# Maintenance

Do not disassemble Ronin 4D. Otherwise, the warranty will be voided.

Protect the Ronin 4D from dust and water. Make sure to operate in a dust-free environment if attaching or detaching the X9 Gimbal and Camera, X9 Focus Motor, LiDAR range finder, lens mount, lens, battery, storage media, or hand grips. The lens or ports may be harmed and usage may be affected if they come into contact with sand or dust.
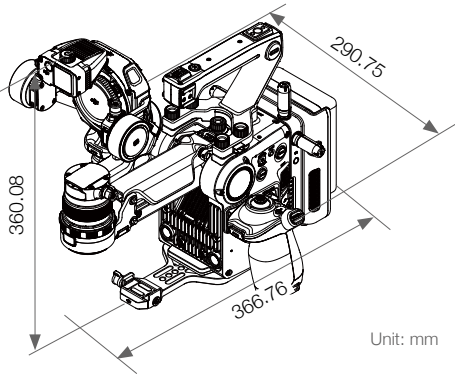
Note that the X9 Gimbal and Camera and LiDAR range finder do not support hot swapping. The X9 Focus Motor, DJI PROSSD 1TB, main monitor, hand grips, lens, lens mount, and top handle support hot swapping.

Keep the sensor or lens clean, clean Ronin 4D with a soft dry cloth, and do not spray Ronin 4D with any cleaning liquids.

When not in use, detach the lens or hand grips, and fold the Ronin 4D correctly before placing into the storage case. Make sure Ronin 4D is not squeezed in any way during storage or transportation.
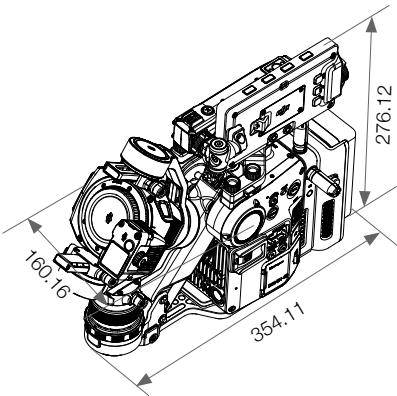
Unit: mm

Folded in Transportation   Operating Status

Specifications

General	
Main Body Dimensions (length×width×height)	235×115×160 mm
Overall Dimensions (length×width×height)	309×290×277 mm (Measured when 6K Combo is fully set up with the main monitor attached and the Z-Axis off)
Gimbal Weight	Approx. 1.04 kg
Main Body Weight	Approx. 1.45 kg
Overall Weight	Approx. 4.67 kg (After installing all modules in the combo, excluding lens and storage media)
Max Operating Time	Approx. 150 min (Measured with a fully charged TB50 Battery and Ronin 4D in a still state with the gimbal balanced, the Z-Axis off, and continuously recording in ProRes RAW. Gimbal movements or use of the Z-axis will reduce operating time.)
Intelligent Features	ActiveTrack Pro, Autofocus (Supports human face/body recognition and framing of any subject)
Storage Temperature	-20° to 60° C (-4° to 140° F)
Operating Temperature	-10° to 40° C (14° to 104° F)
Camera	
Sensor Size	35mm full-frame CMOS image sensor
Base Lens Mount	DX Mount, and support for other mount units
Supported Lens Mounts	DL mount (included), L mount, M mount, E mount (third-party), PL mount (third-party)
DL Lens	DJI DL 18 mm F2.8 ASPH DJI DL 24 mm F2.8 LS ASPH DJI DL 35 mm F2.8 LS ASPH DJI DL 50 mm F2.8 LS ASPH DJI DL PZ 17-28 mm T3.0 ASPH
Dynamic Range	14+ stops
White Balance	Manual 2,000-11,000 Kelvin and tint adjustment, supports AWB
Gamma	D-Log, Rec.709, HLG
EI Range	X9-8K: EI 200 to EI 6400 With Dynamic Range Expansion off: Dual native ISO 320/1600 With Dynamic Range Expansion on: Dual native ISO 800/4000 X9-6K: EI 200-12800, dual native ISO 800/5000
Shutter Speed	Electronic Rolling Shutter 1/24s-1/8000s
ND	Built-in 9-stop ND filters: Clear, 2 (0.3), 4 (0.6), 8 (0.9), 16 (1.2), 32 (1.5), 64 (1.8), 128 (2.1), 256 (2.4), 512 (2.7)
Focus Control	Autofocus, Manual Focus, Automated Manual Focus (Autofocus on manual lenses requires DJI Zenmuse X9 Focus Motor)
Supported File System	exFAT
Recording Format	Apple ProRes RAW HQ/Apple ProRes RAW Apple ProRes 4444 XQ Apple ProRes 422 HQ/Apple ProRes 422 LT H.264 (4:2:0 10-bit)
Storage Media	DJI PROSSD 1TB, CFexpress 2.0 Type B, USB-C SSD

DJI PROSSD 1TB Recording Format	No restriction on recording format
CFexpress 2.0 Type B Recording Format (Use recommended CFexpress cards)	ProRes 422 HQ/LT: 6K: 23.976/24/25/29.97/30fps C4K: 23.976/24/25/29.97/30/48/50/59.94/60/72/96/100/120fps 2K: 23.976/24/25/29.97/30/48/50/59.94/60/72/96/100/120fps H.264: C4K: 23.976/24/25/29.97/30/48/50/59.94/60/72/96/100/120fps 2K: 23.976/24/25/29.97/30/48/50/59.94/60/72/96/100/120fps
USB-C SSD Recording Format (Use recommended USB-C SSD)	ProRes 422 HQ/LT: C4K: 23.976/24/25/29.97/30/48/50/59.94/60fps 2K: 23.976/24/25/29.97/30/48/50/59.94/60fps H.264: C4K: 23.976/24/25/29.97/30/48/50/59.94/60fps 2K: 23.976/24/25/29.97/30/48/50/59.94/60fps
Built-in Mic	Built-in 2-ch stereo
Audio Format	LPCM 2-ch, 24-bit 48kHz
Gimbal	
Mechanical Range	Pan: ±330° Tilt: -75° to 175° Roll: -90° to 230° Z-Axis Range: approx 130mm (Stabilization range of the Z-axis is subject to change based on Z-axis modes and usage scenarios and may be smaller than the mechanical range)
Controllable Range	Pan: ±285° Tilt: -55° to +155° Roll: ±35°
Max Control Speed (°/s)	DJI Master Wheels or DJI Force Pro: Tilt: 360°/s Roll: 360°/s Pan: 360°/s Ronin 4D Hand Grip: Tilt: 120°/s Roll: 120°/s Pan: 120°/s
Maximum Z-axis Payload	2000 g (including 1040 g gimbal)
Angular Vibration Range	±0.01°
LiDAR Range Finder	
Weight	88 g
Dimensions (length×width×height)	71×47×34 mm
Operating Temperature	-10° to 40° C (14° to 104° F)
LiDAR Range Measurement Precision	0.3-1 m (±1%) 1-10 m (±1.5%)
FOV*	30 cm to 3 m @>18% reflectivity 60° (horizontal) × 45° (vertical) 30 cm to 10 m @>18% reflectivity 60° (horizontal) × 7° (vertical)
Safety Rating	Class 1 (IEC 60825-1:2014) (safe for human eyes)

Operating Environment	Use in environments with diffuse reflective surfaces (>10%, such as walls, trees, people, etc.) DO NOT use in environments with dense fog or aim it at or through glass surfaces.
Laser Wavelength	940 nm
Single Pulse Width	Two kinds of pulses emit in circulation: 5 ns and 33.4 ns.
Max Laser Power	6 W
Main Monitor	
Screen Size	5.5 in (diagonal)
Resolution	1920×1080
Refresh Rate	60 Hz
Max Brightness	1000 cd/m²
Screen	Rotational LCD touchscreen
Battery	
Battery Type	TB50 Intelligent Battery
Capacity	4280 mAh
Energy	97.58 Wh
Voltage	22.8 V
Max Charging Voltage	26.1 V
Max Charging Power	180 W
Charging Temperature Range	5° to 40° C (41° to 104° F)
Charging Time	Approx. 1.5 hours (with standard 86W power adapter)
DJI O3 Pro Video Transmission	
Max Transmission Distance (Unobstructed, free of interference.)	20,000 ft (approx. 6 km, FCC-compliant)
Max Transmission Resolution and Frame Rate	1920×1080 @60fps
Minimum End-to-End Latency	100 ms or 68 ms (100 ms is measured at 4K/24fps, 68 ms is measured at 4K/60fps.)
Wireless Frequency	**Non-DFS frequency band:** 2.400-2.483 GHz 5.150-5.250 GHz 5.725-5.850 GHz **DFS Frequency Band:** 5.250-5.350 GHz 5.470-5.600 GHz 5.650-5.725 GHz (Some frequency bands may not be available depending on the legal policies of the region the monitor was activated in)