclination angle measurement accuracy1.0°Inclination angle measurement accuracy1.0°Mavelength830nmLaser PointerEnergySecurity levelClass ISecurity levelClass IDisplayResolutionFPS25HzVariage64GEveriece Diopter $-4-+4$ Weight1.2kgBattery3×18650Working Time8hPower Supply5-12V DCUSB $\checkmark$ Analog video $\checkmark$ KEY $\checkmark$ Environment AdaptabilityOperating TemperatureEnvironmentOperating TemperatureEnvironmentStorage TemperatureStorage Temperature $-40^\circ C-+55^\circ C$ Storage Temperature $-55^\circ C-+70^\circ C$		Data update rate	1Hz
Digital Magnetic azimuth measurement accuracy1.0°Magnetic azimuth measurement range-90°~+90°Pitch angle measurement range-90°~+90°Inclination angle measurement accuracy1.0°Inclination angle measurement range-180°~+180°Inclination angle measurement accuracy1.0°Inclination angle measurement accuracy0.5mW (optional)Security levelClass IEnergy0.5mW (optional)Security level1024×768FPSStorageStorage64GEnvironmentStorageInterfaceNEnvironmentVAdaptabilityVAdaptability-40°C++55°CStorage Temperature-55°C+70°C	Magnetic	Magnetic azimuth measurement range	0~360°
Digital Magnetic CompassPitch angle measurement range $-90^\circ - +90^\circ$ Pitch angle measurement accuracy1.0°Inclination angle measurement range $-180^\circ - +180^\circ$ Inclination angle measurement accuracy1.0°Inclination angle measurement accuracy1.0°Inclination angle measurement accuracy1.0°Inclination angle measurement accuracy1.0°Vavelength830nmEnergy0.5mW (optional)Security levelClass IPointerResolutionPisplayResolutionPS25HzStorage64GEyepiece Diopter $-4-+4$ Weight1.2kgBattery3×18650Working Time8hPower Supply $-512V DC$ USB $\checkmark$ Analog video $\checkmark$ R232 $\checkmark$ KEY $\checkmark$ Operating Temperature $-40^\circ$ C++55°CStorage Temperature $-40^\circ$ C++55°C			1.0°
CompassPitch angle measurement accuracy1.0°Inclination angle measurement range-180°-+180°Inclination angle measurement accuracy1.0°Inclination angle measurement accuracy0.5mW (optional)Energy0.5mW (optional)Security levelClass IResolution1024×768FPS25HzStorage64GEyepiece Diopter-4-+4Weight1.2kgBattery3×18650Working Time8hPower Supply5-12V DCUSB√Analog video√KEY√KEY√Storage Temperature-40°c~+55°CStorage Temperature-55°c~+70°C		,	-90°~+90°
Inclination angle measurement accuracy1.0°Laser PointerWavelength830nmEnergy0.5mW (optional)Security levelClass IDisplayResolution1024*768FPS25HzStorage64GEyepiece Diopter-4~+4Weight1.2kgBattery3×18650Working Time8hPower Supply5-12V DCUSB✓Analog video✓KEY✓Operating Temperature-40°C~+55°CStorage Temperature55°C~+70°C		Pitch angle measurement accuracy	1.0°
Laser PointerWavelength830nmEnergy0.5mW (optional)Security levelClass IDisplayResolution1024×768FPS25HzStorage64GEyepiece Diopter-4~+4Weight1.2kgBattery3×18650Working Time8hPower Supply5~12V DCUSB√Analog video√RS232√KEY√Operating Temperature-40°C~+55°CStorage Temperature-55°C~+70°C		Inclination angle measurement range	-180°~+180°
Laser PointerWavelength830nmEnergy0.5mW (optional)Security levelClass IDisplayResolution1024×768FPS25HzStorage64GEyepiece Diopter-4~+4Weight1.2kgBattery3×18650Working Time8hPower Supply5~12V DCUSB√Analog video√RS232√KEY√Operating Temperature-40°C~+55°CStorage Temperature-55°C~+70°C		Inclination angle measurement accuracy	1.0°
PointerEnergyClosh (optional)Security levelClass IDisplayResolutionFPS1024×768FPS25HzStorage64GEyepiece Diopter-4~+4Weight1.2kgBattery3×18650Working Time8hPower Supply5~12V DCUSB√Analog video√KEY√Coperating Temperature-40°C~+55°CStorage Temperature-55°C~+70°C			830nm
Security level         Class I           Pisplay         Resolution         1024×768           FPS         25Hz           Storage         64G           Eyepiece Diopter         -4~+4           Weight         1.2kg           Battery         3×18650           Working Time         8h           Power Supply         5~12V DC           USB         √           Analog video         √           KEY         √           Operating Temperature         -40°C~+55°C           Storage Temperature         -55°C~+70°C		Energy	0.5mW (optional)
Display         FPS         25Hz           Storage         64G           Eyepiece Diopter         -4~+4           Weight         1.2kg           Battery         3×18650           Working Time         8h           Power Supply         5~12V DC           USB         √           Analog video         √           RS232         √           KEY         √           Operating Temperature         -40°C~+55°C           Storage Temperature         -55°C~+70°C		Security level	Class I
PPS     25HZ       Storage     64G       Eyepiece Diopter     -4~+4       Weight     1.2kg       Battery     3×18650       Working Time     8h       Power Supply     5~12V DC       USB     ✓       Analog video     ✓       RS232     ✓       KEY     ✓       Operating Temperature     -40°C~+55°C       Storage Temperature     -55°C~+70°C	Display	Resolution	1024×768
Eyepiece Diopter     -4~+4       Weight     1.2kg       Battery     3×18650       Working Time     8h       Power Supply     5~12V DC       USB     ✓       Analog video     ✓       RS232     ✓       KEY     ✓       Operating Temperature     -40°C~+55°C       Storage Temperature     -55°C~+70°C		FPS	25Hz
Weight1.2kgBattery3×18650Working Time8hPower Supply5~12V DCUSB✓Analog video✓RS232✓KEY✓Operating Temperature-40°C~+55°CStorage Temperature-55°C~+70°C		Storage	64G
Battery     3×18650       Working Time     3×18650       Power Supply     8h       Power Supply     5~12V DC       USB     ✓       Analog video     ✓       RS232     ✓       KEY     ✓       Operating Temperature     -40°C~+55°C       Storage Temperature     -55°C~+70°C		Eyepiece Diopter	-4~+4
Working Time         8h           Power Supply         5~12V DC           USB         ✓           Analog video         ✓           RS232         ✓           KEY         ✓           Operating Temperature         -40°C~+55°C           Storage Temperature         -55°C~+70°C		Weight	1.2kg
Power Supply     5~12V DC       USB     ✓       Analog video     ✓       RS232     ✓       KEY     ✓       Operating Temperature     -40°C~+55°C       Storage Temperature     -55°C~+70°C		Battery	3×18650
Interface     USB     ✓       Analog video     ✓       RS232     ✓       KEY     ✓       Operating Temperature     -40°C~+55°C       Storage Temperature     -55°C~+70°C		Working Time	8h
Interface Analog video \\ R\$232 \\ KEY \\ Operating Temperature \\ Operating Temperature \\ Storage Temperature \\ C=55°C~+70°C \\ C=1000000000000000000000000000000000000	Interface	Power Supply	5~12V DC
Analog video     Image: Comparison of the comparison of th		USB	$\checkmark$
KEYOperating Temperature-40°C~+55°CStorage Temperature-55°C~+70°C		Analog video	$\checkmark$
KEY√Operating Temperature-40°C~+55°CStorage Temperature-55°C~+70°C		RS232	$\checkmark$
Environment AdaptabilityOperating Temperature-40°C~+55°CStorage Temperature-55°C~+70°C		KEY	
Adaptability Storage remperature -55.0~+70.0			-40°C~+55°C
Encapsulation IP67		Storage Temperature	−55°C~+70°C
		Encapsulation	IP67

### **OPERATING DISTANCE**



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