

ADCP-150K Phased Array

Acoustic Doppler Current Profiler 150kHz



Overview

The ADCP-150K is a high-precision, mid-depth Phased Array Acoustic Doppler Current Profiler. Utilizing advanced, field-proven phased array technology combined with proprietary broadband signal processing algorithms, it delivers highly accurate measurements of water current velocity profiles, water depth, and carrier/vessel motion speed.

The system features a split-component architecture comprising a 150 kHz phased array transducer assembly and a separate electronic chassis. It is engineered to offer exceptional velocity and current measurement precision, high structural adaptability for versatile installation, and ease of maintenance. With support for multiple universal communication interfaces customizable to user requirements, the ADCP-150K is widely deployed across a diverse range of marine engineering applications.

Applications

- **Vessel-Mounted Coastal Surveys:** Hydrographic Mapping, Deployed on regional research vessels to map upper-ocean current structures, boundary currents, and tidal dynamics across continental shelves.
- **Autonomous Platform Integration:** USV Operations, Designed with a lightweight and compact footprint for seamless integration into Unmanned Surface Vehicles, enabling extended autonomous data collection.
- **Offshore Renewable Energy:** Site Assessment & Construction, Provides high-precision flow velocity data to support structural engineering, turbine foundation installation, and underwater cabling operations.
- **Port & Harbor Hydrodynamics:** Navigation & Dredging Safety, Delivers real-time current profiles in busy shipping channels and deep-water ports to monitor siltation, optimize dredging, and guide commercial traffic.

TECHNICAL SPECIFICATIONS

Model	ADCP-150K
Transducer frequency	150kHz
Beam configuration	Phased 4 beams
Current velocity range	$\pm 5\text{m/s}$ (default) $\pm 15\text{m/s}$ (Max.)
Current velocity precision	$\pm 0.5\%V \pm 0.5\text{cm/s}$
Current velocity resolution	1mm/s
Layer size	2~16m
Number of layers	1~128
Pulse frequency	1Hz
High precision mode range	270m
Maximum range	350m
Other configurable function	Bottom tracking
Bottom tracking depth	5~500m
Bottom velocity precision	$\pm 0.5\%V \pm 0.5\text{cm/s}$
Power supply	220V AC $\pm 10\%$
Average power consumption	60W
Communication interface (selectable)	Ethernet, RS422, RS232
Storage capacity	Standard 16GB
Transducer size	$\Phi 225\text{mm} \times 270\text{mm}$
Transducers weight	16kg