

AMAR G3

Autonomous Multichannel Acoustic Recorder

Generation 3

Pristine Acoustic Data, Revolutionary Performance

Superior Data Quality

The breakthrough design of the AMAR provides an extremely low noise floor that lets you measure quiet or distant events. The 24-bit data sampling gives you accurate measurements over a wider range of sound levels than traditional 16-bit systems.

Efficient by Design for Extended Deployments

The AMAR is optimized to use as little power as possible:

- Solid-state memory custom designed to consume very little power
- Leading-edge hardware and software purpose-built for intelligent, ultra-low power usage achieved by turning off unused components
- Large memory capacity up to 1792 GB for extended deployments, even at high sample rates
- Extended-life battery options
- Highly configurable duty-cycling (power saving) options

With fewer batteries, the AMAR G3 is smaller and lighter than other recorders. Save time and money with longer deployments and fewer service trips.

Survives Extreme Conditions

The AMAR is built to perform in the harshest conditions. The rugged, industrial design has been field tested in extreme environments, from the heat of northern Australia to the sub-freezing oceans of the Arctic. The custom-designed solid-state storage memory is more mechanically resilient than traditional hard-disk drives. You can download your data without opening the pressure housing, so the AMAR electronics are protected from the environment.

The Flexible Solution: Versatile and Configurable

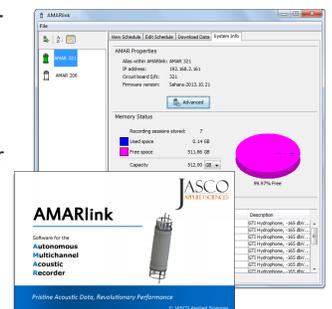
Advanced configuration options meet your performance demands. Whether studying effects of vessel noise on low frequency call rates of baleen whales off Alaska, or high-frequency clicks of dolphins in the Great Barrier Reef:

- Eight 24-bit acoustic channels at up to 128 ksp/s
- The high-speed 16-bit acoustic channel offers ground-breaking sample rates up to 687.5 ksp/s
- Multiple digital and analog interfaces to support oceanographic data sensors or integrate into your existing systems
- Choose between Standard (250 m), Deep (2500 m), and Ultra Deep (6700 m) models

We work closely with hydrophone manufacturers to develop the right system for your unique needs. The AMAR is compact and lightweight for cost-effective, fast, easy deployments by hand. Buy or lease custom-designed moorings or use our specialized mounting brackets to secure the AMAR to your own gear.

Intuitive User Interface

The AMAR Comms Box instantly displays the AMAR's status. And it connects the AMAR to your computer with a standard Ethernet cable to configure the AMAR and download data. The AMARlink software is designed for usability: easy to learn and easy to use. Set up multiple sampling rates, duty cycles, and recording schedules with ease. Save your recording schedules for quick and easy reuse. Download all or some of your data at the click of a button.



AMAR G3 Technical Specifications

Environmental

Maximum depth:	Standard (250 m) Deep (2500 m) Ultra Deep (6700 m)
Operating temperature:	-5 to 50 °C
Storage temperature:	-18 to 55 °C
Vibration resilience:	Withstands transport by air, ground, and vessel

Physical

Dimensions (D × L):	16.5 × 57.2 cm 6.5 × 22.5 in
Material:	PVC, anodized aluminum, 316 stainless steel
Weight in air:	10 kg
Weight in seawater:	1 kg

Hydrophones and Arrays

Various customizable options.	
Sensitivities and frequencies tailored to your needs.	
Example sensitivities:	-164 dB re 1 V/μPa @ 1 kHz -210 dB re 1 V/μPa @ 1 kHz
Example frequencies:	1 Hz to 50 kHz 5 Hz to 100 kHz 20 Hz to 150 kHz
Manufacturers:	Various, based on your needs
Acoustic sensors:	Omnidirectional hydrophones Directional hydrophones Vector sensors Small spatial arrays Small linear arrays

Memory & Recording

Solid-state flash memory:	256–1792 GB
Acoustic data format:	WAV
Non-acoustic data format:	CSV

Power

Operating voltage:	7–16 V _{DC}
AC power adapter:	110–240 V, 50–60 Hz, 0.5 A
Internal battery pack:	9 alkaline D-cells
Optional battery packs:	48, 96, and 144 alkaline D-cells
Recording lifetime:	Over 1 year, depending on configuration

Eight 24-bit Acoustic Channels

ADC banks:	Two banks of 4 channels; each bank has selectable sample rate
Sample rates:	2–128 ksp/s
Spectral noise floor:	Better than -150 dB re FS at 128 ksp/s
Channel gain:	0–42 dB

High-Speed, 16-bit Acoustic Channel

Sample rates:	125–687.5 ksp/s
Dynamic range:	14.5 effective bits
Voltage:	0–4.5 V peak-to-peak

Ten Oceanographic Sensor Channels

Sensor options:	Oxygen, salinity, acidity/pH, depth, turbidity, orientation (roll-pitch-yaw), temperature, others upon request
Eight analog channels:	
Sample rate:	1 sp/s
Voltage:	-10 to +10 V
Two serial channels:	RS-232 and RS-485



Due to continued product development, these specifications are subject to change without notice.



AMAR G3 (left) and 48-cell battery pack (right) in a Lightweight Mooring Frame

For more information, contact your nearest JASCO Applied Sciences office:

Halifax, NS, Canada
+1-902-405-3336
halifax@jasco.com

Victoria, BC, Canada
+1-250-483-3300
victoria@jasco.com

Silver Spring, MD, USA
+1-301-565-3500
maryland@jasco.com

Houston, TX, USA
+1-832-312-0431
texas@jasco.com

Anchorage, AK, USA
+1-907-538-7205
alaska@jasco.com

United Kingdom
+44 (0) 1489 878439
europe@jasco.com

Australia
+61 7 3823 2620
australia@jasco.com