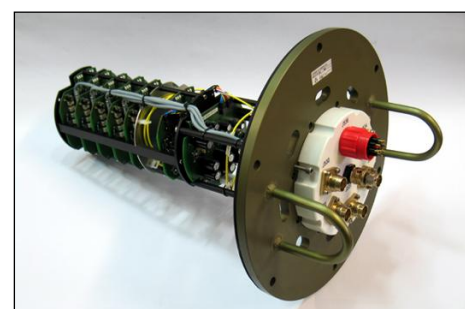
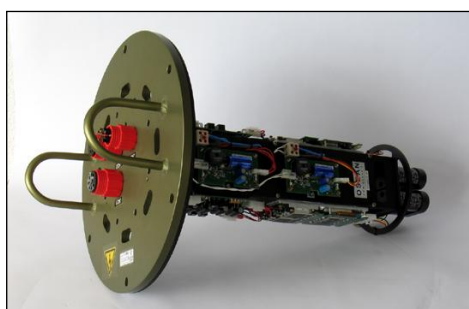
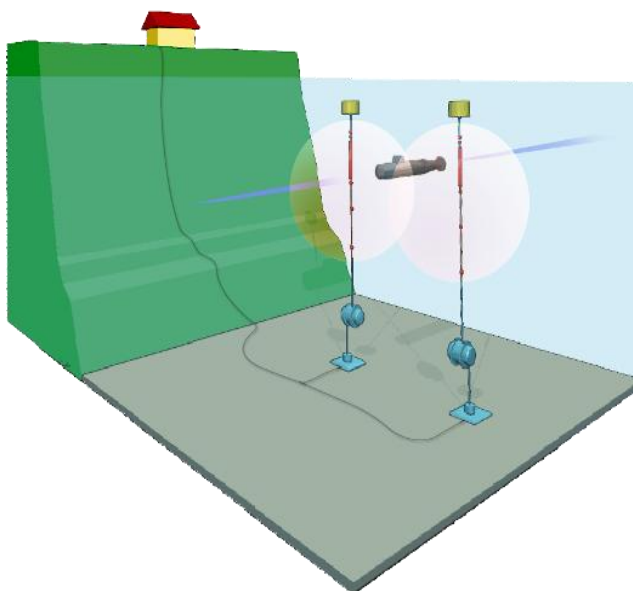


UNDERWATER LISTENING STATION



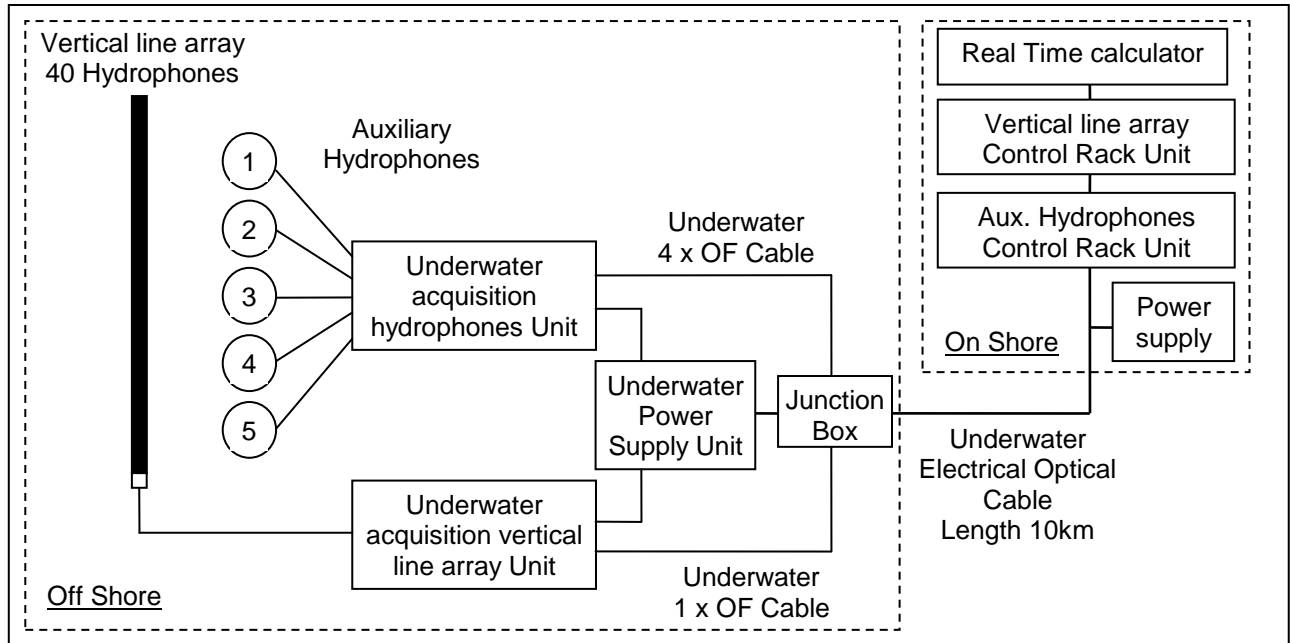
I N T R O D U C T I O N

The underwater Listening measurement Station is located in Mediterranean Sea, at variable depth from surface to 1000m. This system is used for measuring acoustic noise from all type of vessels (ships and submarines). The Listening station is composed of two systems: one underwater measurement system and one on shore control, display and power supply system.

Each system includes the following elements:

- ✓ 1 vertical line hydrophones array,
- ✓ 1 underwater acquisition vertical line unit,
- ✓ 5 hydrophones (MF and HF),
- ✓ 1 underwater acquisition hydrophones unit,
- ✓ 1 underwater power supply unit;
- ✓ Underwater electrical/optical cable;
- ✓ On shore control and display unit.
- ✓ On shore power supply;

TECHNICAL SPECIFICATIONS



Vertical Line Hydrophones array :

Hydrophone Number	:	40
Hydrophone bandwidth (+/- 1dB)	:	5kHz
Hydrophone bandwidth (+/- 3dB)	:	10kHz
High pass filter	:	F= 5Hz @-3dB
Low Pass filter switchable	:	F= 20kHz @-3dB
Programmable Gain control	:	0dB to +70dB
Analog to Digital converter	:	40 synchronous ADC
Resolution, Sample rate	:	24 bits, 96kHz
Monitoring sensors	:	Temperature, voltage and current
Communication	:	Bidirectional single-mode Optical Fiber
Configuration and control	:	HDLC protocol
Measurement Transmission	:	Digital real time streaming

Hydrophones Channels :

Hydrophone Number	:	5
Hydrophone bandwidth (+/- 3dB)	:	80kHz
High pass filter	:	F= 5Hz @-3dB
Low Pass filter	:	F= 80kHz @-3dB
Prewhitener filter	:	yes
Programmable Gain control	:	0dB to +70dB
Analog to Digital converter	:	Up to 5 synchronous ADC
Resolution, Sample rate	:	16 bits, 500kHz
Monitoring sensors	:	Temperature, voltage and current
Communication	:	Bidirectional single-mode Optical Fiber
Configuration and control	:	HDLC protocol
Measurement Transmission	:	Digital real time streaming