



D-RTK 3 Multi-functional GNSS Station

Maximised Precision, Enhanced Range

Providing centimetre-level GNSS positioning for multiple drones.

GNSS Receiver

GNSS Frequency	GPS: L1C/A, L2C, L5 GALILEO: E1, E5a, E5b, E6 QZSS: L1C/A, L2C, L5	BDS: B1I, B2I, B3I, B1C, B2a, B2b GLONASS: L1, L2 L-Band
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System Accuracy

Base Station Mode (Broadcast Mode) and Relay Station Mode:

- Base Station Accuracy:	Single Point Accuracy (Uncalibrated):	Horizontal: 1.5 m (RMS) Vertical: 3.0 m (RMS)
- Satellite-Based Differential Accuracy:	Convergence Time: 20 mins Horizontal: 30 cm (RMS) Vertical: 40 cm (RMS)	
- Network RTK Calibration:	Horizontal: 1.0 cm (RMS) + 1 ppm Vertical: 3.0 cm (RMS) + 1 ppm	

Rover Station Mode:

- RTK Accuracy (Fixed Survey):	Horizontal: 0.8 cm (RMS) + 1 ppm Vertical: 1.5 cm (RMS) + 1 ppm	
- RTK Accuracy (Tilt Survey):	Angle Range: 0° to 60° Horizontal: 8 mm + 0.7 mm/° tilt (accuracy <2 cm within 30°)	

Satellite-Based Precise Point Positioning

Supported Frequencies:	BDS B2b, GALILEO E6, L-BAND	Convergence Time: 20 mins
Horizontal:	30 cm (RMS)	Vertical: 40 cm (RMS)

Differential Data Transmission Format

When used as a base station or relay station, records RTCM 3.2 raw observation data in DAT format.

In rover station mode or in calibration mode for base and relay stations:

1. Supports RTCM v3.0, v3.1, v3.2, v3.3, MSM4, MSM5, MSM6, MSM7 protocols.
2. It is recommended to use receivers that support four or more GNSS systems.

Initialization Reliability: >99.9%

VIDEO TRANSMISSION

Video Transmission System: O4 Enterprise

Operating Frequency	Relay Station Mode: O4: 2.4 GHz/5.2 GHz/5.8 GHz	Base Station Mode: O4: 2.4 GHz/5.8 GHz	Rover Station Mode: BLE: 2.4 GHz
Transmitter Power (EIRP)	2.4000 - 2.4835 GHz: <33 dBm (FCC) <20 dBm (CE/SRRC/MIC)	5.150 - 5.250 GHz: <23 dBm (CE/FCC)	5.725 - 5.850 GHz: <33 dBm (FCC) <30 dBm (SRRC) <14 dBm (CE)
Bluetooth	Protocol: Bluetooth 5.1	Frequency: 2.400 - 2.4835 GHz	Transmitter Power (EIRP): <10 dBm

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Max Transmission Distance (unobstructed, free of interference)

Base Station Mode FCC: 15 km
SRRC: 12 km
CE/JP: 8 km

Rover Station Mode: 30 m

Max Transmission Distance in Relay Station Mode (unobstructed, free of interference)

-FCC Between the aircraft and the relay station: 25 km
Between the relay station and the remote controller/DJI Dock 3: 1 km

-SRRC Between the aircraft and the relay station: 12 km
Between the relay station and the remote controller/DJI Dock 3: 1 km

-CE Between the aircraft and the relay station: 10 km
Between the relay station and the remote controller/DJI Dock 3: 300 m

Max Transmission Distance (unobstructed, with interference)

Strong interference: City centres, approx. 1.5-5 km
Medium interference: Suburban areas, approx. 5-15 km
Micro interference: Remote areas / sea sides, approx. 15-25 km

Max Transmission Distance (obstructed, with interference):
Low Interference and Obstructed by Buildings: Approx. 0-0.5 km
Low Interference and Obstructed by Trees: Approx. 0.5-3 km

Relay Station Range Extension Effect: Relay Station Performance Enhancement:
Severe obstruction (e.g., buildings, mountains): 3x to 5x performance improvement
Mild obstruction (e.g., trees, glass): 1x to 3x performance improvement

Antenna: OcuSync 4 directional antennas× 4, 2T4R

Others: D-RTK 3 Relay Fixed Deployment Version: Compatible with DJI Cellular Dongle 2

ELECTRICAL PROPERTIES

Power	D-RTK 3 Multifunctional Station:	D-RTK 3 Relay Fixed Deployment Version:
	Relay Station: 14.5 W*	Relay Station: 14.5 W
	Base Station: 7 W	
	Rover Station: 6.2 W	

Power Output Port	D-RTK 3 Multifunctional Station:	D-RTK 3 Relay Fixed Deployment Version:
	USB Type-C	USB Type-C and Ethernet Port (PoE)

Supported Power Adapter

D-RTK 3 Multifunctional Station: USB PD 3.0 protocol, output voltage 9-15V adapter
D-RTK 3 Relay Fixed Deployment Version: DJI Dock 3 PoE Output Port
Third-party PoE Power Supplies:
IEEE 802.3bt Type 4 (PoE++): 52 V to 57 V output, 99.9 W max
IEEE 802.3bt Type 3 (PoE++): 50 V to 57 V output, 60 W max
IEEE 802.3at Type 2 (PoE+): 50 V to 57 V output, 30 W max

Battery Operating Time (Under Normal Temperature)

D-RTK 3 Multifunctional Station:	D-RTK 3 Relay Fixed Deployment Version:
Relay Station: 4 hrs	Relay Station : 4 hrs
Base Station : 7 hrs	
Rover Station: 10 hrs	

Ethernet Cable Requirements

D-RTK 3 Multifunctional Station: Ethernet not supported
D-RTK 3 Relay Fixed Deployment Version: Requires Cat 6 twisted-pair cable, ≤100m length, 6-9mm outer diameter.

Battery	Type: LiPo	Capacity: 6500 mAh	Energy: 46.8 Wh
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PHYSICAL CHARACTERISTICS

Operating Temperature

D-RTK 3 Multifunctional Station:	-20° to 55° C
D-RTK 3 Relay Fixed Deployment Version:	-30°C to 55° C

Altitude: 6000 m

Protection Rating

D-RTK 3 Multifunctional Station:	IP67
D-RTK 3 Relay Fixed Deployment Version:	IP67

Drop Resistance

D-RTK 3 Multifunctional Station:	2 m drop with pole
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Dimensions

D-RTK 3 Multifunctional Station:	163 mm × 89 mm
D-RTK 3 Relay Fixed Deployment Version:	163 mm × 344 mm

Weight

D-RTK 3 Multifunctional Station:	Approx. 1.26 kg (2.78 lbs)
D-RTK 3 Relay Fixed Deployment Version:	Approx. 2.24 kg (4.94 lbs)

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