

Aircraft

- Weight: Approximately 80 g (Propellers and Battery Included)
- Dimensions: 98×92.5×41 mm
- Propeller: 3 inches
- Built-in Functions: Range Finder, Barometer, LED, Vision System, 2.4 GHz 802.11n Wi-Fi, 720p Live View
- Port: Micro USB Charging Port

Flight Performance

- Max Flight Distance: 100m
- Max Speed: 8m/s
- Max Flight Time: 13min
- Max Flight Height: 30m



Drone-1

KS/AI/DRONE-1

Battery

- Detachable Battery: 1.1Ah/3.8V

Camera

- Photo: 5MP (2592x1936)
- FOV: 82.6°
- Video: HD720P30
- Format: JPG(Photo); MP4(Video)
- EIS: Yes

Delivery period: **10 to 12 weeks.**



Designed & Manufactured by:
Kalpna Scientific Pvt.Ltd.
Konnagar, West Bengal-712235, India
Tel. 7679774297 website: www.kalpanascientific.com
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Camera

• Sensor

1/2.3-inch CMOS

Effective Pixels: 12 MP

• Lens

FOV: 150°

Equivalent Focal Length: 14.66 mm

Aperture: f/2.8

Focus Mode: FF

Focus Range: 0.6 m to ∞

• ISO Range

100-12800

• Shutter Speed

1/50-1/8000 s

• Still Photography Mode

Single Shot

• Max Image Size

3840×2160

• Photo Format

JPEG

• Video Resolution

4K: 3840×2160@50/60fps

FHD: 1920×

1080@50/60/100/120fps

• Video Format

MP4/MOV (MPEG-4

AVC/H.264, HEVC/H.265)

• Max Video Bitrate

120 Mbps

• Color Mode

Standard, D-Cineline

• EIS

Supported

• Distortion Correction

Supported

• Supported File System

exFAT (recommended)

FAT32



Gimbal

- Mechanical Range

Tilt: -65° to 70°

- Controllable Range

Tilt: -50° to 58°

- Stabilization

Single-axis (tilt), electronic roll axis

- Max Control Speed

$60^{\circ}/s$

- Angular Vibration Range

$\pm 0.01^{\circ}$ (Normal mode)

- Electronic Roll Axis

Supported (can stabilize footage when the aircraft is tilted at up to 10°)



Drone-2

KS/AI/DRONE-2

Aircraft

- Takeoff Weight

Approx. 795 g

- Dimensions

255×312×127 mm (with propellers)

178×232×127 mm (without propellers)

- Diagonal Distance

245 mm

- Max Ascent Speed

M mode: No limit

S mode: 15 m/s

N mode: 8 m/s

- Max Descent Speed

M mode: No limit

S mode: 10 m/s

N mode: 7 m/s

- Max Horizontal Speed

N mode: 15 m/s

S mode: 27 m/s

M mode: 39 m/s (27 m/s in Mainland China)

- Max Horizontal Acceleration

0-100 kph: 2 s (in windless conditions while flying in M mode)

- Max Flight Altitude

6000 m

- Max Flight Time

Approx. 20 mins (measured while flying at 40 kph in windless conditions)

- Max Hovering Time

Approx. 16 mins (measured when flying in windless conditions)

- Max Flight Distance

16.8 km (measured in windless conditions)

- Max Wind Speed Resistance

Level 6

- Operating Temperature

-10° to 40° C (14° to 104° F)



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Drone-2

KS/AI/DRONE-2

- Transmitter Power (EIRP)

2.400-2.4835 GHz

FCC: ≤ 31.5 dBm

CE: ≤ 20 dBm

SRRC: ≤ 20 dBm

MIC: ≤ 20 dBm

5.725-5.850 GHz

FCC: ≤ 31.5 dBm

CE: ≤ 14 dBm

SRRC: ≤ 25.5 dBm

- Antennas

Four antennas

- Global Navigation Satellite System

GPS + GLONASS + Galileo

- Hovering Accuracy Range

Vertical: ± 0.1 m (with vision positioning)

± 0.5 m (with GPS positioning)

Horizontal: ± 0.3 m (with vision positioning)

± 1.5 m (with GPS positioning)

- Supported SD Cards

microSD (up to 256 GB)

- Internal Storage

N/A



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Drone-2

Sensing System

- Forward (Binocular)

Precision Measurement Range: 0.5-18 m

Obstacle Sensing: Available in N mode only

FOV: Horizontal 56°, Vertical 71°

- Downward (Binocular + ToF)

ToF Effective Measurement Height: 10 m

Precise Hovering Range: 0.5-15 m

Vision Sensor Hovering Range 0.5-30 m

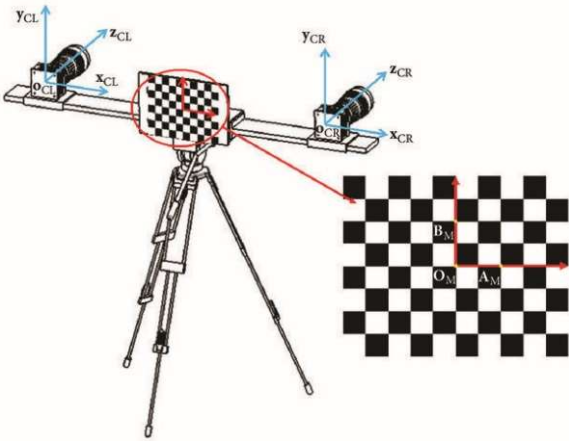
- Downward Auxiliary Light

Single LED

- Operating Environment

Surfaces with discernible patterns

Diffuse reflectivity > 20% (e.g. walls, trees, people) Adequate lighting (lux > 15)



Charger

- Input

100-240V, 50/60 Hz, 1.8 A

- Output

Battery Port:

25.2 V $\pm$ 0.1 V

3.57 A $\pm$ 0.1 A (high current)

1 A $\pm$ 0.2 A (low current)

USB Port: 5V/2A ($\times$ 2)

- Rated Power

86 W



Drone-2

KS/AI/DRONE-2

Intelligent Flight Battery

- Battery Capacity
2000 mAh
- Nominal Voltage
22.2 V
- Max Charging Voltage
25.2 V
- Type
LiPo 6S
- Energy
44.4 Wh@0.5C
- Discharge Rate
Typical: 7C
- Weight
Approx. 295 g
- Charging Temperature
5° to 40° C (41° to 104° F)
- Max Charging Power
86 W

Video Transmission

- Operating Frequency
2.400-2.4835 GHz
5.725-5.850 GHz
- Communication Bandwidth
Max 40 MHz
- Live View Mode
Low-Latency Mode: 810p/100fps, with latency down to 30 ms*
High-Quality Mode: 810p/60fps, with latency down to 40 ms*
* The 150° FOV is only available when shooting at 50 or 100 fps. For other frame rates, the FOV will be 142°.

- Max Video Bitrate
50 Mbps
- Max Transmission Distance
10 km (FCC), 6 km (CE), 6 km (SRRC), 6 km (MIC)
- Audio Transmission
Supported



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Drone-2

KS/AI/DRONE-2

Goggles V2

- Weight

Approx. 420 g (headband and antennas included)

- Dimensions

184×122×110 mm (antennas excluded) 202×126×110 mm (antennas included)

- Screen Size

2-inches (×2)

- Screen Refresh Rate

144 Hz

- Operating Frequency

2.400-2.4835 GHz 5.725-5.850 GHz

- Transmitter Power (EIRP)

2.400-2.4835 GHz

FCC: ≤ 28.5 dBm

CE: ≤ 20 dBm

SRRC: ≤ 20 dBm

MIC: ≤ 20 dBm

5.725-5.850 GHz

FCC: ≤ 31.5 dBm

CE: ≤ 14 dBm

SRRC: ≤ 19 dBm



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Drone-2

KS/AI/DRONE-2

- Communication Bandwidth

Max 40 MHz

- Live View Modes

Low-Latency Mode: 810p/100fps, with latency down to 30 ms*

High-Quality Mode: 810p/60fps, with latency down to 40 ms*

* The 150° FOV is only available when shooting at 50 or 100 fps. For other frame rates, the FOV will be 142°.

- Max Video Bitrate

50 Mbps

- Max Transmission Distance

10 km (FCC), 6 km (CE), 6 km (SRRC), 6 km (MIC)

- Video Format

MOV (Codec: H.264)

- Audio Transmission

Supported

- Supported Video Playback Format

MP4, MOV, MKV (H.264; audio formats: AAC-LC, AAC-HE, AC-3, MP3)

- Operating Temperature

0° to 40° C (32° to 104° F)

- Power Input

Dedicated Goggles batteries

- FOV

30° to 54°, adjustable Image size: 50-100%

- Interpupillary Distance Range

58-70 mm

- Supported SD Cards

microSD (up to 256 GB)



Goggles V2 Battery

- Capacity
1800 mAh
- Voltage
Max 9 V
- Type
LiPo 2S
- Energy
18 Wh
- Charging Temperature
0° to 45° C (32° to 113° F)
- Max Charging Power
10 W
- Operating Time
Approx. 110 mins (using screen brightness of level 6 and tested in a 25°C/77°F environment)



Drone-2

KS/AI/DRONE-2

Goggles Integra

- Weight

Approx. 410 g (battery included)

- Dimensions

With antennas folded: 170×104×75 mm (L×W×H)

With antennas unfolded: 205×104×104 mm (L×W×H)

- Screen Size (single screen)

0.49 inch

- Resolution (single screen)

1920×1080

- Screen Refresh Rate

Up to 100 Hz

- Interpupillary Distance Range

56-72 mm

- FOV (single screen)

44°

- Video Format

MOV

- Supported Video Playback Format

MP4, MOV (codec: H.264, H.265; audio format: AAC, PCM)

- Operating Temperature

-10° to 40° C (14° to 104° F)

- Power Input

Built-in battery

- Supported SD Cards

microSD (up to 512 GB)



Drone-2

KS/AI/DRONE-2

- Operating Frequency

2.4000-2.4835 GHz

5.725-5.850 GHz

- Transmitter Power (EIRP)

2.4000-2.4835 GHz:

<30 dBm (FCC)

<20 dBm (CE/SRRC/MIC)

5.725-5.850 GHz:

<30 dBm (FCC)

<23 dBm (SRRC)

<14 dBm (CE/KC)

- Live View Mode

1080p/100fps, with latency down to 30 ms

1080p/60fps, with latency down to 40 ms

Measured in an open outdoor environment without interference. Actual data varies depending on aircraft model.

- Max Transmission Distance

10 km (FCC) 6 km (CE) 6 km (SRRC)

- Max Video Bitrate

50 Mbps Measured in an open outdoor environment without interference. Actual data varies depending on operating environment.

- Weight

Approx. 185 g (headband included)

- Dimensions

120×51×71 mm (L×W×H)



Drone-2

KS/AI/DRONE-2

- Capacity

2450 mAh

- Voltage

5.6-8.4 V

- Type

Li-ion

- Chemical System

LiNiMnCoO₂

- Energy

17.64 Wh

- Charging Temperature

5° to 45° C (41° to 113° F)

- Max Charging Power

15 W (charging when powered off)

- Operating Time

Approx. 2 hours



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Remote Controller 2

- Operating Frequency

2.400-2.4835 GHz 5.725-5.850 GHz

- Transmitter Power (EIRP)

2.400-2.4835 GHz

FCC: ≤ 28.5 dBm

CE: ≤ 20 dBm

SRRC: ≤ 20 dBm

MIC: ≤ 20 dBm

5.725-5.850 GHz

FCC: ≤ 31.5 dBm

CE: ≤ 14 dBm

SRRC: ≤ 19 dBm

- Max Transmission Distance

10 km (FCC), 6 km (CE), 6 km (SRRC), 6 km (MIC)

- dimensions

190×140×51 mm

- Weight

346 g

- Operating Time

Approx. 9 hours.

- Charging Time

2.5 hours



Memory Card

- Supported SD Cards

microSD card The aircraft and Goggles V2 support up to 256GB capacity, whereas Goggles Integra supports up to 512GB capacity. It is recommended to use a UHS-I Speed Grade 3 microSD card.

- Recommended microSD Cards

SanDisk High Endurance U3 V30 64GB microSDXC

SanDisk Extreme PRO U3 V30 A2 64GB microSDXC

SanDisk Extreme U3 V30 A2 64GB microSDXC

SanDisk Extreme U3 V30 A2 128GB microSDXC

SanDisk Extreme U3 V30 A2 256GB microSDXC

Lexar 667x V30 128GB microSDXC

Lexar High Endurance 128GB U3 V30 microSDXC

Samsung EVO U3 (Yellow) 64GB microSDXC

Samsung EVO Plus U3 (Red) 64GB microSDXC

Samsung EVO Plus U3 256GB microSDXC

Netac 256GB U3 A1 microSDXC



Delivery period: **10 to 12 weeks.**