



SWALE OCEANOGRAPHIC

Teledyne Benthos

Benthos Acoustic Modems

Subsea Wireless Communication

ATM-900 Series Modems

The Teledyne Benthos ATM-900 Series Acoustic Telemetry Modems are a major enhancement to previous modem lines offered. The new ATM-900 series provides a long list of special purpose, flexible extensions supporting multiple capabilities beyond "just" underwater communications. These capabilities range from high capacity data logging, through updated data storage and user command line interfaces to real-time clock integration. Each surface unit can operate using cables from 2m to 200m with a mating transducer for each cable. Both directional and omnidirectional transducers are available



ACOUSTIC
DATA ACQUISITION
UNDERWATER
REMOTE
RELIABLE



General Specifications

Baud Rate

- 140-2400 (bps) Multiple Frequency Shift Keying (MFSK)
- 2560 -15,360 (bps) Phase Shift Keying (PSK)

Frequency Band

- Customer Specified
 - 9 - 14 kHz (LF)
 - 16 - 21 kHz (MF)
 - 22-27 kHz (Band C)

Processing Features

- Data redundancy, 1/2 rate convolutional coding,
- Multipath guard period selection
- MFSK and PSK modulation schemes

Configurations

- Deck Box
- 500m, 2000m and 6000m depth rated subsea units
- Customer integrated electronics
- Omnidirectional and directional transducers

Distances-Range

- 2-6 km common, greater distances possible

Deployment Length

- Up to 2 years
- 3-6 months typical with hourly transmissions
- Unlimited with external power supplied

Data Storage

- 6144 KB datalogger standard
- Expanded memory option available

Standard Features

ATM-900 Series modem electronics integrated or remote transducer options. Flash file system data logger creates discrete records for query and retrieval

Options

Dual serial ports: connect two instruments for transmission or data logging

SD card for expanded data storage

In-band acoustic recorder: records any ambient sounds with in-band of operation

Arbitrary wave form playback

UDB-9400

ATM-900 Series modem deck box
Good for vessels, dock, and other operational environments

Internal batteries or AC/DC power connector

Speaker

Serial port

Transducer and cable included

Splash proof case

Communicates to Acoustic Releases & Modems

25m to 200m cables available

ATM-903 Series

Ideal for AUV applications

For mounting in your customer supplied housing

Transducer, power cable and serial cable included

ATM-960 Series

6000 meter depth rated

Alkaline batteries, 588 W•HR optional

Remote head optional



ATM-910 Series

500 meter depth rated

Alkaline batteries, 378 W•HR optional

Remote head optional

Corrosion resistant housings

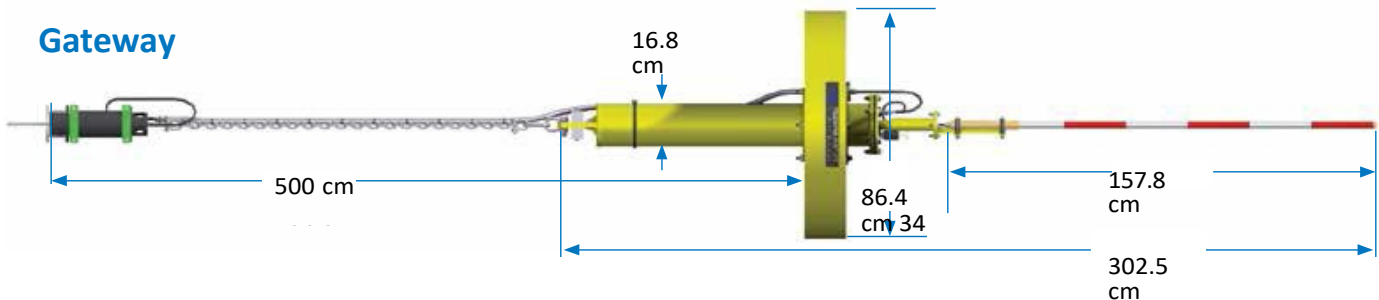
ATM-920 Series

2000 meter depth rated

Alkaline batteries, 378 W•HR optional

Remote head optional

Gateway



- 2-man deployable
- Remote system monitoring from shore base station
- Rechargeable batteries
- Freewave, 900 MHz spread spectrum communication

- 2 month deployment (based on Freewave transmission to shore station)
- Internal space for custom options
- Uses ATM-916 Series Modem
- Requires shore-based RF system (not included)

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