DJI AIR2S REVIEW

PREPARED BY:

PAYKARS-A UNIT OF SUMITRA ENTERPRISES

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INTRODUCTION

THE DJI AIR 2S IS A SMALL DRONE WITH A POWERFUL 1200 MAH BATTERY AND A 1" SENSOR. THE DJI AIR 2S USES A LARGE 1-INCH SENSOR THAT'S EQUALLY GOOD AT PHOTOGRAPHY AND VIDEO: IT CAN SHOOT 5.4K AT 30 FRAMES PER SECOND AND EVEN 4K AT 60 FRAMES PER SECOND. WITH 20 MEGAPIXELS, THE BRILLIANT F/2.8 SENSOR PRODUCES DETAILED IMAGES.

WITH O3, A ROBUST AND RELIABLE TRANSMISSION TECHNOLOGY, THE RANGE CAN EXCEED 5 MILES. IF YOU LOSE CONTROL, DON'T WORRY; THE DJI AIR 2S USES APAS 4.0, AN ULTRA-EFFICIENT OBSTACLE AVOIDANCE SYSTEM. THIS DRONE IS AVAILABLE WITH (FLY MORE COMBO) OR WITHOUT ACCESSORIES.

THE DJI AIR 2S IS NO LONGER NEW, BUT IT REMAINS ONE OF THE BEST ALL-ROUND DRONES YOU CAN BUY. BY COMBINING THE COMPACT DESIGN OF THE DJI MAVIC AIR 2 AND THE MAVIC 2 PRO'S IMAGE QUALITY, IT'S A GREAT CHOICE FOR ANYONE LOOKING TO SHOOT HIGH-QUALITY AERIAL VIDEOS AND PHOTOS FROM A COMPACT DRONE. THE NEWER MINI 3 PRO IS SMALLER STILL, BUT THE AIR 2S HAS A LARGER 20MP 1-INCH SENSOR AND SQUEEZES THAT INTO A FOLDING DESIGN THAT'S STILL ONLY 595G. WHILE THE AIR 2S IS SLIGHTLY PRICIER THAN ITS PREDECESSOR, IT'S WELL WORTH THE EXTRA COST.

FEATURES

- 20MP, 1"-TYPE CMOS SENSOR
- 22MM (EQUIV.) LENS WITH 88° FOV AND FIXED F2.8 APERTURE
- 5.4K/30P, 4K/60P, AND 1080P/120P VIDEO
- H.264 AND H.265 RECORDING AT 150 MBPS
- 10-BIT D-LOG AND HDR VIDEO CAPTURE
- RAW AND JPEG IMAGE CAPTURE
- OCUSYNC 3.0 (O3) IMAGE TRANSMISSION (12 KM RANGE)
- FOUR-WAY OBSTACLE AVOIDANCE
- APAS 4.0
- 'MASTERSHOTS' CINEMATIC CAPTURE MODE
- 31-MINUTE FLIGHT TIME
- 595G (1.3 POUNDS) TOTAL WEIGHT

PROS

- 1-inch 20 MP sensor

- Great image quality

- Small and lightweight

CONS

- Controller isn't foldable

- Image edges slightly soft

- No adjustable aperture

WHAT'S IN THE BOX?

- Aircraft
- DJI RC-N1 Remote Controller
- Intelligent Flight Battery
- Battery
- AC Power Cable Charger
- Low-Noise Propellers (Pair)
- Gimbal Protector
- Type-C Cable
- DJI RC-N1 RC Cable (USB Type-C Connector)
- DJI RC-N1 RC Cable (Lightning Connector)
- DJI RC-N1 RC Cable (Standard Micro-USB Connector)
- Spare DJI RC-N1 Control Sticks (Pair)

DJI Air 2S review: design and controller

The Air 2S weights just 595g
It has a compact, foldable design
Also has the same controller as the Mavic Air 2

the Air 2S looks extremely similar to the Mavic Air 2, with just a few subtle differences. As you'd expect, it features the folding design that Mavic drones are known for (even if DJI has now dropped the Mavic name). The front arms swing out, while the rear arms rotate down and out for flight and help keep the drone highly transportable.

The Air 2S is small at just 180×97×80mm when folded, and 183×253×77mm when unfolded. It's barely any different to its predecessor, but that puts the folded length at 4mm shorter than the Mavic Air 2. And at just 595g, the Air 2S is just over half the weight of the DJI Mavic 2 Pro and just 25g heavier than the Air 2, which is very impressive considering its larger camera.

The controller is the same as the one you get with the Mavic Air 2. Unlike the Mavic 2 Pro's controller, though, it isn't foldable and is larger with a weight of 393g. While it connects to the aircraft faster than the Mavic 2 controller it, unfortunately, doesn't offer a simple screen showing basic flight and camera information.
Without the folding arms to support a phone, the phone attaches to the top of the controller using a telescopic grip, and the control sticks are stored in rubberized sections at the bottom of the controller. It's a comfortable controller to use, but it's a shame it's larger and heavier than the Mavic 2 Pro and Mavic 2 Zoom's controller.

DJI Air 2S review: features and flight

Upgraded safety features
A new MasterShots flight mode
Real-world flight times around 20 minutes

Flying the DJI Air 2S is extremely easy, and indeed safe, thanks to the flight features that the Mavic series have become well-known for. Whether you're an absolute beginner or a seasoned expert, the flight modes, automated video modes, collision avoidance and manual flight control provide as little or as much assistance as you need.

The Air 2S features all of the camera functions you'd expect including Single Shot, Timed Photo, AEB (Auto Exposure Bracketing), HDR, Panoramas and Hyperlapses. Plus, there's a new SmartPhoto mode that records full-resolution photos using scene analysis and deep learning to automatically choose the best of three options – HDR, Hyperlight and Scene Recognition – for your photo.

This is great for photography beginners who want to capture a high-quality image with minimum effort, but not so much for more advanced users. Still, if you're capturing stills in raw+JPEG mode, the JPEG will be processed as a SmartPhoto while the Raw file will be unprocessed, so you can edit it yourself if you wish.

The Air 2S also has an upgraded FocusTrack mode, which includes several programmed modes where you draw a box around the subject and the drone will track it. Plus, there's Spotlight 2.0, where the drone's flight is controlled by the pilot, while the camera locks and tracks the subject in the frame.

The new MasterShots mode sounds exciting on paper and it does produce an interesting result. But it's perhaps more of a showcase of all the QuickShots in a single video, rather than something to be used regularly. You'll likely try it a few times, then move onto QuickShots or manual flight control to capture more unique camera movements.

DJI Air 2S review: video and image quality

1-inch 20MP sensor
Shoots up to 5.4 K video
Clean images even at high ISO settings

It features a 20MP 1-inch sensor, with the camera providing an 88-degree field of view or a full-frame equivalent focal length of 22mm. Like the Mavic Air 2, the Air 2S also unfortunately has a fixed f/2.8 aperture (more on that later) with a focus range of 60cm to infinity.

Still images appear to be slightly softer at the edges than those from the Mavic 2 Pro, even when the Pro's aperture is set to f/2.8. But while noticeable in a side-by-side comparison, this drop in sharpness is extremely minimal and is no reason to choose one drone over the other. In video, however, the image is sharp across the frame.

The most significant improvement in image quality over the Mavic 2 Pro has to be the high ISO noise handling of the Air 2S. Images shot at ISO 3200 are surprisingly clean for a drone, even one with a 1-inch sensor. It's only at ISO 6400 where noise becomes more noticeable.

In a nutshell, ISO handling is significantly better than the Mavic 2 Pro, which will make it possible to shoot at higher ISO settings, when necessary in low-light conditions, without having to deal with prominent chroma and luminance noise. In fact, the Air 2S blows the Mavic 2 Pro out of the water in this respect.

In terms of video, it's possible to shoot 5.4K at up to 30fps, 4K at up to 60fps and Full HD at up to 120fps, so slow-motion video is available. There's also the 8x digital zoom, which starts at 4x with 4K at 30fps video and goes up to 8x with 1080p at 30fps. Zoom recording isn't available while shooting 10-bit videos or 120fps videos though, sadly.

Digital zooms are traditionally extremely poor because they reduce image resolution by cropping into images to achieve the zoom. But here it's achieved less destructively, because the Air 2S's camera can record at up to 5.4K, and explains why there's a sliding scale of zoom available at different video resolutions. Either way, 2x zoom is as far as you'd ever want to go at any resolution.

You can record video in H.264 or H.265 formats, and can also choose from three video color profiles – these are Normal (8-bit), D-Log (10-bit) or HLG (10-bit). This provides the perfect range of options for both professionals and enthusiasts. Pros can fit their aerial footage into a raw video workflow with color grading, while hobbyists can use Standard more to get footage that looks great straight out-of-camera without any need for raw editing.

specification

Aircraft
- Takeoff Weight
- 595 g
- Dimensions
- Folded:
- 180×97×77 mm (length×width×height)
- Unfolded:
- 183×253×77 mm (length×width×height)
- Diagonal Length
- 302 mm
- Max Ascent Speed
- 6 m/s (S Mode)
- 6 m/s (N Mode)
- Max Descent Speed
- 6 m/s (S Mode)
- 6 m/s (N Mode)
- Max Service Ceiling Above Sea Level
- 5000 m
- Max Flight Time (no wind)
- 31 minutes
- Max Hovering Time (no wind)
- 30 minutes
- Max Flight Distance (no wind)
- 18.5 km
- Max Flight Speed (near sea level, no wind)
- 19 m/s (S Mode)
- 15 m/s (N Mode)
- 5 m/s (C Mode)
- Max Wind Speed Resistance
- 10.7 m/s
- Max Pitch Angle
- 35° (S Mode)
- Front: 30°, Back: 20°, Left: 35°, Right: 35° (N Mode)

- Max Angular Velocity
- 250°/s (S Mode)
- 90°/s (N Mode)
- 60°/s (C Mode)
- Operating Temperature Range
- 0° to 40°C (32° to 104°F)
- Operating Frequency
- 2.4 GHz
- 5.8 GHz
- Transmission Power (EIRP)
- 2.4 GHz:
- FCC: ≤30 dBm
- CE: ≤20 dBm
- SRRC: ≤20 dBm
- MIC: ≤20 dBm
- 5.8 GHz:
- FCC: ≤30 dBm
- CE: ≤14 dBm
- SRRC: ≤29 dBm
- Hovering Accuracy Range
- Vertical:
- ± 0.1 m (with vision positioning)
- ± 0.5 m (with GNSS positioning)
- Horizontal:
- ± 0.1 m (with vision positioning)
- ± 1.5 m (with GNSS positioning)
- Propellers
- Quick release, low noise, folding
- Aircraft Arms
- Foldable
- GNSS
- GPS+GLONASS+GALILEO
- Compass
- Single Compass
- IMU
- Single IMU
- Internal Storage
- 8 GB

specification

Intelligent Flight Battery

- Capacity[1]
- 3750 mAh / 3500 mAh
- Voltage
- 11.04 V / 11.55 V
- Max Charging Voltage
- 12.6 V / 13.2 V
- Battery Type
- LiPo 3S
- Energy
- 41.4 Wh / 40.42 Wh
- Weight
- 198 g
- Charging Temperature Range
- 5° to 40°C (41° to 104°F)
- Max Charging Power
- 38 W
- Built-in Battery
- N/A

Gimbal

- Stabilization
- 3-axis (tilt, roll, pan)
- Mechanical Range
- Tilt: -135° to 45°
- Roll: -45° to 45°
- Pan: -100° to 100°
- Pan Axis
- Pan: -80° to 80°
- Controllable Range
- Tilt: -90° to 0°(default); -90° to 24° (extended)
- Max Controllable Speed (tilt)
- 100°/s
- Angular Vibration Range
- ±0.01°

specification

Camera

- Sensor
- 1" CMOS
- Effective Pixels: 20 MP; 2.4μm Pixel Size
- Lens
- FOV: 88°
- 35 mm Format Equivalent: 22 mm
- Aperture: f/2.8
- Shooting Range: 0.6 m to ∞
- ISO Range
- Video:
- 100–3200 (Auto)
- 100–6400 (Manual)
- 10-Bit Dlog-M Video:
- 100–800 (Auto)
- 100–1600 (Manual)
- Photo:
- 100–3200 (Auto)
- 100–12800 (Manual)
- Still Image Size
- 20 MP
- 5472×3648 (3:2)
- 5472×3078 (16:9)
- Still Photography Modes
- Single shot: 20 MP
- Burst shooting: 20 MP (continuous burst)
- Auto Exposure Bracketing (AEB): 20 MP, 3/5 bracketed frames at 0.7 EV bias
- Timed: 20 MP, 2/3/5/7/10/15/20/30/60s
- SmartPhoto (including HDR and HyperLight): 20 MP
- HDR Panorama[2]:
- Vertical (3×1): 3328×8000 (width×height)
- Wide-angle (3×3): 8000×6144 (width×height)
- 180° (3×7): 8192×3500 (width×height)
- Sphere (3×8+1): 8192×4096 (width×height)
- JPEG/DNG (RAW)

- Video Resolution
- 5.4K: 5472×3078 @ 24/25/30 fps
- 4K Ultra HD: 3840×2160 @ 24/25/30/48/50/60 fps
- 2.7K: 2688×1512 @ 24/25/30/48/50/60 fps
- FHD: 1920×1080 @ 24/25/30/48/50/60/120 fps
- MP4/MOV (H.264/MPEG-4 AVC, H.265/HEVC)
- Max Video Bitrate
- 150 Mbps
- Supported File System
- FAT32/exFAT
- Supports a microSD card with a capacity of up to 256 GB.
- Digital Zoom
- Zoom recording is not available while recording 10-bit videos and 120fps videos.
- 4K/30fps:
- 4x;
- 2.7K/60fps:
- 4x;
- 2.7K/30fps:
- 6x;
- 1080p/60fps:
- 6x;
- 1080p/30fps:
- 8x

specification

Sensing System

- Forward
- Precision Measurement Range: 0.38–23.8 m
- Effective Sensing Speed: ≤15 m/s
- Field of View (FOV): 72° (horizontal), 58° (vertical)
- Backward
- Precision Measurement Range: 0.37–23.4 m
- Effective Sensing Speed: ≤12 m/s
- Field of View (FOV): 57° (horizontal), 44° (vertical)
- Downward
- ToF Measurement Range: 0.1–8 m
- Hovering Range: 0.5–30 m
- Vision Sensor Hovering Range: 0.5–60 m
- Left/Right
- N/A
- Upward
- Precision Measurement Range: 0.34–28.6 m
- Field of View (FOV): 63° (horizontal), 78° (vertical)
- Downward Auxiliary Light
- Single LED

Video Transmission

- Transmission System
- O3
- 2.4 GHz/5.8 GHz Auto-Switching (compatible with OcuSync 2.0)
- 4-antenna 2T4R
- Max Transmission Distance
- 12 km (FCC), 8 km (CE)
- 8 km (SRRC), 8 km (MIC)
- Live View Quality/Latency
- Drone + Remote Controller: 1080p/30fps 12 Mbps 120 ms
- Drone + DJI Smart Controller: 1080p/30fps 12Mbps 130 ms
- Max Transmission Bitrate
- 44 Mbps (download bitrate)
- 16 Mbps (live video bitrate)
- Operating Frequency
- 2.4 GHz
- 5.8 GHz

specification

DJI RC-N1 Remote Controller
- Multiple Controllers
- N/A
- DJI Smart Controller
- Supported
- Remote Controller Transmission System
- When used with different aircraft hardware configurations, DJI RC-N1 Remote Controllers will automatically select the corresponding firmware version for updating and support the following transmission technologies enabled by the hardware performance of the linked aircraft models:
- a. DJI Mini 2/ DJI Mavic Air 2: O2
- b. DJI Air 2S: O3
- c. DJI Mavic 3: O3+
- Battery Life
- 6 hours (4 hours when charging a mobile device)
- Supported Mobile Device Connectors
- Lightning, Micro USB, USB-C
- Max Supported Mobile Device Size
- 180×86×10 mm (length×width×height)
- Operating Temperature
- 0° to 40°C (32° to 104°F)
- Transmitter Power (EIRP)
- 2.400-2.4835 GHz:
- <26 dBm (FCC), <20 dBm (CE/SRRC/MIC)
- 5.725-5.850 GHz:
- <26 dBm (FCC), <23 dBm (SRRC), <14 dBm (CE)

Charger
- Charging Input
- 100-240V, 50/60 Hz, 1.3 A
- Charging Output
- Charging Port: 13.2 V⎓2.82 A
- USB Port: 5 V⎓2 A
- Voltage
- 13.2 V
- Rated Power
- 38 W

QUESTIONS AND ANSWERS

<u>What are the main differences between DJI Air 2S and Mavic Air 2?</u>
Camera performance, intelligent features, obstacle sensing system, and transmission system have all improved significantly. Upgrades include a 1-inch CMOS sensor, four-antenna low-latency transmission, APAS 4.0, added upward dual vision sensors, and MasterShots.

<u>What app do I use to fly DJI Air 2S?</u>
The DJI Fly app.

<u>Is DJI Air 2S compatible with the remote controller of Mavic 2 or Mavic Air 2?</u>
DJI Air 2S is compatible with the Mavic Air 2 remote controller.

<u>Is the DJI Smart Controller compatible with DJI Air 2S?</u>
Yes.

<u>How do I mount the propellers on the motors correctly?</u>
Attach the propellers with the orange markings to the motors with orange markings. Next, attach the propellers without markings to the motors without markings. The DJI Fly app will display a reminder before flight.

QUESTIONS AND ANSWERS

Which microSD card should I use?
UHS-I Speed Grade 3 micro SD cards are recommended:
SanDisk Extreme PRO 64GB V30 A2 microSDXC
SanDisk High Endurance 64GB V30 microSDXC
SanDisk Extreme 64GB V30 A2 microSDXC
SanDisk Extreme 128GB V30 A2 microSDXC
SanDisk Extreme 256GB V30 A2 microSDXC
Lexar Lexar 667x 64GB V30 A2 microSDXC
Lexar High-Endurance 64GB V30 microSDXC
Samsung EVO 64GB microSDXC
Samsung EVO Plus 64GB microSDXC
Samsung EVO Plus 256GB microSDXC
Kingston 128GB V30 microSDXC
Netac 256GB A1 microSDXC

Is DJI Air 2S waterproof?
No.

How do I put on the ND filters?
Carefully hold the camera to prevent damage, and slowly rotate the filter to attach or detach it. Make sure the ND filter is mounted securely to avoid accidental detachment during flight.

Does DJI Air 2S support the DJI FPV Goggles series or the DJI Motion Controller?
DJI Air 2S does not support the use of the DJI FPV Goggles series or the DJI Motion Controller, and there is currently no plan to add support for these devices. For further information, please pay attention to future firmware updates.

QUESTIONS AND ANSWERS

<u>Does DJI Air 2S feature an auxiliary LED light?</u>
Yes. DJI Air 2S has an auxiliary LED light for improved vision and safety in low-light conditions, similar to the Mavic 2 series.

<u>Does DJI Air 2S provide omnidirectional obstacle sensing?</u>
No. DJI Air 2S supports obstacle sensing in four directions: upward, downward, forward, and backward.

<u>What is the difference between APAS 4.0 and APAS 3.0?</u>
APAS 4.0 has further improved its map-building algorithms with a newly added upward sensor to deliver smoother and more reliable obstacle avoidance and bypassing performance.

<u>What is the difference between ActiveTrack 4.0 and ActiveTrack 3.0?</u>
ActiveTrack 4.0 features more advanced flight route planning algorithms that plan a route in advance when an obstacle is detected, resulting in an optimal tracking experience.

QUESTIONS AND ANSWERS

<u>Does DJI RC-N1 Remote Controller support HDMI output?</u>
No.

<u>What video transmission technology does DJI RC-N1 Remote Controller use?</u>
When used with different aircraft hardware, the RC-N1 Remote Controller can achieve the following video transmission specifications:
DJI Mini 2/DJI Mavic Air 2: O2
DJI Air 2S: O3
DJI Mavic 3: O3+

<u>Compared with OcuSync 2.0, how has the O3 video transmission been upgraded?</u>
The O3 video transmission uses an all-new video transmission solution. Dual antennas have been upgraded to four antennas, bringing up to 12km FHD video transmission (unobstructed, free of interference, and FCC compliant) and stronger anti-interference capability. Video transmission in cities and other complex environments has become more reliable.

<u>Compared with the DJI RC-N1 Remote Controller, what major upgrades does DJI RC have?</u>
1. With a built-in screen, DJI RC can directly link with your drone after powering on without connecting to a smartphone, allowing you to start shooting right away.
2. DJI RC adopts built-in antennas that offer excellent performance.
3. DJI RC adopts all-new dual-spring control sticks for a smoother control experience.
4. DJI RC supports more customizable buttons and dials for more intuitive operation.

QUESTIONS AND ANSWERS

How can I update the firmware of DJI RC?
You can update the firmware of your DJI RC via the DJI Fly app.

Does DJI RC have customizable buttons?
Yes. The C1/C2 button and right dial can be customized in the DJI Fly app for more intuitive control of the drone.

How can I charge DJI RC at the fastest speed?
DJI RC supports a charging power of 15 W (5 V/3 A), and the highest charging efficiency can be achieved with a charger that supports PD protocol. It takes approximately 1.5 hours to fully charge the battery.

What video transmission technology does DJI RC use?
DJI RC adopts OcuSync HD video transmission technology. When connected to other compatible drone models, DJI RC will switch to the corresponding video transmission technology.
With different aircraft hardware, the corresponding video transmission specifications are as follows:
DJI Mini 3 Pro: O3
DJI Air 2S: O3
DJI Mavic 3: O3+
DJI Mavic 3 Cine: O3+

QUESTIONS AND ANSWERS

<u>What photo resolutions and formats are available?</u>
Photos can be taken in 20 MP, and JPG or RAW formats are also available.

<u>What is the highest video resolution supported by DJI Air 2S?</u>
DJI Air 2S can shoot videos with resolution up to 5.4K/30fps. It also supports 4K/60fps videos.

<u>Can I shoot in D-Log M or a different flat color profile?</u>
DJI Air 2S can record 10-bit D-Log M videos in H.265 coding format, convenient for color adjustment in post-editing.

<u>What are the advantages of the 1-inch sensor camera on DJI Air 2S?</u>
DJI Air 2S features a 1-inch CMOS sensor with 2.4µm-sized pixels, offering exceptional low-light performance. With outstanding exposure and dynamic range, it can capture up to 12.6 stops in RAW. Additionally, 5.4K resolution offers a high level of detail.

<u>What are the advantages of the H.265 video codec?</u>
The HEVC (H.265) is a more modern video codec than H.264; it retains more details and uses less storage space.

<u>Can I control the camera settings manually?</u>
Yes. You can adjust camera parameters like ISO and shutter speed in M mode.

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