

This document addresses the most common technical, operational, and environmental inquiries regarding the deployment of the **DADI · DUSV 8** unmanned surface vessel paired with the **iADCP series**.

Q: What is the maximum remote control distance? Can the 2.4G radio maintain control without a cellular signal?

The standard 2.4GHz RF datalink provides a reliable point-to-point control range of approximately **1 kilometer**. By deploying our optional radio relay station, this range can be extended up to **4 kilometers**. Because the 2.4G system establishes a direct physical radio link between the U-Controller and the vessel, it provides 100% full command and control even in completely off-grid remote areas with **zero cellular (4G/5G) network coverage**.

Q: Is the U-Controller based on the Android operating system?

Yes. The U-Controller operates on a deeply customized, highly stable Android OS. This ecosystem guarantees a smooth, user-friendly smartphone-like touch experience, allowing the **iSail unified control software** to run natively with excellent responsiveness and enabling seamless OTA (Over-The-Air) updates.

Q: Does extremely turbid water negatively affect the ADCP measurements?

Under normal conditions, turbidity is highly beneficial, as Acoustic Doppler technology relies on suspended particles in the water to scatter sound waves. However, in extreme **"mud slurry" conditions** (hyper-concentrated sediment), the excessively high physical density of the water can absorb the acoustic energy. While the ADCP will still function, this severe acoustic attenuation may reduce the maximum profiling depth or temporarily impact bottom-tracking stability.

Q: What is the expected learning curve for vessel operation and ADCP software processing?

The entire system is engineered for a rapid, ultra-low learning curve:

- **Vessel Piloting:** A new operator can master basic navigation, waypoint planning, and manual override of the DUSV 8 in approximately **30 minutes**.
- **iADCP Software:** Following our standard quick-start guide, a surveyor can learn the complete data processing workflow—from raw data import to standard hydrological report generation—in just **1 hour**.