

# DJI Matrice 30 Series

## Aircraft

|                                                                |                                                                                                                                                                        |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions<br>(unfolded, excl. propellers)                     | 470×585×215 mm (L×W×H)                                                                                                                                                 |
| Dimensions (folded)                                            | 365×215×195 mm (L×W×H)                                                                                                                                                 |
| Diagonal Wheelbase                                             | 668 mm                                                                                                                                                                 |
| Weight (incl. two batteries)                                   | 3770 ± 10 g                                                                                                                                                            |
| Max Takeoff Weight                                             | 4069 g                                                                                                                                                                 |
| Max Takeoff Weight for C2<br>Certification in EU               | 3998 g                                                                                                                                                                 |
| Operation Frequency <sup>[1]</sup>                             | 2.4000-2.4835 GHz; 5.725-5.850 GHz                                                                                                                                     |
| Transmitter Power (EIRP)                                       | 2.4 GHz: <33 dBm (FCC); <20 dBm (CE/SRRC/MIC)<br>5.8 GHz: <33 dBm (FCC/SRRC); <14 dBm (CE)                                                                             |
| Hovering Accuracy<br>(windless or breezy)                      | Vertical: ±0.1 m (Vision System enabled); ±0.5 m (N-mode with GPS); ±0.1 m (RTK)<br>Horizontal: ±0.3 m (Vision System enabled); ±1.5 m (N-mode with GPS); ±0.1 m (RTK) |
| RTK Positioning Accuracy<br>(fixed RTK enabled)                | 1 cm+1 ppm (horizontal)<br>1.5 cm+1 ppm (vertical)                                                                                                                     |
| Max Angular Velocity                                           | Pitch: 150°/sec.; Yaw: 100°/sec.                                                                                                                                       |
| Max Pitch Angle                                                | 35° (N-mode and Forward Vision System enabled: 25°)                                                                                                                    |
| Max Ascent/Descent Speed                                       | 6 m/s, 5 m/s                                                                                                                                                           |
| Max Tilt Descent Speed                                         | 7 m/s                                                                                                                                                                  |
| Max Horizontal Speed                                           | 23 m/s                                                                                                                                                                 |
| Max Service Ceiling Above Sea<br>Level (without other payload) | 5,000 m (with 1671 propellers)<br>7,000 m (with 1676 propellers)                                                                                                       |
| Max Wind Resistance                                            | 12 m/s                                                                                                                                                                 |
| Max Hover Time <sup>[2]</sup>                                  | 36 min                                                                                                                                                                 |
| Max Flight Time <sup>[2]</sup>                                 | 41 min                                                                                                                                                                 |
| Motor Model                                                    | 3511                                                                                                                                                                   |
| Propeller Model                                                | 1671<br>1676 High Altitude (not included)                                                                                                                              |
| Ingress Protection Rating <sup>[3]</sup>                       | IP55                                                                                                                                                                   |
| GNSS                                                           | GPS+Galileo+BeiDou+GLONASS<br>(GLONASS is supported only when RTK module is enabled)                                                                                   |
| Operating Temperature                                          | -20° to 50° C (-4° to 122° F)                                                                                                                                          |
| Class                                                          | C2 (EU)                                                                                                                                                                |



|                         |                                                 |
|-------------------------|-------------------------------------------------|
| Angular Vibration Range | ±0.01°                                          |
| Controllable Range      | Pan: ±90°<br>Tilt: -120° to +45°                |
| Mechanical Range        | Pan: ±105°<br>Tilt: -135° to +60°<br>Roll: ±45° |

## Zoom Camera

|                          |                                                                                                                    |
|--------------------------|--------------------------------------------------------------------------------------------------------------------|
| Sensor                   | 1/2" CMOS, Effective pixels: 48M                                                                                   |
| Lens                     | Focal length: 21-75 mm (equivalent: 113-405 mm)<br>Aperture: f/2.8-f/4.2<br>Focus: 5 m to ∞                        |
| Exposure Compensation    | ±3 ev (using 1/3 ev as step length)                                                                                |
| Electronic Shutter Speed | Auto Mode:<br>Photo: 1/8000-1/2 s<br>Video: 1/8000-1/30 s<br>M Mode:<br>Photo: 1/8000-8 s<br>Video: 1/8000 -1/30 s |
| ISO Range                | 100-25600                                                                                                          |
| Max. Video Resolution    | 3840×2160                                                                                                          |
| Max Photo Size           | 8000×6000                                                                                                          |

## Wide Camera

|                          |                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Sensor                   | 1/2" CMOS, Effective pixels: 12M                                                                                      |
| Lens                     | DFOV: 84°<br>Focal length: 4.5 mm (equivalent: 24 mm)<br>Aperture: f/2.8<br>Focus: 1 m to ∞                           |
| Exposure Compensation    | ±3 ev (using 1/3 ev as step length)                                                                                   |
| Electronic Shutter Speed | Auto Mode:<br>Photo: 1/8000-1/2 s<br>Video: 1/8000-1/30 s<br><br>M Mode:<br>Photo: 1/8000-8 s<br>Video: 1/8000-1/30 s |
| ISO Range                | 100-25600                                                                                                             |
| Max. Video Resolution    | 3840×2160                                                                                                             |
| Photo Size               | 4000×3000                                                                                                             |

## Thermal Camera

|                |                             |
|----------------|-----------------------------|
| Thermal Imager | Uncooled VOx Microbolometer |
|----------------|-----------------------------|



|                                                          |                                                                                               |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                                                          | Aperture: f/1.0<br>Focus: 5 m to ∞                                                            |
| Noise Equivalent Temperature Difference (NETD)           | ≤50 mK@F1.0                                                                                   |
| Infrared Temperature Measurement Accuracy <sup>[4]</sup> | ±2°C or ±2% (using the larger value)                                                          |
| Video Resolution                                         | Infrared Image Super-resolution Mode: 1280×1024<br>Normal Mode: 640×512                       |
| Photo Size                                               | Infrared Image Super-resolution Mode: 1280×1024<br>Normal Mode: 640×512                       |
| Pixel Pitch                                              | 12 μm                                                                                         |
| Temperature Measurement Method                           | Spot Meter, Area Measurement                                                                  |
| Temperature Measurement Range                            | High Gain Mode: -20° to 150° C (-4° to 302° F)<br>Low Gain Mode: 0° to 500° C (32° to 932° F) |
| Temperature Alert                                        | Supported                                                                                     |
| Palette                                                  | White Hot/Black Hot/Tint/Iron Red/Hot<br>Iron/Arctic/Medical/Fulgurite/Rainbow 1/Rainbow 2    |

## FPV Camera

|            |           |
|------------|-----------|
| Resolution | 1920×1080 |
| DFOV       | 161°      |
| Frame Rate | 30 fps    |

## Laser Module

|                                                     |                                                                     |
|-----------------------------------------------------|---------------------------------------------------------------------|
| Wavelength                                          | 905 nm                                                              |
| Max Laser Power                                     | 3.5 mW                                                              |
| Single Pulse Width                                  | 6 ns                                                                |
| Measurement Accuracy                                | ± (0.2 m + D×0.15%)<br>D is the distance to a vertical surface      |
| Measuring Range                                     | 3-1,200 m (0.5×12 m vertical surface with 20% reflectivity)         |
| Safety Regulation Level                             | Class 1M                                                            |
| Accessible Emission Limit (AEL)                     | 304.8 nJ                                                            |
| Reference Aperture                                  | 18mm length, 18mm width (20.3mm diameter if equivalent to circular) |
| Max Laser Pulse Emission Power Within 5 Nanoseconds | 60.96 W                                                             |

## Vision Systems

|                        |                                                                  |
|------------------------|------------------------------------------------------------------|
| Obstacle Sensing Range | Forward: 0.6-38 m<br>Upward/Downward/Backward/Sideward: 0.5-33 m |
| FOV                    | 65° (H), 50° (V)                                                 |



## Infrared Sensing Systems

|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| Obstacle Sensing Range | 0.1 to 10 m                                                  |
| FOV                    | 30°                                                          |
| Operating Environment  | Large, diffuse, and reflective obstacles (reflectivity >10%) |

## TB30 Intelligent Flight Battery

|                       |                                                                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capacity              | 5880 mAh                                                                                                                                                                                                            |
| Voltage               | 26.1 V                                                                                                                                                                                                              |
| Battery Type          | Li-ion 6S                                                                                                                                                                                                           |
| Energy                | 131.6 Wh                                                                                                                                                                                                            |
| Net Weight            | Approx. 685 g                                                                                                                                                                                                       |
| Operating Temperature | -20° to 50° C (-4° to 122° F)                                                                                                                                                                                       |
| Storage Temperature   | 20° to 30° C (68° to 86° F)                                                                                                                                                                                         |
| Charging Temperature  | -20° to 40° C (-4° to 104° F)<br>(When the temperature is lower than 10° C (50° F), the self-heating function will be automatically enabled. Charging in a low temperature may shorten the lifetime of the battery) |
| Chemical System       | LiNiMnCoO2                                                                                                                                                                                                          |

## Auxiliary Lights

|                                 |                   |
|---------------------------------|-------------------|
| Effective Illumination Distance | 5 m               |
| Illumination Type               | 60 Hz, solid glow |

## Remote Controller

|                                            |                                                                                                                                                                                               |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Screen                                     | 7.02 inch LCD touchscreen, with a resolution of 1920×1200 pixels, and high brightness of 1200 cd/m <sup>2</sup>                                                                               |
| Internal Battery                           | Type: Li-ion (6500 mAh @ 7.2 V)<br>Charge Type: Supports battery station or USB-C charger maximum rated power 65W (max voltage of 20V)<br>Charge Time: 2 hours<br>Chemical System: LiNiCoAlO2 |
| External Battery(WB37 Intelligent Battery) | Capacity: 4920 mAh<br>Voltage: 7.6 V<br>Battery Type: Li-ion<br>Energy: 37.39 Wh<br>Chemical System: LiCoO2                                                                                   |
| Operating Time <sup>[5]</sup>              | Internal Battery: Approx. 3 hours 18 min<br>Internal Battery + External Battery: Approx. 6 hours                                                                                              |
| Ingress Protection Rating <sup>[3]</sup>   | IP54                                                                                                                                                                                          |
| GNSS                                       | GPS+Galileo+BeiDou                                                                                                                                                                            |
| Operating Temperature                      | -20° to 50° C (-4° to 122° F)                                                                                                                                                                 |

## O3 Enterprise

|                                                                |                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Max Transmission Distance (unobstructed, free of interference) | 15 km (FCC); 8 km (CE/SRRC/MIC)                                                                                                                                                                                                                                                                                                                                       |
| Max Transmission Distance (with interference)                  | Strong Interference (urban landscape, limited line of sight, many competing signals): 1.5-3 km (FCC/CE/SRRC/MIC)<br>Medium Interference (suburban landscape, open line of sight, some competing signals): 3-9 km (FCC); 3-6 km (CE/SRRC/MIC)<br>Weak Interference (open landscape abundant line of sight, few competing signals): 9-15 km (FCC); 6-8 km (CE/SRRC/MIC) |
| Transmitter Power (EIRP)                                       | 2.4 GHz: <33 dBm (FCC); <20 dBm (CE/SRRC/MIC)<br>5.8 GHz: <33 dBm (FCC); <14 dBm (CE); <23 dBm (SRRC)                                                                                                                                                                                                                                                                 |

## Wi-Fi

|                                    |                                                                                                                                              |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Protocol                           | Wi-Fi 6                                                                                                                                      |
| Operating Frequency <sup>[1]</sup> | 2.4000-2.4835 GHz; 5.150-5.250 GHz; 5.725-5.850 GHz                                                                                          |
| Transmitter Power (EIRP)           | 2.4 GHz: <26 dBm (FCC); <20 dBm (CE/ SRRC/MIC)<br>5.1 GHz: <26 dBm (FCC); <23 dBm (CE/ SRRC/MIC)<br>5.8 GHz: <26 dBm (FCC/SRRC); <14 dBm(CE) |

## Bluetooth

|                          |                   |
|--------------------------|-------------------|
| Protocol                 | Bluetooth 5.1     |
| Operating Frequency      | 2.4000-2.4835 GHz |
| Transmitter Power (EIRP) | <10 dBm           |

## BS30 Intelligent Battery Station

|                                               |                                                                                                                              |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                                    | 353×267×148 mm                                                                                                               |
| Net Weight                                    | 3.95 kg                                                                                                                      |
| Compatible Battery Type                       | TB30 Intelligent Flight Battery<br>WB37 Intelligent Battery                                                                  |
| Input                                         | 100-240 VAC, 50/60 Hz                                                                                                        |
| Output                                        | TB30 Battery Port: 26.1 V, 8.9 A (supported up to two outputs simultaneously)<br>WB37 Intelligent Battery: 8.7 V, 6 A        |
| Output Power                                  | 525 W                                                                                                                        |
| USB-C port                                    | Max. output power of 65 W                                                                                                    |
| USB-A port                                    | Max. output power of 10 W (5 V, 2 A)                                                                                         |
| Power Consumption (when not charging battery) | < 8 W                                                                                                                        |
| Output Power (when warming up battery)        | Approx. 30 W                                                                                                                 |
| Operating Temperature                         | -20° to 40° C (-4° to 104° F)                                                                                                |
| Ingress Protection Rating <sup>[3]</sup>      | IP55 (with the cover closed properly)                                                                                        |
| Charging Time <sup>[6]</sup>                  | Approx. 30 min (charging two TB30 batteries from 20% to 90%)<br>Approx. 50 min (charging two TB30 batteries from 0% to 100%) |
| Protection Features                           | Anti-Backflow Protection<br>Short Circuit Protection                                                                         |



# Other

Footnotes

- [1] 5.8 and 5.1GHz frequencies are prohibited in some countries. In some countries, the 5.1GHz frequency is only allowed for use indoors.
- [2] The maximum flight time and the hover time were tested in a lab environment and is for reference only.
- [3] This protection rating is not permanent and may reduce over time after long-term use.
- [4] Infrared temperature measurement accuracy was tested in a lab environment and is for reference only.
- [5] The maximum operating time was tested in a lab environment and is for reference only.
- [6] The charging time was tested in a lab environment at room temperature. The value provided should be used for reference only.

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