

# Teledyne Gateway Buoy

UNDERWATER ACOUSTIC MODEM

## Subsea to Shore: Real-time Remote System Monitoring

The Teledyne Gateway Buoy provides customers with real-time data monitoring of their subsea sensors or vehicles from a remote shore station. The buoy is two-man deployable and can be launched from a small craft/boat. Designed for near shore applications, the system can relay data to and from shore in real time for up to 2 months using Freewave® radio transmissions. The Teledyne Gateway Buoy can communicate with any deployed Benthos modem that is either moored to the ocean floor or incorporated on an AUV. Useful for a wide range of applications, the ease and length of deployment, combined with the reliability of Teledyne Benthos modems, makes this gateway buoy a perfect choice for near shore, real-time data acquisition and subsea vehicle communication.

- 2-man deployable
- Remote system monitoring from shore based station
- Rechargeable batteries
- Freewave, 900 MHz spread spectrum communication
- 2 month deployment (based on Freewave transmission to shore station)
- Internal space for custom options



**TELEDYNE  
BENTHOS**

A Teledyne Technologies Company

INNOVATIVE UNDERSEA SYSTEMS TECHNOLOGY

# Gateway Buoy

## General Specifications

### Buoy

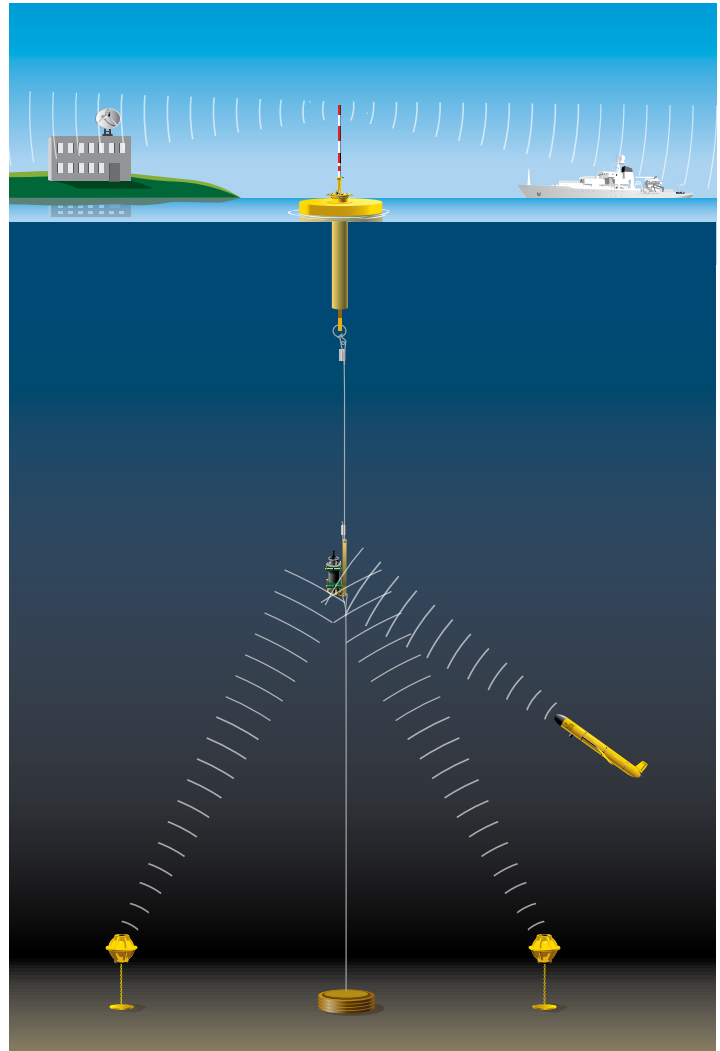
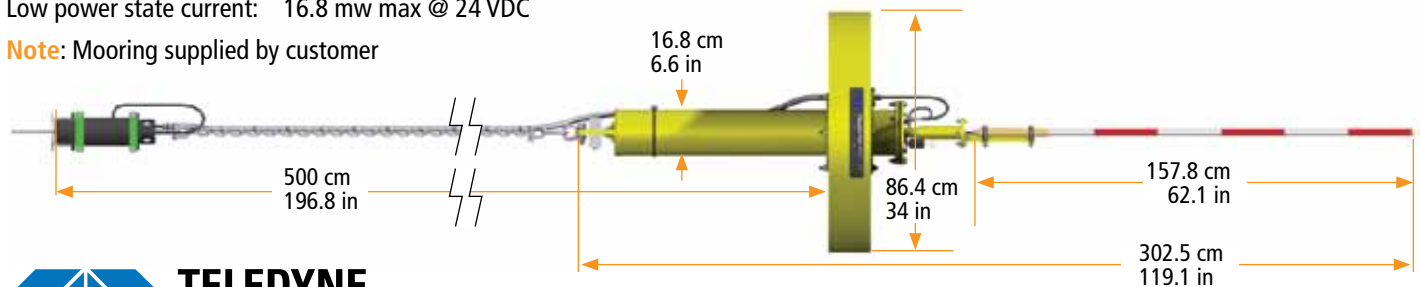
Deployment :	2-man deployment from small craft/boat
Housing:	Powder coated aluminum
Weight in air:	47.7 kg (105 lb)
Operator controls:	Shorting plug with flashing green power indicator for power on/off
Operating life:	Up to two months, depending on the amount of data transmitted and received by the acoustic modem and wireless data transceiver
Operating temperature:	-5°C to 50°C
Storage temperature:	-45°C to 85°C
Power:	Four 12-volt rechargeable sealed lead-acid batteries
Wireless Data Transceiver:	Freewave®, 900 MHz, spread spectrum wireless data transceiver. Other wireless options available (contact Benthos)
Options:	Iridium, GPS, Acoustic data recorder

### Acoustic Modem

The acoustic modem is a Teledyne Benthos ATM-886 Acoustic Telemetry Modem in a PVC housing. The modem attaches to the buoy with the suspension chain and connects to the buoy with the interface cable. Both the chain and the cable are supplied.

Frequency bands:	9–14 kHz (LF)
Data modulation:	PSK and MFSK
Housing construction:	PVC
Baud rate:	2560–15,360 bits/sec (PSK transmit); 140–2400 bits/sec (MFSK transmit and receive)
Addressable modems:	250
Serial interface:	RS-422 at 9600, 4800, 2400, or 1200 baud (RS-232 available)
External input power:	12–36.0 VDC
Low power state current:	16.8 mw max @ 24 VDC

**Note:** Mooring supplied by customer



**Figure 1.** Transfer data remotely from underwater networks, sensors and vehicles to shore based or ship based stations. **Note:** requires customer supplied mooring (not included with Gateway Buoy).

## Applications

- Real-time data monitoring of subsea sensors
- Communication with subsea vehicles
- Network Gateway



**TELEDYNE  
BENTHOS**

A Teledyne Technologies Company  
[www.benthos.com](http://www.benthos.com)

49 Edgerton Drive, North Falmouth, MA 02556 USA

Tel +1 508-563-1000 • Fax +1 508-563-6444 • E-mail: [benthos@teledyne.com](mailto:benthos@teledyne.com)

Specifications subject to change without notice. 1/2011. ©2011 TELEDYNE BENTHOS, Inc. Other products and company names mentioned herein may be trademarks and/or registered trademarks.

TELEDYNE BENTHOS • A MEMBER OF TELEDYNE MARINE