



10x  
OPTICAL  
ZOOM

1.3 MPx  
SUPER IR  
RESOLUTION

W  
WIRIS OS

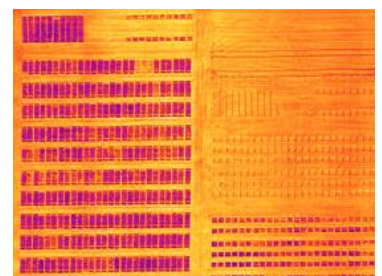
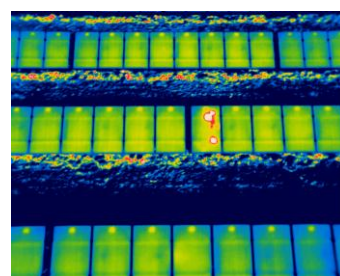
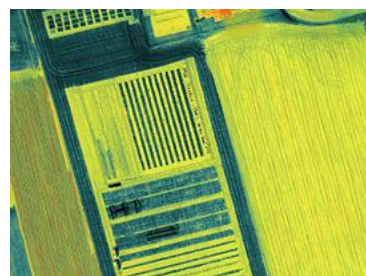
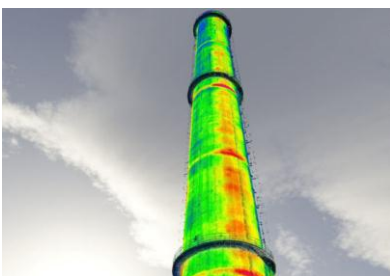
30mK  
SENSITIVITY

DATA & STREAM  
SDK

1500°C  
TEMPERATURE  
RANGE



# WORKSWELL WIRIS PRO SC R&D DRONE THERMAL CAMERA



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## Datasheet

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Release date: 10<sup>th</sup> February 2020

Revision Number: 1.0

# WIRIS Pro SC technical specification

WIRIS Pro SC Key features description	
<b>Super Resolution Mode</b>	WIRIS Pro SC takes Super Resolution IR Images in 1.3Mpx
<b>Operating onboard system</b>	WIRIS OS for full real-time data streaming and control during the flight <ul style="list-style-type: none"> <li>- operating system ensures the full access to all camera functions</li> <li>- easy camera control via S.Bus, CAN bus, MavLink, RJ-45 or Trigger</li> <li>- Data and Stream SDK via Ethernet included in the package</li> </ul>
<b>10x Optical Antivibration zoom</b>	Full HD 10x optical zoom camera with anti-vibration compensation
Thermal camera specification	
<b>IR camera resolution</b>	640 x 512 pixels
<b>IR Super Resolution Mode</b>	1 266 x 1 010 pixels (improvement of native resolution up to 1.3 Mpx)
<b>FPA active sensor size</b>	1.088 x 0.8705 cm
<b>Temperature ranges</b>	-25 °C to +150 °C -40 °C to +550 °C optional temperature range 50 °C to 1 000 °C optional temperature range 400 °C to 1 500 °C
<b>Temperature sensitivity</b>	Standard 0.03 °C (30 mK)
<b>Accuracy</b>	±2 % or ±2 °C (in temperature range 0 °C to +150°C)
<b>Frame rate</b>	30 Hz or < 9 Hz
<b>Spectral range / detector</b>	7.5 – 13.5 μm / Uncooled VOx microbolometer
<b>Available lenses</b>	18°, 32°, 45°, 69° (exchangeable lenses, all calibrated), <a href="#">visit FOV calculator</a> <ul style="list-style-type: none"> <li>- two lenses included in the standard package</li> <li>- all lenses calibrated including calibration certificate</li> </ul>
<b>Protective filter on lens</b>	Filter protects the lens against external damage during the flight
<b>IR Digital zoom</b>	1 – 14x continuous
Digital visual camera	
<b>Resolution</b>	1 920 x 1 080 pixels (Full HD), 1/3" sensor, Auto white balance, Wide dynamic range, Backlight compensation, Exposure and Gamma control
<b>Optical zoom</b>	10x optical zoom with vibration compensation
<b>View angle</b>	ultra zoom 6.9° - extra wide 58.2°, focal 33.0 mm - 3.3 mm
<b>Noise reduction</b>	Special 3D noise reduction function
<b>Focus</b>	Autofocus with Direct Focus Zoom synchronization
Memory and data recording	
<b>Memory</b>	Internal high-speed SSD 128GB or 256GB for image and video recording External slot for Micro SD card & USB 2.0 for USB stick for taking images
<b>Image and video formats</b>	Radiometric JPEG images and Digital camera Full HD JPEG images Radiometric TIFF images (Pix4D and Agisoft compatible for 3D modeling) Digital camera h.264 encode video HD recording Radiometric full-frame IR recording (raw data recording in 30 Hz or < 9 Hz)

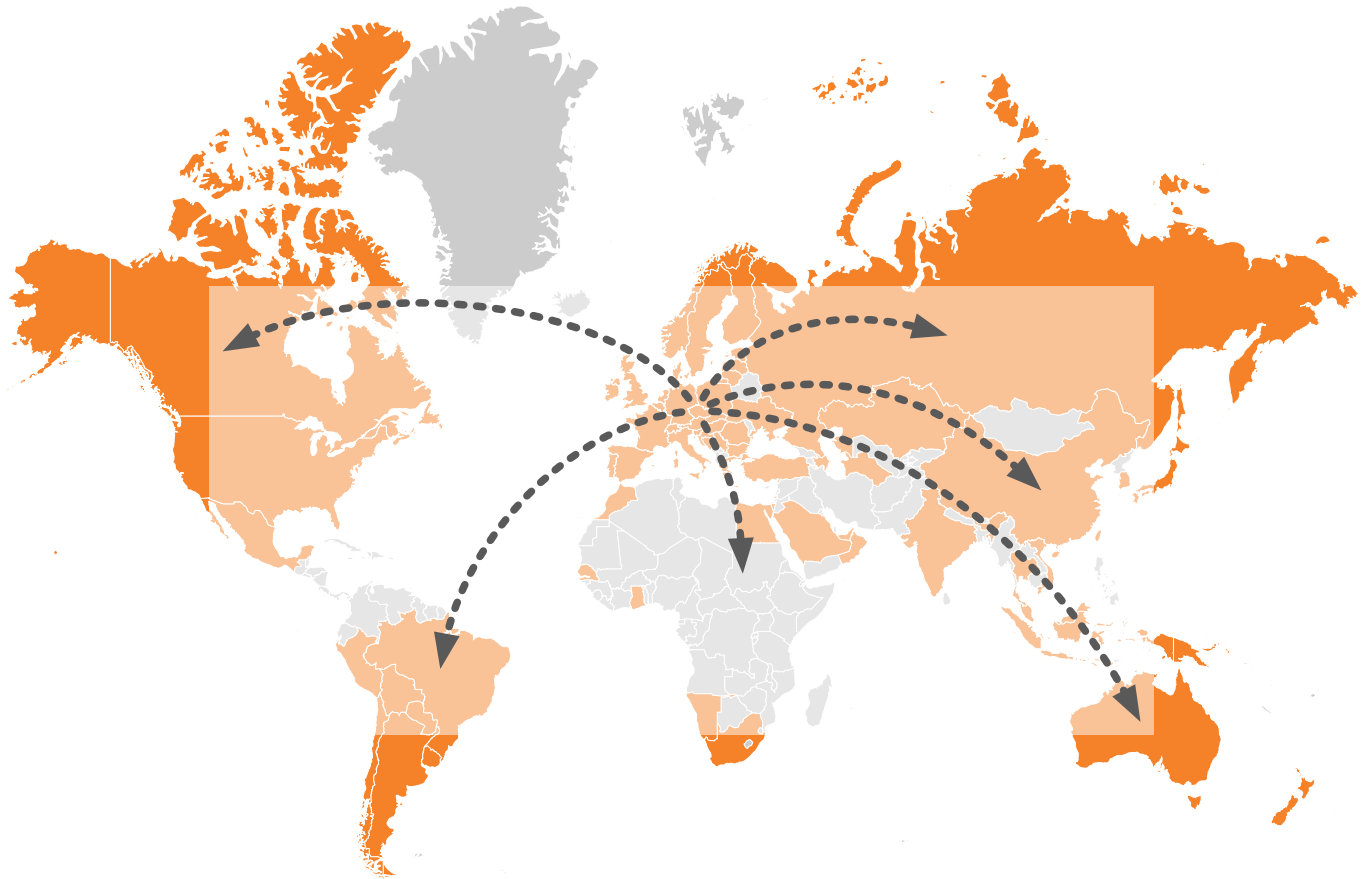


GPS geo-tagging (image & video)	
GPS tagging (image & video)	MavLink or External GPS or DJI A3 controllers compatible via CAN bus
Interfaces & real-time remote control	
10-pin digital port	S.BUS CAN bus (compatible with DJI M600 and A3 controllers) MavLink External GPS connectivity External trigger
Ethernet (RJ-45) port	Video streaming and camera control, API included & adjustable
Micro USB 2.0 port	Mass storage Camera control and video streaming (optional on request only)
USB 2.0 port	Keyboard connection for in-house WIRIS camera control
Remote control system	WIRIS OS ensures real-time control of all camera functions during the flight
Remote control options	S.BUS protocol CAN bus for real-time control on DJI M600 and GPS geo-tagging RJ-45 for wireless uplink installation (video streaming and camera control)
Camera functions	<b>Measurement functions:</b> Hot/cold spot detection, center point <b>Temperature range settings:</b> Automatic, manual or span mode <b>Advanced alarm modes:</b> Above, below, between, above & below <b>Multi camera modes:</b> Full screen mode, IR only, VIS only, Picture in Picture <b>Periodic capturing:</b> From 1s, IR and Visual images simultaneously <b>Temperature units:</b> Celsius, Fahrenheit, Kelvin <b>Measurement corrections:</b> Emissivity correction <b>NUC control settings:</b> Automatic, manual, by time or triggered by operator
Micro HDMI video output	1 280 x 720 pixels (720p), Aspect ratio 16:9, Micro HDMI video output
Software & SDK	
Desktop software	Advanced thermal analysis and reporting SW for Windows
SDK	Windows and iOS with sample application, Linux
Power supply, weight & dimensions	
Input supply voltage	9 – 36 VDC, Coaxial 2 x 6.4 mm, outer shell - GND
Power dissipation (avg.)	12 W
Weight	< 430 grams
Dimensions (L x W x H)	83 mm x 85 mm x 68 mm
Mounting	2 x 1/4-20 UNC thread (1x bottom side, 1x upper side)
Housing material	Durable aluminium body for long-time measurement stability
Environmental	
Operating temperature range	-10 °C to +50 °C
Storage temperature range	-30 °C to +60 °C



# Contact information

WORKSWELL IN THE WORLD



## Our partner in Mexico



Tecnología Avanzada para Mantenimiento, S.A. de C.V.

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