



AquaVision X400 Series

Subsea Multibeam Forward-looking Sonar

400 kHz · 40 Hz · 6,000 / 11,000 m

Description

AquaVision X400 is a subsea multibeam forward-looking sonar for obstacle avoidance and forward situational awareness on deep-sea vehicles. Operating at 400 kHz, it sees through turbid, zero-visibility water where optical cameras fail, and **gives up to 250 m of warning ahead of the vehicle.**

A fully digital beamforming (DBF) architecture refreshes a 120° forward sector at up to 40 Hz, producing a real-time acoustic video of the scene ahead. Two pressure ratings are offered — 6,000 m and 11,000 m (full ocean depth) — without trading structural strength for weight, making AquaVision a dependable safety layer for work-class ROVs and long-endurance AUVs in complex deep water.

Application

- ▶ Autonomous piloting and rapid obstacle avoidance for AUV / ROV
- ▶ Site-scale inspection of pipelines, platform foundations and subsea structures
- ▶ Advance warning of reefs and shoals in ports, shallows and narrow channels
- ▶ Wide-area deep-water search for wreckage, persons and lost equipment

Features

- ▶ **40 Hz acoustic video**
Up to 512 beams per ping, refreshed at 40 Hz for smear-free imaging of moving scenes and fast avoidance response.
- ▶ **250 m forward warning**
400 kHz with 1° horizontal resolution outlines large targets at distance, leaving the vehicle room to manoeuvre.
- ▶ **Full-ocean-depth solid-state design**
All-digital solid-state array in rugged pressure housings; 6,000 m and 11,000 m versions.
- ▶ **Clear picture in turbid water**
Built-in adaptive noise reduction holds image quality in high suspended sediment and complex bottom returns.
- ▶ **Secure supply and support**
Independently developed core components and algorithms — short lead times, stable supply and long-term technical support.

Technical Specifications of AquaVision X400 Series

Technical Specifications		
Max. Working Depth	6,000 m / 11,000 m (full ocean depth)	
Centre Frequency	400 kHz	
Max. Number of Beams	512	
Max. Ping Rate (refresh)	40 Hz	
Range	150 – 250 m (large targets such as terrain)	
Horizontal Field of View	120°	
Vertical Field of View	25°	
Horizontal Angular Resolution	1°	
Triggering	Internal / external	
Temperature	−3 to +40 °C in water; −10 to +55 °C storage	
Physical Specifications	AquaVision 6400	AquaVision 11400
Power Supply	24 – 50 VDC	
Power Consumption	25 W average; 75 W peak	
Communication & Interface	Gigabit Ethernet; external trigger input	
Dimensions	279 × 135 × 211 mm	279 × 150 × 245 mm
Weight (air / water)	8 kg / 4.5 kg	12.5 kg / 8.5 kg
Connector	DBH13M	DBH16M

