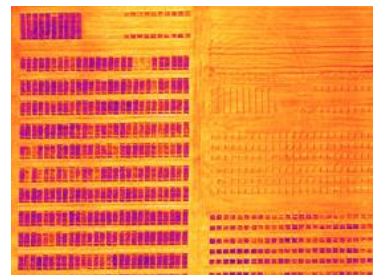
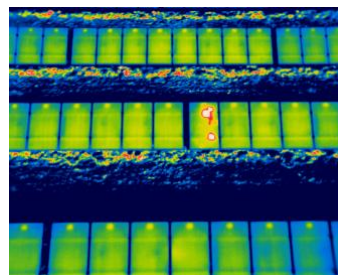
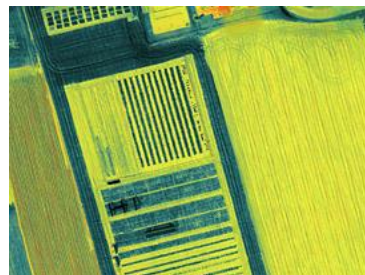
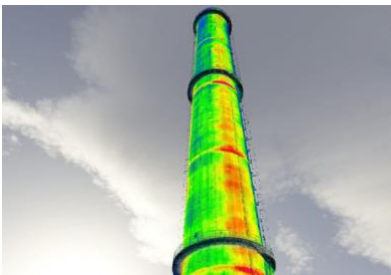


- 1266px**
THERMAL
RESOLUTION
- 1500°C**
TEMPERATURE
RANGE
- 10x**
OPTICAL
ZOOM
- 30mK**
SENSITIVITY
- DATA & STREAM
SDK**
- W**
WIRIS OS



WORKSWELL WIRIS PRO SC R&D DRONE THERMAL CAMERA



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Datasheet

Release date: 27th April 2021

Revision Number: 210427

WIRIS Pro SC technical specification

| WIRIS Pro SC Key features description | |
|---------------------------------------|--|
| Super Resolution Mode | WIRIS Pro SC takes Super Resolution IR Images in 1 266px |
| Operating onboard system | WIRIS OS for full real-time data streaming and control during the flight <ul style="list-style-type: none"> - operating system ensures the full access to all camera functions - easy camera control via S.Bus, CAN bus, MavLink, RJ-45 or Trigger - Data and Stream SDK via Ethernet included in the package |
| 10x Optical Antivibration zoom | Full HD 10x optical zoom camera with anti-vibration compensation |
| Thermal camera specification | |
| IR camera resolution | 640 x 512 pixels |
| IR Super Resolution Mode | 1 266 x 1 010 pixels (improvement of native resolution up to 1.3 Mpx) |
| FPA active sensor size | 1.088 x 0.8705 cm |
| Temperature ranges | -25 °C to +150 °C (-13 °F to 302 °F) -40 °C to +550 °C (-40 °F to 1 022 °F) optional temperature range +50 – 1 000 °C (122 °F to 1 832 °F) optional temperature range +400 – 1 500 °C (752 °F to 2 732 °F) |
| Temperature sensitivity | Standard 0.03 °C (30 mK) |
| Accuracy | ±2 % or ±2 °C (in temperature range -10 °C to +150°C and 0 °C to +550°C, after stabilization, climate chamber and black body testing for all products) |
| Frame rate | 30 Hz or < 9 Hz |
| Spectral range / detector | 7.5 – 13.5 μm / Uncooled VOx microbolometer |
| Available lenses | 18°, 32°, 45°, 69° (exchangeable lenses, all calibrated), visit FOV calculator <ul style="list-style-type: none"> - two lenses included in the standard package - all lenses calibrated including calibration certificate |
| Protective filter on lens | Filter protects the lens against external damage during the flight |
| IR Digital zoom | 1 – 12x continuous |
| Digital visual camera | |
| Resolution | 1 920 x 1 080 pixels (Full HD), 1/3" sensor, Auto white balance, Wide dynamic range, Backlight compensation, Exposure and Gamma control |
| Optical zoom | 10x optical zoom with vibration compensation |
| View angle | ultra zoom 6.9° - extra wide 58.2°, focal 33.0 mm - 3.3 mm |
| Noise reduction | Special 3D noise reduction function |
| Focus | Autofocus with Direct Focus Zoom synchronization |
| Memory and data recording | |
| Memory | 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 |
| Image and video formats | 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 for DJI M600 and A3 controllers MavLink CANbus & UART External GPS connectivity & External trigger |
| Ethernet (RJ-45) port | Video streaming and camera control, API included & adjustable |
| Micro USB 2.0 port | Mass storage |
| 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 Mavlink protocol CANbus & Command Control Protocol - UART 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 | Measurement functions: Hot/cold spot detection, center point Temperature range settings: Automatic, manual or span mode Advanced alarm modes: Above, below, between, above & below Multi camera modes: Full screen mode, IR only, VIS only, Picture in Picture Periodic capturing: From 1s, IR and Visual images simultaneously Temperature units: Celsius, Fahrenheit, Kelvin NUC control settings: 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 libraries | Stream SDK, Data SDK, CANbus & UART SDK |
| 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 (0.95 lb) |
| Dimensions (L x W x H) | 83 mm x 85 mm x 68 mm (3.26 in x 3.34 in x 2.67 in) |
| 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 | -15 °C to +50 °C (5 °F to 122 °F) |
| Storage temperature range | -30 °C to +60 °C (-22 °F to 140 °F) |



Contact information

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