SERCEL

MATS 3G

MULTI-MODULATION ACOUSTIC TELEMETRY SYSTEM

MATS 3G

NEW GENERATION ACOUSTIC TELEMETRY SYSTEM

MATS 3G is an underwater acoustic modem that offers a single solution for all underwater communication needs.

Its state-of-the-art DSP (Digital Signal Processing) technology ensures long-range and reliable communication. MATS 3G also features a robust and versatile innovative multi-modulation system to fit a wide range of applications and environments.

The last generation acoustic modem supports multi-sensor and high-data-rate antenna receivers for improved communication in shallow or noisy environment. Acoustic modems can ensure stealth communication when necessary.

FEATURES & BENEFITS

ADJUSTABLE SPREAD CONFIGURATION

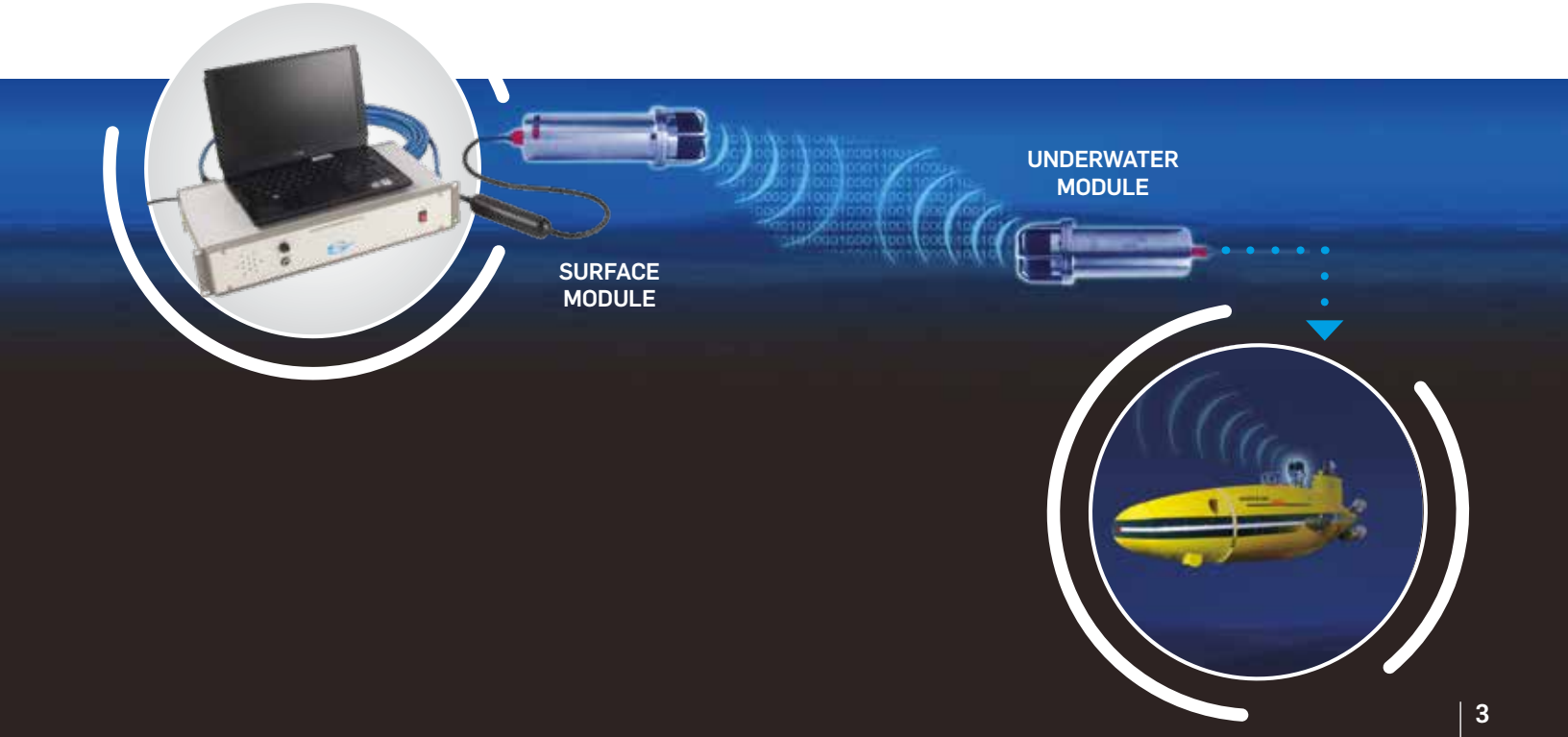
Up to 15-km range
Up to 24.6-kbps data rate

OPTIMIZED INTEGRATION

Light and compact design

VERSATILE FIELDS OF APPLICATION

Oceanography
Offshore Oil & Gas
Defense



APPLICATIONS

AUV COMMUNICATION

MATS 3G is ideal for AUV (Autonomous Underwater Vehicle) communication. As well as being compact and light, it has a high-data-rate link which can be used to transfer images from a subsea camera or side-scan sonar data to a master vessel at the surface.

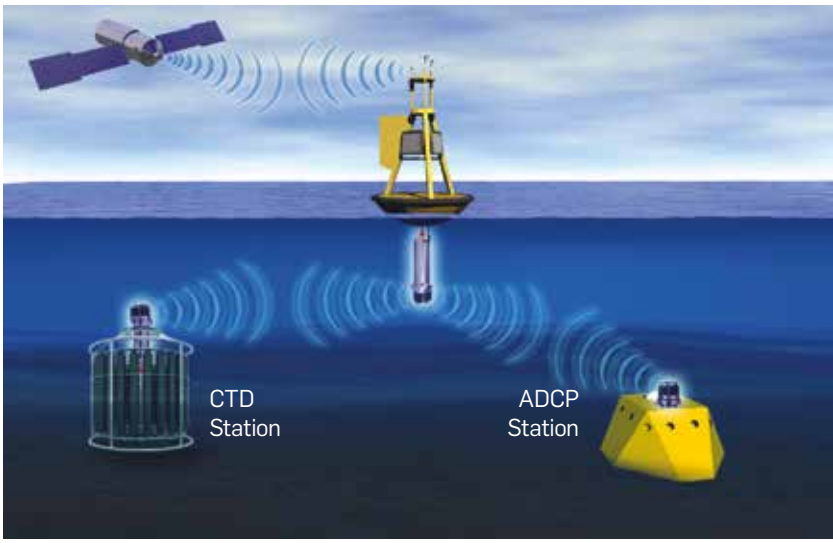
ROBUST CONTROL COMMAND

MATS 3G ensures reliable, robust and secure communication in harsh acoustic conditions. When deployed in an offshore drilling platform environment, it provides an error-free underwater communication solution to command subsea valve operations.

UNDERWATER MONITORING

MATS 3G can be deployed for long periods of time for underwater field monitoring. Its use can range from oceanographic applications to real-time monitoring by networked stations across vast instrumented fields.

Communication buoy



EQUIPMENT

SURFACE MODULE

Hooked to a vessel or to a buoy, and placed close to the sea surface, the MATS 3G surface module communicates with all the other MATS 3G modules using the same frequency. A 30-m long cable is provided between the rack and the modem. Other lengths are available on request.

UNDERWATER MODULE

With the capability to be installed on any underwater system (AUV, CTD, ADCP, etc.) and down to depths of 6,000 m, the MATS 3G underwater module communicates with all the other MATS 3G modules using the same frequency. Its light and compact design facilitates integration and it is made of titanium for optimum durability. A flange is provided for the installation.

UNDERWATER OEM MODULE

Integrated on the watertight hull of any underwater system the compact OEM module communicates with all the other MATS 3G modules using the same frequency.

OPTIONS

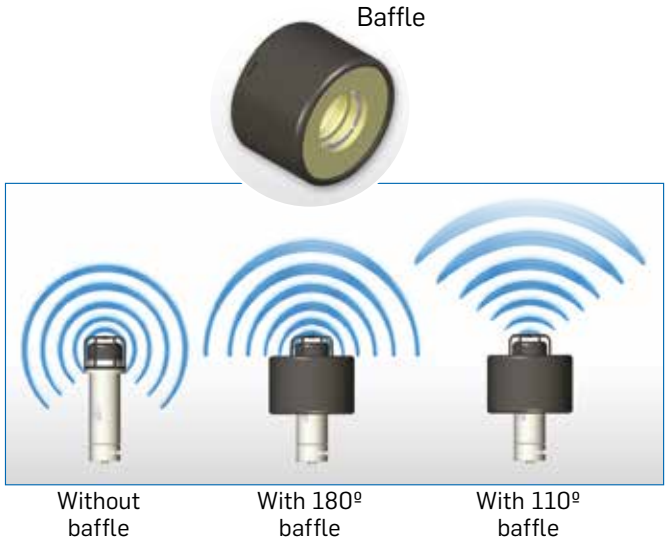
ACOUSTIC BAFFLE

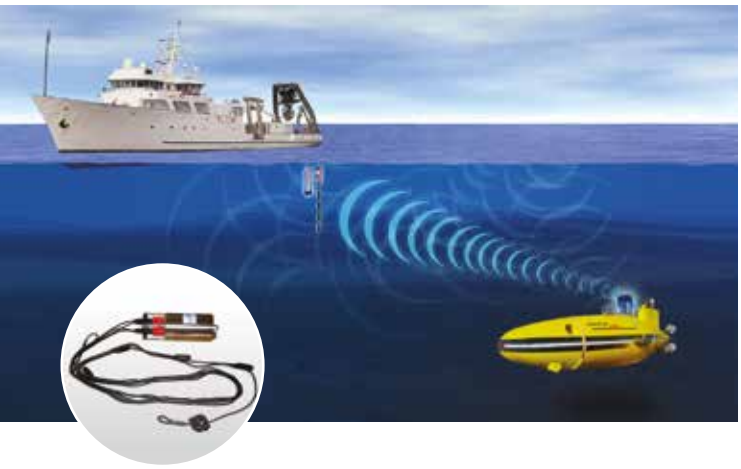
IMPROVED COMMUNICATION IN HARSH ENVIRONMENTS

Installed as an option on the sea surface or on the underwater module, the baffle channels the emitted signal. Available in either a 110° or 180° format, the baffle focuses the emitted signal in a narrower direction.

180° Baffle
Transmission gain: 3dB
Ship noise reduction: 10dB

110° Baffle
Transmission gain: 6dB
Ship noise reduction: 15dB





TRIDENT

IMPROVED ACOUSTIC SIGNAL IN HORIZONTAL CHANNELS

Trident is a string of four hydrophones which improves the high-data-rate communication in horizontal channels (shallow water) and noisy environments.

Trident manages the processing of multipath spreading for an improved signal-to-noise ratio.

Signal-to-noise improvement: 6dB

VITAC

VITAC is a software module which improves and facilitates image transmission. Even if transmission errors occur, VITAC ensures that transmitted images can still be visualized.

Typical compression rate: 20 (24-bit image)

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