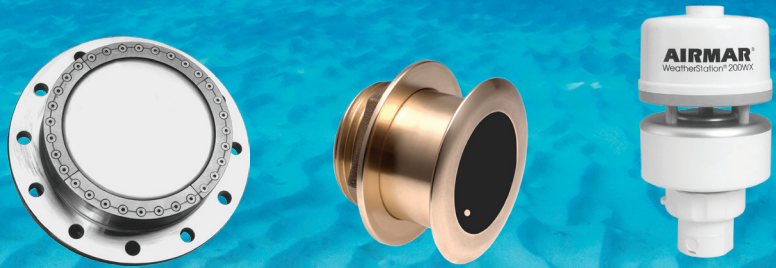


# Ultrasonic Transducers



*Sensor Solutions from Surface to Seabed*



Contact [navsurvey@airmar.com](mailto:navsurvey@airmar.com) for more information







## Tune-in with Broadband\* Technology

AIRMAR's high-performance, broadband transducers are supplied as original equipment with many commercial fishing and survey echosounder systems from industry-leading manufacturers. When used as replacement transducers for already installed systems, they make the perfect, low-priced, high value, performance enhancement.

## The Ultrasonic Advantage




AIRMAR offers a full line of transducers for hydrographic survey and scientific applications including models suitable for Aquatic Habitat Assessment, Acoustic Fish Deterrents (AFDs) and Fish Aggregating Devices (FADs).

### Bridge Scour Inspection, Dredging, Portable Survey



Model	Frequency	Beam
<b>Smart™ Dual Frequency EchoRange™*</b> <b>M195</b> 	30 kHz 200 kHz	26° 9°
<b>Smart™ EchoRange™*</b> <b>SS510</b> 	200 kHz	9°

\* Digital outputs with embedded processors

### Commercial Fishing

Model	Frequency	Beamwidth	Pulsed Power
<b>M155</b> 	28 kHz 38 kHz 200 kHz	24°x37° 11°x21° 6°	1 kW 1.2 kW 1 kW
<b>R109*</b> 	38-75 kHz 130-210 kHz	19° to 10° 8° to 10°	2 kW 2 kW
<b>M42</b> 	38 kHz 24 kHz 200 kHz	10°x12° 19° 5°	2.2 kW 2 kW 2 kW

### Oceanographic Instrumentation

Model	Frequency	Beamwidth	Pulsed Power
<b>M153</b> 	50 kHz 200 kHz	46° 8°	600 W 600 W
<b>M159</b> 	30 kHz 33 kHz 50 kHz	27° 24° 15°	900 W 1 kW 1 kW

## Custom Configurations

AIRMAR specializes in custom active and passive transducer designs. We can design to your specifications or assist with development requirements. Customize your transducer with one of these AIRMAR housing models and the frequency you prefer.

### Broadband Technology

The outstanding qualities of these high-performance transducers make them the right choice for your marine applications! Many AIRMAR Broadband Transducers are already supplied as original equipment with many new echosounder systems. Or, when used as replacement transducers for already installed sounders, these transducers will make the perfect, low-cost/high-value, performance enhancement.

When used at discreet frequencies, the low-ringing and narrow-beam characteristics of these transducers help produce the most accurate single-beam surveys at any water depth. In addition, these transducers can be used with electronics that produce a chirp pulse.



\* Green boxed products denote Broadband transducers with CHIRP-Ready capabilities.

### 200m Mini Altimeter Kit Smart™ Sensor



The 200m Mini Altimeter Kit is an ultra-compact altimeter kit designed for measuring height off the sea floor and underwater structures. Pressure rated for up to 1,000 meters, the 200m Mini Altimeter delivers excellent performance from a small, lightweight configuration optimized for use on UUVs and AUVs. The sensor is available in either 170 kHz or 200 kHz. With low power consumption of just 150 mA at 12 V, the 200m Mini Altimeter is perfect for power-limited vessels.






### Shallow and Coastal Survey

Model	Frequency	Beamwidth	Pulsed Power
<b>M563*</b> 	25–45 kHz	24° @ 25 kHz 19° @ 35 kHz 14° @ 45 kHz	1 kW
	80–130 kHz	13° @ 80 kHz 10° @ 100 kHz 8° @ 130 kHz	2 kW
	130–210 kHz	8° @ 130 kHz 5° @ 170 kHz 4° @ 210 kHz	2 kW
	160-260 kHz	5° @ 160 kHz 4° @ 200 kHz 4° @ 260 kHz	2 kW




### Side Scan

Model	Frequency	Beamwidth	Pulsed Power
<b>SS134</b> 	340 kHz 500 kHz	0.5°x48° 0.5°x48°	1 kW 1 kW
<b>SS82</b> 	200 kHz	0.5°x48°	1.35 kW






### Sub-bottom Profiling

Model	Frequency	Beamwidth	Pulsed Power
<b>M190</b> 	12 kHz 24 kHz 28 kHz 33 kHz	24° 11° 9° 10°	5.7 kW 7 kW 10 kW 3 kW
<b>M187</b> 	10 kHz 15 kHz	16° 11°	6 kW 8 kW
<b>M74*</b> 	10-18 kHz 12-22 kHz	20° 17°	4 kW 4 kW




### Survey Echosounding

Model	Frequency	Beamwidth	Pulsed Power
<b>M190</b> 	12 kHz 24 kHz 28 kHz 33 kHz	24° 11° 9° 10°	5.7 kW 7 kW 10 kW 3 kW
<b>M187</b> 	10 kHz 15 kHz	16° 11°	6 kW 8 kW
<b>M74*</b> 	12 kHz 15 kHz	20° 17°	4 kW 4 kW

### River, Harbor or Estuary/Shallow Water Survey

Model	Frequency	Beamwidth	Pulsed Power
<b>SS549</b> 	200 kHz	3°	3 kW
<b>SS538*</b> 	80-130 kHz 130-210 kHz 160-260 kHz	13° to 8° 8° to 4° 5° to 4°	2 kW 2 kW 2 kW
<b>M194*</b> 	160-260 kHz	8° to 10°	500 W
<b>M191</b> 	24 kHz 30 kHz 33 kHz 50 kHz 200 kHz 200 kHz	33° 26° 23° 15° 6° 8°	900 W 600 W 700 W 1 kW 1 kW 500 W
<b>SS510*</b> 	160-260 kHz (Surface temp. and XID also available)	8° to 10°	500 W

### Shallow and Deep Water Survey

Model	Frequency	Beamwidth	Pulsed Power
<b>CS229</b> 	12 kHz 24 kHz 28 kHz 50 kHz 200 kHz	42° 20° 18° 13° 3°	2.1 kW 1.5 kW 2 kW 2 kW 3 kW
<b>M176</b> 	12 kHz 28 kHz 70 kHz 200 kHz	25°x32° 11°x14° 6° 8°	4.2 kW 4 kW 3 kW 500 W
<b>M192*</b> 	25-45 kHz 15 kHz 24 kHz 33 kHz 38 kHz	24° to 14° 50° 24° 19° 20°	1 kW 1 kW 1.5 kW 1 kW 1 kW

**Note:** All beamwidths are at -3dB

# Offshore Applications



## WX Ultrasonic WeatherStation® Instruments for Offshore Weather Monitoring

### Available Model: 200WX-IPX7

Weather impacts every aspect of operations on offshore platforms, ships, and in ports. Rapid changes in weather and sea conditions make monitoring of both meteorological and oceanographic parameters a critical part of ensuring safety, while also maintaining operational efficiency.

Reliable environmental monitoring is critical for various offshore needs. The numerous sensors contained in the compact size of the 200WX is an attractive feature for installations where space is limited, such as on buoys, USVs, and ASVs.

Having worked with many autonomous vehicle and buoy manufacturers, we have further developed the 200WX to be more robust—meeting the operational challenges of the harsh ocean environment.

The WeatherStation WX Series products offer a truly best-in-class solution at a better price point than any other weather monitoring system on the market today, enabling individuals and professionals the ability to make informed decisions based on real-time site-specific weather information.



For more information  
and the full product roadmap,  
please visit [www.weatherstationwx.com](http://www.weatherstationwx.com)

### FEATURES

The 200WX-IPX7 WeatherStation instrument accurately measures real-time weather conditions, including:

- Dynamic True and Apparent wind speed and direction with no moving parts
- Air temperature and calculated wind chill
- Barometric pressure
- GPS: Position, speed over ground, course over ground
- Three-axis solid state compass with dynamic stabilization
- Three-axis rate gyro for rate-of-turn
- Best-in-class  $<1^\circ$  pitch and roll accuracy
- IPX7 water proof rating
- Current draw:  $<75\text{mA}$  (0.9W), LEN 2 at 12 VDC
- Available outputs: NMEA 0183 (RS422 or RS232) and NMEA 2000® (CAN bus)

[www.airmar.com](http://www.airmar.com)

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