Table S1: Technical specification of the drones and sensors used in the study.

| Type | Property | Parameters |
|---|---|---|
| **DJI Mavic Pro** | Weight | 734 g |
| | Diagonal size | 335 mm |
| | Max Speed | 40 mph (65 kph) in Sport mode without wind |
| | Max Flight Time | Approx. 21 minutes |
| | Above Sea Level | 5000 m |
| | Operating Temperature Range | 0° to 40° C |
| | Satellite Positioning Systems | GPS / GLONASS |
| | Sensor | 1/2.3″ (CMOS),<br>Effective pixels:12.35 M (Total pixels:12.71M) |
| **MicroKopter ARF XL** | Weight | 2570 g |
| | Size | 735 x 735 x 360 (WxLxH) |
| | Max Speed | 2 to 3 Beaufort |
| | Max Flight Time | 8 to 41 minutes, depending on payload, batteries, and weather conditions |
| | Above Sea Level | up to 5000 m |
| | Operating Temperature Range | -5 to +35° C, batteries lose power quicker in cold weather |
| | Satellite Positioning Systems | GPS / GLONASS |
| | Sensor | Universal mount |
| **FLIR DUO R dual-sensor imager** | Type | Radiometric thermal imager + 4K RGB sensor |
| | Dimensions | 41 x 59 x29.6 mm |
| | Weight | 84 g |
| | Spectral band (IR) | 750 to 1350 nm |
| | Thermal Imager | Uncooled Vox Microbolometer |
| | Thermal Measurement Accuracy | +/-5° C |
| | Thermal Sensor Resolution | 160 x 120 |
| | Visible Camera Resolution | 1920 x 1080 |
| | Focal length | 1.9 |
| **Tetracam μ-MCA Snap 6 camera** | Type | μMCA 6 Snap |
| | Dimensions | 115.6 x 80.3 x 68.1 mm |
| | Weight | 530 g |
| | Sensor | 6 identical global shutter sensors, interchangeable bandpass filters |
| | Sensitivity | 1.3 megapixel CMOS sensor (1280 ×1024 pixels) |
| | Pixel Resolution | ~450 nm to ~1000 nm |

| | |
|---|---|
| Focal length | 4.8 microns |
| Aperture | 9.6 mm fixed lens |
| Horizontal Angle of View | f/3.2 |
| Vertical Angle of View | 38.26◦ |
| Bands | B1: 550 nm (FWHM 20 nm) |
| | B2: 650 nm (FWHM 20 nm) |
| | B3: 700 nm (FWHM 20 nm) |
| | B4: 800 nm (FWHM 20 nm) |
| | B5: 900 nm (FWHM 20 nm) |
| | B6: 950 nm (FWHM 20 nm) |