



640px
THERMAL
RESOLUTION

16MPx
RGB CAMERA
RESOLUTION

30x
OPTICAL
ZOOM

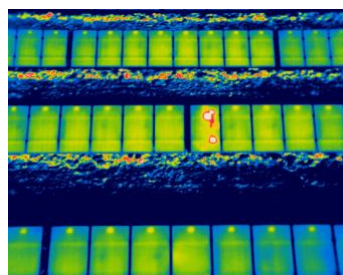
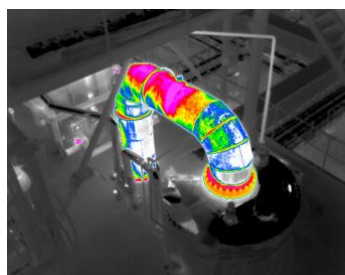
1500M
RANGEFINDER

0.03°C
SENSITIVITY

W
WIRIS OS

WIRIS ENTERPRISE

MOST ADVANCED DRONE THERMAL CAMERA



Datasheet

Release date: 14th of August 2026

Version: 260814

WIRIS Enterprise technical specification

WIRIS Enterprise Key features description	
Operating onboard system	WIRIS OS for full real-time data streaming and control during the flight - operating system ensures the full access to all camera functions - easy camera control via S.Bus, CAN bus, MavLink, Ethernet RTSP - trigger input for image recording, alarm output for confirmation
30x Optical antivibration zoom	Full HD 30x optical zoom camera with antivibration compensation
Laser rangefinder	Distance measurement 10 to 1500 m (32 to 4920 ft), divergence: 1.4 x 0.4 mrad, EN 60825-1:2015-07 eye-safe 905nm
Thermal camera specification	
IR camera resolution	640 x 480 pixels (EU core unit, non-ITAR, BlueUAS)
FPA active sensor size	1.088 x 0.816 cm
Scene temperature ranges (non-radiometric version)	Super Gain mode -32 °C to 80 °C (-25.6 °F to +176 °F) High Gain mode up to +160 °C (up to +320 °F) Low Gain mode up to +600 °C (up to +1 112 °F)
Scene temperature ranges (radiometric version)	High Gain mode -25 °C to 160 °C (-13 °F to +320 °F)
Temperature sensitivity	<30 mK or <50 mK
Accuracy	±2 % or ±2 °C (only radiometric version)
Frame rate	30 Hz or < 9 Hz
Spectral range / detector	8 – 14 µm
Available lenses	FOV 50° (H) x 36° (V), focal length 13 mm, f/1.0 FOV 32° (H) x 20° (V), focal length 19 mm, f/1.0 <i>Package includes a calibration certificate (only radiometric version)</i>
Protective filter on lens	Filter protects the lens against external damage during the flight
Thermal image digital zoom	1 – 12x steps
Digital RGB cameras – WIRIS Enterprise is equipped with two RGB cameras	
High resolution fixed camera	Resolution: 4 656 x 3 496 pixels (16 Mpx), 1/2.8" IMX298 sensor Field of view: extra wide DFOV 73.2°, focal 4.35mm Settings: configuration and stream in advanced auxiliary menu
30x optical zoom camera	Resolution: 1 920 x 1 080 pixels (Full HD), 1/2.8" EXMOR R CMOS sensor Field of view: 30x optical zoom with vibration compensation and image stabilization, ultra-zoom HFOV 2.3° - extra wide 63.7°, focal 129.0 mm - 4.3 mm
Optical zoom camera Image enhancement	Auto-white balance, WDR, IR cut filtering, DEFOG, 3D noise reduction
Optical focus camera - autofocus	Autofocus with Direct Focus Zoom synchronization
Memory and data recording	
Memory	Internal high-speed SSD 128GB for image and video recording External slot for Micro SD card & USB 2.0 for USB stick for taking images



Image and video formats	16Mpx high resolution camera JPEG images, Optical zoom camera Full HD JPEG images, Radiometric IR JPEG and IR TIFF images (only radiometric version) Pix4D and Agisoft compatible for 3D modeling Digital camera h.264 encoded video HD recording Radiometric full-frame IR recording (raw data recording 30 Hz or < 9 Hz, only for radiometric version)
GPS geo-tagging (image & video)	
GPS tagging (image & video)	MavLink, External GPS (NMEA), CAN, UART
Interfaces & real-time remote control	
Auxiliary digital port	S.BUS UART (MAVLink, NMEA GPS or Workswell Command Control Protocol) - Pixhawk compatible - Auterion compatible CANbus (Workswell Command Control Protocol) External trigger input Digital alarm output
Ethernet (RJ-45) port	Video streaming and camera control
Micro USB 2.0 port	Mass storage, USB OTG
USB-A port communication	Keyboard connection for in-house WIRIS camera control
USB-C port communication	USB mass storage connection, Flash drive connection (USB2.0)
Remote control system	WIRIS OS ensures real-time control of all camera functions during the flight via onboard WIRIS operating system
Remote control options	S.BUS protocol Mavlink protocol CANbus & Command Control Protocol - UART
Camera functions	WIRIS onboard operating system: full control and access to all functions Measurement functions: Hot/cold spot detection, center point (only radiometric version) Temperature range settings: Automatic, manual or span mode (only radiometric version) Advanced alarm modes: Above, below, between, above & below (only radiometric version) Multi camera modes: Full screen mode, IR only, VIS only, Picture in Picture with blending setup in percentage Periodic capturing: From 1s, IR and VIS images simultaneously Trigger speed of capturing: around 200ms for radiometric image Temperature units: Celsius, Fahrenheit, Kelvin (only radiometric version) NUC control settings: Automatic, manual or triggered
Micro HDMI video output	1 280 x 720 pixels (720p), Aspect ratio 16:9, Micro HDMI video output
Software & SDK	
Desktop software	Advanced software ThermoLab for radiometric calibrated analysis
SDK libraries	Stream SDK, Data SDK, CANbus & UART SDK



Power supply, weight & dimensions	
Input supply voltage	9 – 36 VDC, 2-pin HARTING connector
Power dissipation	20W average consumption
Weight	< 730 grams (1.49 lb) including Rangefinder, without IP protection cap
Dimensions (L x W x H)	76 mm x 107 mm x 102 mm (2.99 in x 4.21 in x 4.01 in)
Mounting	1 x 1/4-20 UNC thread
Housing material	Durable aluminium body for long-time measurement stability
Environmental	
Operating temperature range	-15 °C to +50 °C (5 °F to 122 °F)
Storage temperature range	-30 °C to +60 °C (-22 °F to 140 °F)
IP rating	Standard IP40 without backside cap Optional IP54 with backside cap Optional IP66 with backside cap and certification (on request) <i>Backside cap must be ordered together with camera due to IP rating tests; the camera is shipped with IP40 rating as standard configuration without the cap.</i>

Standard package WIRIS Enterprise: WIRIS Enterprise camera head with lens, Lens protection cap, WIRIS OS, Calibration certificate, Micro SD card, Micro HDMI cable, 3 connectors (1x power supply, 2x AUX), power supply and AUX 2-pin wire cable (2 meters), USB Mass storage cable, Software ThermoLab FREE license, Quick start guide, Hard transport case



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