

BIL. SEBUTHARGA/QUOTATION REF: UBD/Q/338/2022 - [G]

(SDS)

TITLE : TO SUPPLY, DELIVER, SET UP AND PROVIDE TRAINING OF A DRONE SYSTEM WITH INSTALLED
RGB AND MULTISPECTRAL CAMERAS, A SENSING SYSTEM, A GIMBAL, VIDEO TRANSMISSION,
BATTERIES, AND A CHARGING HUB FOR THE SCHOOL OF DIGITAL SCIENCE (SDS), UNIVERSITI BRUNEI
DARUSSALAM.

No.	Quantity	SPECIFICATIONS
1	One Complete System (1 log) with three (3) batteries	Drone System <u>Specifications: -</u> As per attached

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Specifications of the Drone System:

AIRCRAFT Unit - Net Weight (with propellers and RTK module): 951g

- Max Takeoff Weight: 1,050g
- Dimensions (Folded/Unfolded): Folded (without propellers): 223x96.3x122.2 mm
Unfolded (without propellers): 347.5x283x139.6 mm
- Diagonal Length: Diagonal: 380.1 mm
- Max Ascent Speed: 6 m/s (Normal Mode) 8 m/s (Sport Mode)
- Max Descent Speed: 6 m/s (Normal Mode) 6 m/s (Sport Mode)
- Max Flight Speed (at sea level, no wind): 15 m/s, (Normal Mode) Flying forward: 21 m/s, flying sideways: 20 m/s, flying backwards: 19 m/s (Sport mode)
- Max Wind Speed Resistance: 12 m/s
- Max Take-off Altitude Above Sea Level: 6000 m (without a payload)
- Max Flight Time (without wind): 43 minutes
- Max Hover Time (without wind): 37 minutes
- Max Flight Distance: 32 km
- Light Sensor: Built-in module

RGB CAMERA – Image Sensor: 4/3 CMOS, Effective Pixels: 20MP

- Lens: FOV: 84° Equivalent focal length: 24mm, Aperture: f/2.8 to f/11
- ISO Range: 100-6400
- Shutter speed: Electronic shutter: 8-1/8000s, Mechanical shutter: 8-1/2000s,
- Max Image Size: 5280x3956
- Photo Shooting Mode: Single shot: 20 MP, Timelapse: 20MP JPEG: 0.7/1/2/3/5/7/10/15/20/30/60 s, JPEG + RAW: 3/5/7/10/15/20/30/60 s, Panorama: 20 MP (original material)
- Video Resolution: H.264:4K: 3840x2160@30fps, FHD: 1920x1080@30fps
- Max Video Bitrate: 4K: 130Mbps, FHD: 70Mbps
- Supported File System: exFAT
- Image Format: JPEG/DNG (RAW)
- Video Format: MP4 (MPEG-4 AVC/H.264)

MULTISPECTRAL CAMERA - - Image Sensor: 1/2.8-inch CMOS, effective pixels: 5MP

- Lens: FOV: 73.91° (61.2° x 48.10°), Equivalent focal length: 25mm, Aperture: f/2.0
- Focus: Fixed Focus
- Multispectral Camera Band: Green (G): 560 ± 16 nm; Red (R): 650 ± 16 nm; Red Edge (RE): 730 ± 16 nm; Near infrared (NIR): 860 ± 26 nm;
- Gain Range: 1x-32x
- Shutter Speed: Electronic Shutter: 1/30~1/12800 s
- Max Image Size: 2592x1944
- Image Format: TIFF
- Video Format: MP4 (MPEG-4 AVC/H.264)
- Photo Shooting Mode: Single shot: 5 MP, Timelapse: 5 MP TIFF: 2/3/5/7/10/15/20/30/60 s
- Video Resolution: H.264 FHD: 1920 x 1080@30fps, Video content: NDVI/GNDVI/NDRE
- Max Video Bitrate: Stream: 60 Mbps

GIMBAL - Stabilization System: 3-axis mechanical gimbal (tilt, roll, pan)

- Mechanical Range: Tilt: -135° to 45°, Roll: -45° to 45°, Pan: -27° to 27°
- Controllable Range: Tilt: -90° to 35°, Pan: Uncontrollable

- Max Control Speed (tilt): 100°/s
- Angular Vibration Range: $\pm 0.007^\circ$

SENSING SYSTEM - Sensing System Type: Omnidirectional binocular vision system, with an infrared sensor at the bottom of the aircraft

VIDEO TRANSMISSION - Video Transmission System, Transmission Industry Edition

- Live View Quality: Remote Controller: 1080p/30fps
- Operating Band: 2.400-2.4835 GHz, 5.725-5.850 GHz

3 BATTERIES

- Capacity: 5000 mAh
- Standard Voltage: 15.4 V
- Max Charging Voltage: 17.6 V
- Battery Type: LiPo 4S

BATTERY CHARGER

- Input: 100V to 240V (AC), 50Hz to 60Hz, 2.5A
- Output Power: 100 Watts
- Output: Maximum output power of 100 Watts

CHARGING HUB

- Input: USB-C: 5V to 20V, 5.0A
- Output: Battery Port: 12V to 17.6V, 8.0A
- Rated Power: 100 Watts
- Charging Type: 3 batteries on charging rotation

RTK MODULE

- Dimensions: 50.2x40.2x66.2 mm
- Weight: 24 \pm 2 g
- Interface: USB-C
- Power: Approximately 1.2 watts