



IDU

PPA-UAV

The PPA-UAV is an ultra-light, ultra-slim Ku-band phased array satellite terminal engineered to deliver seamless UAV connectivity. Its compact design, low weight, and minimal power consumption dramatically reduce payload burden while ensuring outstanding performance. With quick installation and superior efficiency, it's the perfect choice for payload-sensitive platforms such as cargo drones and inspection UAVs.

The system combines a fully electronic ESA antenna—mountable directly above the UAV fuselage without modification—with a streamlined indoor unit that integrates the ACU, satellite modem, and power supply for unmatched simplicity and reliability.

Our next-generation ESA antennas are modem-agnostic, enabling universal access to GEO, MEO, and LEO satellite networks through a single antenna. With no moving parts, they deliver superior durability, while advanced electronic beam steering ensures agility and speed—ideal for reliable LEO satellite tracking and mobile operations. Integrated radomes eliminate extra cost, drag, and RF performance loss, further enhancing efficiency.

Key Features

- ▶ **Optimised Performance** – Designed to deliver maximum efficiency and reliability in every mission.
- ▶ **Seamless Connectivity** – Ensures uninterrupted communication across networks and platforms.
- ▶ **Rugged Reliability** – Engineered to perform even in the harshest environments.
- ▶ **Simplified Installation** – Quick, hassle-free setup with minimal effort.
- ▶ **Flexible Network Integration** – Easily connects with customer networks for smooth data exchange.
- ▶ **Rapid Deployment** – Lightweight and portable, ready for use within minutes.
- ▶ **SAR System Compatibility** – Fully compatible with GNSS, including Galileo, Glonass, and GPS.
- ▶ **Enhanced Accuracy** – Boosts throughput and improves localisation precision.
- ▶ **Low Maintenance** – Reliable design requiring no recalibration and minimal servicing.



GENERAL SPECIFICATIONS

	Ku-Band	Ka-Band
Antenna type	Phased Array Antenna	Phased Array Antenna
Tracking	Azimuth: 0°~360°; Elevation: 30°~90°	Azimuth: 0°~360°; Elevation: 30°~90°
Locking time	≤120s	≤120s
Tracking accuracy	≤0.2° RMS	≤0.2° RMS
Weight	≤6kg	≤4.5kg
Power consumption	≤120W 24VDC	≤70W 24VDC
Dimensions	500mm×330mm×30mm (L×W×H)	250mm×350mm×30mm (L×W×H)

RF CHARACTERISTIC

		Ku-Band	Ka-Band
Frequency (GHz)	Tx	13.75~14.50	27.50~31.00
	Rx	10.70~12.75	17.00~21.50
Pol		Linear / Circular	LHCP/RHCP Circular
G/T		≥4dB/K@12.5GHz	≥2dB/K
EIRP		≥35dBW@14.25GHz	≥25dBW

IDU SPECIFICATION

Components	Antenna control, Spread Spectrum (DSSS) Modem, Power supply
Ports	DC power port, ethernet port, serial port
Power consumption	≤20w 24VDC
Weight	≤1.4kg
Dimensions	237mm×160mm×41mm (L×W×H)

ENVIRONMENTAL SPECIFICATION

Temperature	-40°C~55°C
Protection	IP66 (Antenna)

Compliances / Certificates



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