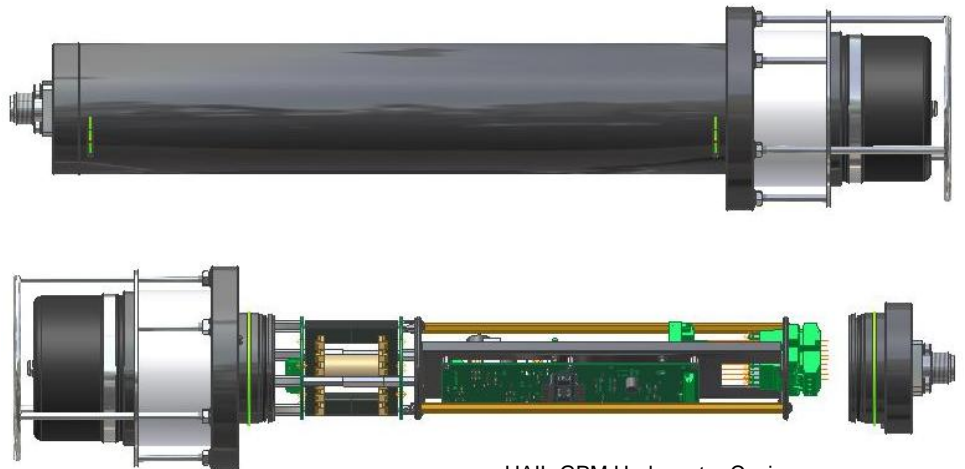


HAIL-GPM

HAIL General Purpose Modem



HAIL-GPM Underwater Casing

FEATURES

- General Purpose Modem built on a modular architecture
- Reliable long range underwater communications link
- Undersea networking and tactical data links
- Can be integrated into unmanned vehicles and seabed sensors
- Integrated digital signal processing (DSP) architecture.

L-3 Nautronix develops sophisticated solutions to measure and communicate data through water. It specialises in applications involving underwater test and evaluation and through water communications.

This Capability Statement describes the Hydro-Acoustic Information Link (HAIL) General Purpose Modem (GPM). It is based on an application recently provided to one of our customers.

The Hydro-acoustic Information Link (HAIL) General Purpose Modem (GPM) meets the need for a reliable long range underwater communications link.

The HAIL GPM is ideal for use in underwater communications where power and size are major constraints.

The HAIL GPM employs Digital Signal Processing (DSP) architecture, and is aimed at embedded HAIL applications with well defined telemetry requirements, such as Autonomous Underwater Vehicles.



KEY CHARACTERISTICS

The HAIL-GPM has the following key characteristics:

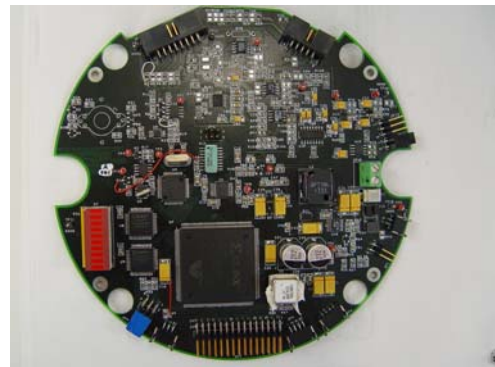
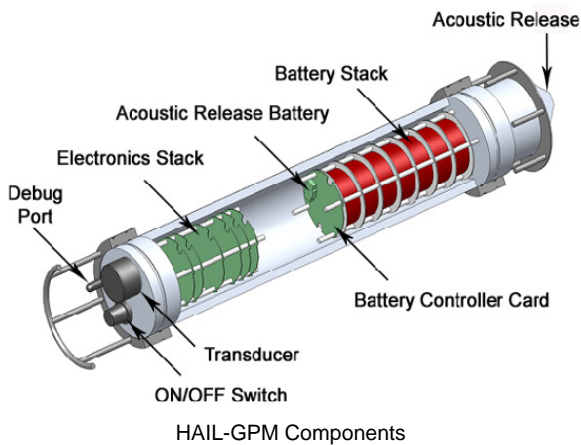
- Modular
- Reliable
- Long range
- Undersea networking
- Tactical data
- Integrated DSP architecture.

OPTIONS

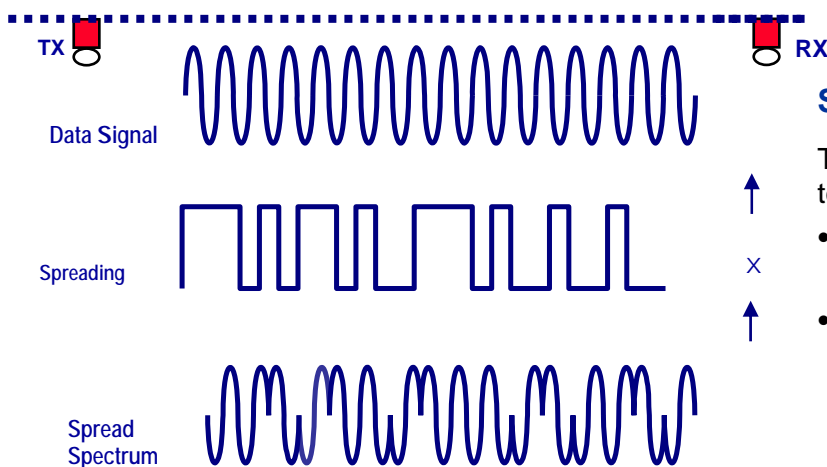
Our experience (over 20 years) has taught us that systems such as these are unique to the customer's requirements, requiring research, development and evolution to meet its specific role.

For example, L-3 Nautronix has provided HAIL-GPM interfaced to:

- host sonar
- underwater telephones
- unmanned vehicles
- seabed sensors.



HAIL-GPM Electronics Stack



Spread Spectrum Technology

The HAIL-GPM uses Spread Spectrum technology:

- Spread Spectrum is a broadband signalling technology.
- 'Spreading' the signal allows more energy and a more complex signal to be generated. This results in better detection and further benefits to integrity, reliability and accuracy from the associated processing.
- HAIL-GPM uses coded Spread Spectrum.

