# AIRBORNE MODULAR ACOUSTIC SYSTEM

GAMAS is a family of Acoustic Systems developed to meet the requirements of a wide range of Anti-Submarine Warefare (ASW) missions for maritime patrol fixed and rotary wing aircraft. The GAMAS family includes the Sonobuoy sub-system for the OTS-90 Sonic System which is operational on the NFH-90 helicopter.

## KEY FEATURES

- Sonobuoy localisation capability
- Monitoring of both passive and active sonobuoys
- Search, detection, localisation and classification of submarines with both active and passive sonobuoy operation capabilities
- Target range, bearing and Doppler velocity computation
- Automatic tracking of multiple targets
- Sound velocity profile and environment noise measurement
- Acoustic performance estimation
- Classification library management.

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AIRBORNE & SPACE SYSTEMS

# GAMAS



## SYSTEM COMPOSITION

The standard system architecture comprises a powerful Sonobuoy Processor, a VHF receiver (with optional SLS) and a Digital Recorder. Configurations at 16, 32 and 64 Channels are available in order to meet the most demanding MPA requirements.

**Acoustic Processor**
The Acoustic Processor performs passive and active processing, audio processing, tracking algorithms, localisation and classification of targets.

It features:
- Open system architecture based on COTS boards
- Video Processing and stereo audio for two acoustic operators
- Processing capability for the following sonobuoys:
  - LOFAR
  - VLAD
  - BT
  - VLA
  - BARRA
  - ANM
  - DIFAR
  - DICASS
- Command generator for DICASS active sonobuoy through client/server model
- Interface to Mission Data Bus (MIL-STD 1553B)
- Interface with intercom system for active sonobuoy command transmission and audio output
- Dedicated interface for the management of classified data (classification library)

**Sonobuoy VHF Receiver**
The VHF Receiver demodulates RF signals and sends base band signal to the Acoustic Processor.

Main characteristics include:
- High sensitivity / wide dynamic range
- Excellent out-of-band rejection
- Low inter modulation
- Linear phase shift
- Low acoustic noise generation
- Comprehensive Built-In-Test
- Built in simulation / training capabilities

**Acoustic Data Recorder**
The Acoustic Data Recorder provides long-term data/ signals storage for on-board and off-board analysis with key features that include:
- Ultra compact and light weight configuration
- Large storage capacity (28Gb cartridge available)
- Simultaneous acquisition of time code
- Easy data download/playback